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EVALUATION OF BEARING LOADS
AND CONTACT STRESSES IN THE PRIMARY COOLANT CHECK
VALVE OF THE ADVANCED TEST REACTOR

N. R. Byers

IDAHO NUCLEAR CORPORATION
NATIONAL REACTOR TESTING STATION
IDAHO FALLS, IDAHO

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ABSTRACT

Bearing failures in the ATR primary coolant check valve occurred during final stages of testing and indicated that conditions could occur that would affect the safety and reliability of reactor operation. This report evaluates bearing stresses due to a varying load, establishes a criterion for bearing material, and serves as a guide for future bearing design. By a slight extension, this method may be used to predict bearing fatigue failure and bearing life.

SUMMARY

The bearing forces were evaluated by standard methods of kinematic analysis which included the effect of friction in the rotating and translative joints. These forces were necessary for the evaluation of the contact zone (of the bearings and journals rolling together) bearing stresses. These stresses, which vary during a loading cycle, and the properties of the materials upon which the strength depends are accounted for by using Radzimovsky's method of bearing analysis. In addition, the shearing stress due to frictional torque is included in the analysis; typical plots of σ_x , σ_y , and τ_{xy} are shown in Figure 30 and complete stress values are given in Table III.

A margin of safety was determined as the ratio of allowable stress, σ_g , known by actual service conditions to be satisfactory for various materials, to the critical value of the bearing load $P_{\max}$ determined in the force analysis.

$$\text{M.S.} = \frac{\sigma_g}{P_{\max}} \quad (1)$$

where

$$\sigma_g = K \sigma_s$$

σ_s = the yield point, in tension, of the material

K = factor accounting for material properties and the distance of the layer below the contact surface.

While the M.S. does not indicate any absolute results, it can be used as a comparison to indicate when galling is imminent. Joint #A appears to be the critical joint since the M.S. = 1.401 for $t = 1.94$ sec. is the lowest of all joints and all values of time; indeed, this is where galling did occur in the check valve. This would seem to indicate that a M.S. ≥ 2.0 must be maintained to insure adequate bearing design. A comparison of the margins of safety may be seen in Table I.

The lowest necessary values of the margin of safety to insure absence of galling can be established through experimentation with various materials or, better, by actual service conditions. However, the margin of safety can be used as a design guide provided only that the necessary physical properties of the material are known. In addition to the margin of safety, the stress values were mapped (evaluated under the load) and decreased with x and y distances as may be seen from each joint at only one value of time ($t=1.94$ sec.); other values are given in Table III. The stress values found appear reasonable for the materials selected and were as expected. When these stress values become large, it is reflected by a low value for the margin of safety.

RESULTS

Complete hand calculations were made at several time intervals and checked the double precision computer values within a very small percentage (.01% average) of error. While the results appear very good indeed, the following limitations should be remembered:

- (1) The actual pressure drop across the disc, being unknown, was approximated by a linear function as being the best equation to use.
- (2) An average coefficient of friction ($\mu=.032$) was used throughout.
- (3) The actual pressure drop across the damper piston was approximated by a 6th order best fit polynomial with 90% reliability, since the true equation relating pressure drop to time was unknown.
- (4) The material is assumed to remain within the elastic limit.
- (5) The usual assumptions of an isotropic, homogeneous, elastic material have been made.

TABLE I

Margin of Safety VS. Time

Time	Margin of Safety				
t	Joint A	Joint 2	Joint 3	B1	B2
.7	2.264	5.117	5.117	5.61	7.704
.8	2.593	5.107	5.107	5.409	7.499
.9	2.897	4.785	4.785	5.088	7.029
1.0	3.101	4.482	4.478	4.744	6.529
1.1	2.989	4.129	4.129	4.726	6.489
1.2	2.659	3.699	3.699	4.288	5.867
1.3	2.356	3.352	3.352	3.978	5.423
1.4	2.105	3.058	3.058	3.714	5.046
1.5	1.881	2.791	2.791	3.395	4.596
1.6	1.860	2.616	2.616	3.171	4.268
1.7	1.796	2.464	2.464	2.851	3.819
1.8	1.667	2.305	2.305	2.569	3.421
1.9	1.480	2.144	2.144	2.318	3.066
1.94	1.401	2.080	2.080	7.225	2.936

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I. INTRODUCTION

The primary coolant system of the ATR has four main coolant pumps whose inlets and outlets connect to common intake and discharge headers (see Figure 1). Each pump has a check valve located between it and the common discharge header to prevent back flow, through that pump, in the event of a pump loss-of-power failure. If one pump fails during the normal three-pump operation, its check valve must close before an excessive back flow is established through the failed pump. In the event of a power failure all three check valves must operate satisfactorily to prevent back flow with the emergency pump operation.

Bearing failure in one of the primary coolant system check valves of the ATR caused system malfunction during reactor acceptance tests. The disc hinge pins galled; the 1/2" diameter retaining bolts were sheared, and (see Figure 2) the broken pieces were carried into the reactor core. In addition, the check valve disc was held open until excessive back flow was established through the failed pump, forcing the disc closed with an ensuing destructive water hammer.

Since check valve failure was caused by bearing galling, a bearing load analysis was performed from which the contact stresses were compared to allowable stress values to determine the adequacy of present bearing materials and design. In addition, bearing life can be predicted by fatigue analysis using an extension of the design method presented.

FIGURE 1

ATR Primary Coolant Flow Diagram

FIGURE 2

Primary Coolant Check Valve Cross-Section

II. METHOD OF ANALYSIS

The check valve was reduced to its kinematic equivalent, a slider crank mechanism, which is shown in Figure 3. The complete force analysis, which includes friction in the joints, was made but, since this is a standard method in kinematic^[1] analysis, the details will not be given here but are included in Section IV, Derivation of Equations.

By including the effect of friction, in the complete force analysis, it is seen from equation (114), page 57, that the complication involved precludes a direct solution for $\lambda(t)$; therefore, the equation was solved for $\lambda(t)$ by the Bolzano^[2] iterative method. This method lends itself particularly well to computer use, and while some methods converge more rapidly, i.e., Newton's method, it does avoid the complication of finding the derivatives of $\lambda(t)$. The Bolzano method did, however, permit rapid convergences to a predetermined limit of accuracy.

The differential pressure acting across the damper piston was evaluated from experimental data taken during one-in-three (one pump failure when three were originally operating) pump tests. The actual differential pressure across the disc could not be obtained without modification of the check valve body, and since this was not permitted, the only recourse was to a theoretical consideration for differential pressure evaluation. After an investigation of several methods, a pressure drop, linear with respect to the angular position of the disc, was selected as being the closest to actual operating conditions. With the limitations imposed by the above assumption, the magnitude and direction of the resultant force at each joint were established; from these, bearing contact stresses were found.

The contact stresses were evaluated by methods derived by Timoshenko^[3] and applied by Rodzmivosky^[4], the details of which are given in Appendix A. The contact stress values found by this method were compared with values known to give satisfactory bearing service to determine if present bearings were adequate. Stress values and the margin of safety so found can also be used in the selection of new bearing materials and as an aid in bearing design. The geometry of the equivalent mechanism is expressed in terms of the known link dimensions and the experimentally determined displacement of the damper piston as shown in Figure 4. A best fit mathematical curve, $z(t)$, for the damper piston displacement values, with 90% reliability, was found by the least squares method of curve fitting to be a sixth order polynomial in the variable t . With the motion of the damper piston thus defined, the angular displacement, $\beta(t)$, of the disc from the horizontal was written in terms of $z(t)$, the damper piston displacement, and the geometry of the system.

Prerequisite to the evaluation of the dynamic forces were the finding of the angular velocity and acceleration of the disc (link 2). These were found in terms of $\beta(t)$ by use of the relative velocity and acceleration method of analysis. With these values established, the normal

FIGURE 3

Kinematic Equivalent of Check Valve

and tangential components of acceleration were found and the analysis proceeded. The moment of inertia, I , of each link was established analytically if possible and, when not, then experimentally using the compound pendulum technique. The details and results are given in Appendix B.

By D'Alembert's principle, the dynamic forces thus found are reduced to equivalent static forces and are vectorially combined with the respective static forces at each joint. Total forces for each link are shown in Figure 5.

The equivalent analysis was then carried forward in terms of $\beta(t)$, the pressure drop across the disc, $P(t)$, the pressure drop across the damper piston, $p(t)$, and the spring force, $F_s(t)$, exerted on the damper piston.

Assuming that $\lambda(t)$, the angle which the resultant force F_a subtends with the horizontal, is known, the force solution proceeds link by link until all forces have been found, in terms of $\lambda(t)$; then the equilibrium of the entire mechanism, as shown in Figure 6, allows $\lambda(t)$ to be evaluated.

To account for frictional resistance in the rotating joints, and to obtain a more accurate solution, friction circles were introduced, but only with the added complication that a direct solution for $\lambda(t)$ was not practical as can be seen by equation (114). Thus the Bolzano method of iteration was used to complete the solution for $\lambda(t)$. At time $t=1.5$ seconds, the resultant moment of F_a around point B has a reversal of direction. This reversal destroys all convergence possibilities (since the left side of equation (114) cannot now equal the right side) and, thus, for time greater than $t=1.5$, the equation for $\lambda(t)$ must, of necessity, be rederived. With two possible sets of equations for $\lambda(t)$, the selection of the proper set must be insured. This is done through the criterion

$$\text{If } |\bar{y} \sin (\beta+\Delta)| \geq |c \sin \beta| \text{ use equations for case I} \quad (2)$$

$$\text{If } |c \sin \beta| > |\bar{y} \sin (\beta+\Delta)| \text{ use equations for case II} \quad (3)$$

As may be seen in Figure 20, the effect of this moment reversal is reflected in the term

$$[\bar{y} \sin (\beta+\Delta) - c \sin \beta] \quad (4)$$

of equation (55). The effect of this reversal is given in greater detail in Appendix A.

The contact stress equations were developed using well known methods^[3] and resulted in Hertz stresses as modified by Radzimovsky^[4]. The general method for determining the distribution of stresses in the zone

FIGURE 4

Geometry of Kinematic Equivalent Mechanism

FIGURE 5

Free Body Diagram of Equivalent Mechanism

FIGURE 6

Equilibrium of External Forces

of contact of two elastic bodies was indicated by H. Hertz^[6] in 1881. For bodies having initial line contact he obtained expressions defining the half-width, b , of the contact strip and the pressure distribution, P , across this strip. According to Hertz, the pressure distribution on the surface of two compressed bodies is defined by the expression

$$P = P_{\max} \sqrt{1 - \frac{y^2}{b^2}} \quad (5)$$

where $P_{\max}$ = maximum pressure at the center of contact area.

Some authors have based their strength calculations on the maximum pressure at the contact surface or on the maximum shearing stress (there is no real difference between these since the maximum shearing stress is directly proportional to the maximum surface contact pressure); however, neither of these methods accounts for the complex stress conditions due to variable contact loading; however, Radzimovsky's method modifies the Hertz stresses to account for the strength conditions of the materials subjected to variable contact stresses and is derived from the Mises-Hencky Theory of Failure.

In this method, the critical value of $P_{\max} = \sigma_g$ at which fatigue failure in the contact zone is expected to occur is found from the equation

$$\sigma_g = K \sigma_s \quad (6)$$

where

$$K = \frac{1}{\sqrt{A - B \left(\frac{\sigma_s}{\tau_s}\right)^2 + C \left(\frac{\sigma_s}{\tau_{-1}}\right)^2}} \quad (7)$$

σ_s, τ_s = stress at the yield point.

τ_{-1} = the endurance limit due to a symmetrical stress cycle

σ_g = critical value of $P_{\max}$

A, B, C = constants, depending upon position where stress is desired given in Table I.

The value of σ_g found in equation (6) is compared to the $P_{\max}$ found in equation (3) for times of $t=0$ to 1.94 sec. in increments of .1 sec. through the margin of safety where

$$M.S. = \frac{P_{\max}}{\sigma_g} \quad (8)$$

The exact value of the M.S. above which no galling is expected can only be established by experience; however, the calculated values of the M.S. at location A are the lowest of all joint values and, this is where galling actually occurred during the 1 out of 3 test. This would seem to indicate that even though no criterion (value) can be established without further supporting evidence a comparison of the margins of safety can be indicative of locations that are vulnerable to galling, i.e., joint A and joint B1 as calculated.

In order to select adequate bearings the values σ_s , σ_g , and τ_{-1} for the material must be known (or found), substituted into equation (7), and compared to σ_g by equation (8). Also a comparison between materials may be made using equation (8).

In addition to the criterion for adequate bearings, the stress distribution due to loadings was evaluated using methods developed by Belayev[6]. He derived the stresses on planes perpendicular to the coordinate axes as given by the following equations in elliptic coordinates:

$$\begin{aligned} \sigma_x &= -\frac{2q}{\pi b} e^{-\alpha} \sin\beta - \frac{2q}{\pi b} \sin\beta \sinh\alpha \left(1 - \frac{\sinh 2\alpha}{\cosh 2\alpha - \cos 2\beta}\right) \\ \sigma_y &= -\frac{2q}{\pi b} e^{-\alpha} \sin\beta + \frac{2q}{\pi b} \sin\beta \sinh\alpha \left(1 - \frac{\sinh 2\alpha}{\cosh 2\alpha - \cos 2\beta}\right) \end{aligned} \quad (9)$$

$$\tau_{xy} = -\frac{2q}{\pi b} \sinh\alpha \sin\beta \left(\frac{\sin 2\beta}{\cosh 2\alpha - \cos 2\beta}\right)$$

$$\tau_{xz} = 0$$

$$\tau_{yz} = 0$$

where

$$\begin{aligned} \sin \beta &= \frac{\sqrt{(b^2 - y^2 - x^2)} + \sqrt{(b^2 - y^2 - x^2)^2 + 4b^2 x^2}}{2b} \\ \sinh \alpha &= \frac{\sqrt{(b^2 - y^2 - x^2)} + \sqrt{(b^2 - y^2 - x^2)^2 + 4b^2 x^2}}{2b^2} \end{aligned}$$

$$\cos \beta = \sqrt{1 - \sin^2 \beta}$$

$$\cosh 2 = \sqrt{1 + \sinh^2 \alpha}$$

$$\sin 2\beta = 2 \sin \beta \cos \beta$$

$$\cos 2\beta = 1 - 2 \sin^2 \beta \quad (10)$$

$$\sinh 2\alpha = 2 \sinh \alpha \cosh \alpha$$

$$\cosh 2\alpha = \cosh^2 \alpha + \sinh^2 \alpha$$

$$e^{-\alpha} = \cosh \alpha - \sinh \alpha$$

q = loading per unit length of contact strip

b = one-half the width of the contact strip.

By using equation (9) the values of the stresses σ_x , σ_y , τ_{xy} were calculated at values of $y=.56b$, $1.0b$, $1.5b$, $3.20b$; at depths below the contact surface of $x=1.0b$, $.78b$, $.5b$, and $.1b$; and for values of $t=.7$ thru 1.9 in increments of $.1$ sec. and at 1.94 (note that F_n is zero until $t=.7$ is reached). Notice that time is started at $t=.7$ second instead of $t=0$. This was necessary since a reproducible starting time was found to be when the electrical breakers on the circulation dumps tripped. The reaction time for the differential pressure across the damper piston to be measurable was essentially $.7$ second and hence until $t=.7$ there was practically no load. The results of these force and stress calculations are given in the table of computer results, and the computer program is included for convenience.

III. RESULTS AND CONCLUSIONS

The results of the bearing contact stress analysis show that Joint A was most vulnerable to galling and, in fact, galling did occur when this bearing was constructed of 17-4 P. H. stainless steel in heat treated condition 1075, and the journal was 17-4 P. H. in heat treated condition 975. The margin of safety in designing a new bearing combination should be meaningful once the significance of its numerical value has been established. This could be done either experimentally or through satisfactory bearing service. The effects of speed, surface finish, lubrication, smearing of metal, etc., also affects galling and must be eliminated or controlled; the M.S. must be made to show only the effects of load on galling. This can be done through experiments which hold the aforementioned effects constant.

If a surface treatment is used, the method of determining case depth used by ball and roller bearing manufacturers results in a case which is impractically deep; however, the case must be deep enough to prevent tearing away from the base metal. In other words, the base metal allowable stress values must exceed the stress at various depths, i.e., $\tau_{-1} > \sigma_{xy}$, $\sigma_s > \sigma_x$, $\sigma_s > \sigma_y$, to prevent the base metal plastically giving way under the case.

Although there is no direct correlation in the literature, the bearing and the trunion should contain the best surface finish economically possible since bearing manufacturers agree that service life is a direct function of surface finish; the better the finish the greater the chances for a particular material to have successful bearing application. Based on the strength of materials subject to repeated loading, the shearing stress τ_{xy} is the critical stress. This stress is equal to zero at the plane of symmetry and changes symmetrically with a range ratio of 1.0. The maximum value of τ_{xy} occurs in the layer where $x=.5b$ below the contact surface and is not in phase with the maximum normal stress. This can be seen in Figure 30.

IV. DERIVATION OF EQUATIONS

The pressure drop across the disc was assumed linear with respect to disc position, since the necessary valve modification to obtain experimental values was not allowed. The resultant force, due to ΔP , was taken as acting at the center of percussion of Link 2 (see Appendix B) and is given by

$$F_{\Delta P}(t) = \Delta P(t) A_D \sin \beta(t) \quad (1)$$

where

- A_D = Disk area = $\frac{\pi D^2}{4} \text{ IN}^2$
- $\Delta P(t)$ = Pressure drop across the disc (as a function of t) as given by equation (2), LBS/IN²
- $\beta(t)$ = Disc angle with the horizontal
- t = time in sec.

$$\Delta P(t) = \frac{\Delta P_f(t) - \Delta P_i(t)}{t_f - t_i}$$

The subscript f indicates final values and i indicates initial values

$$\Delta P(t) = \frac{256t}{1.95}$$

$$\Delta P(t) = 131.28205t$$

The initial and final values of ΔP were experimentally determined.

The position of the damper piston was found by test and is expressed by the best fit polynomial with 90% reliability as

$$\begin{aligned} Z(t) = & 2.889985 - 1.135639t + 7.983562t^2 - 17.827503t^3 \\ & + 15.612802t^4 - 6.167576t^5 + 0.896792t^6 \end{aligned} \quad (2)$$

Diagram illustrating a mechanical linkage system for a damper piston, showing the relationship between the piston displacement $Z(t)$ and the damper piston position X (Open Position).

The diagram shows a vertical guide with a piston at the top. A vertical link (Link 4) connects the piston to a horizontal link (Link 2). Link 2 is pivoted at point A on the right and point B on the vertical guide. Link 3 is a vertical link pivoted at point B and point C' on the horizontal guide. Link 4 is a vertical link pivoted at point C' and point C on the horizontal guide. The horizontal guide is labeled X (Open Position) and $Fully$. The vertical guide is labeled $Z(t)$. The angle between Link 2 and the horizontal is labeled β_0 . The angle between Link 3 and the vertical is labeled γ . The angle between Link 4 and the vertical is labeled γ . The distance between points A and B is labeled $\overline{AB} = C$ and $\overline{AB} = d$.

From Figure 7 then the position of the damper piston, $Z(t)$, is chosen as its displacement from the fully open position.

$$Z(t) = c \sin \beta_0 - c \sin \beta(t) - d[1 - \cos \gamma(t)] \quad (3)$$

$$\cos \gamma(t) \equiv \sqrt{1 - \sin^2 \gamma(t)} \quad (4)$$

and from Figure 7 it is seen that

$$\sin \gamma(t) = \frac{c}{d} [\cos \beta(t) - \cos \beta_0] \quad (5)$$

then by equation (4) and (5)

$$\cos \gamma(t) = \sqrt{1 - \frac{c^2}{d^2} [\cos \beta(t) - \cos \beta_0]^2}$$

and equation (3) becomes

$$Z(t) = c [\sin \beta_0 - \sin \beta(t)] - d + d \left\{ \sqrt{1 - \frac{c^2}{d^2} [\cos \beta(t) - \cos \beta_0]^2} \right\}$$

and

$$Z(t) - c [\sin \beta_0 - \sin \beta(t)] + d = d \sqrt{1 - \frac{c^2}{d^2} [\cos \beta(t) - \cos \beta_0]^2} \quad (6)$$

Now by squaring both sides of equation (6) to solve for $\beta(t)$ and letting

$$R(t) = Z^2(t) + 2c^2 + 2Z(t) d - 2c[Z(t) + d] \sin \beta_0$$

$$S(t) = 2c[Z(t) + d - c \sin \beta_0]$$

$$T = 2c^2 \cos \beta_0 \quad (7)$$

$$A_s(t) = -R(t) S(t) + T \sqrt{S^2(t) - R^2(t) + T^2}$$

$$B(t) = S^2(t) + T^2$$

FIGURE 8

Trigonometric Relation for $\beta(t)$

We find

$$\beta(t) = \sin^{-1} \frac{A_S(t)}{B(t)}, \quad \cos \beta(t) = \frac{\sqrt{B^2(t) - A_S^2}}{B(t)}, \quad \tan \beta(t) = \frac{A_S}{\sqrt{B^2 - A_S^2}} \quad (8)$$

FIGURE 9

Kinematic Equivalent of the Check Valve

The position of the point c is given by $\bar{e}(t)$ and is seen to be

$$\bar{e}(t) = j + c \sin \beta(t) - d \sqrt{1 - \left\{ \left(\frac{c}{d} \right) [\cos \beta(t) - \cos \beta_0] \right\}^2} \quad (9)$$

The damper piston compression spring, acting on top of the damper piston, supplies a force $F_s(t)$ proportional to the piston displacement (therefore a function of $Z(t)$) and is given by

$$F_s(t) = K [Z(t) + \delta_i] \text{ lbs.} \quad (10)$$

where δ_i is the initial compression of the spring, K = spring constant lbs/in.

The force due to differential pressure across the damper piston (Link 5) $F_p(t)$ is found from

$$F_p(t) = A_5 p(t) \frac{\text{lbs.}}{\text{in}^2} \quad (11)$$

Where the damper piston area, A_5 , is

$$A_5 = \frac{\pi d^2}{4} \text{ in}^2$$

and the differential pressure, $p(t)$, acting on the damper piston is given by the best fit polynomial with 90% reliability as

$$\begin{aligned} p(t) = & -464.1679 + 2050.2743t - 3626.0703t^2 \\ & + 3222.6769t^3 - 1432.5001t^4 + 254.0226t^5 \frac{\text{lbs.}}{\text{in}^2} \end{aligned} \quad (12)$$

The inertia forces of each link must now be evaluated, and D'Alembert's principle used to complete the evaluation of all external forces which are acting on the mechanism. With all external forces thus determined, the equilibrium of the entire structure is used to evaluate the angle $\lambda(t)$. Note that $\lambda(t)$ is the angle which the resultant force at joint A makes with the horizontal and is unknown at the start of the analysis. In order to find the inertia forces of each link by the use of the tangential and normal component method, the angular velocities and angular accelerations of links 2 and 3 must first be found.

Determine the angular velocity and acceleration for link 2 and link 3 by differentiating equation (6) with respect to time, t , once and twice respectively.

By differentiating equation (2) with respect to time is found

$$\begin{aligned} Z(t) = & -1.135639 + 15.967124t - 53.482509t^2 \\ & + 62.451208t^3 - 30.83788t^4 + 5.380752t^5 \end{aligned} \quad (13)$$

$$\ddot{Z}(t) = +15.967124 - 106.965018t + 187.353624t^2 - 123.35152t^3 + 26.903765t^4 \quad (14)$$

$$\dot{R}(t) = 2Z(t) \ddot{Z}(t) + 2d\ddot{Z}(t) - 2c \sin \beta_0 \ddot{Z}(t)$$

$$\dot{S}(t) = 2c \dot{Z}(t)$$

$$\dot{A}(t) = -R(t) \dot{S}(t) - \dot{R}(t) S(t) + \frac{T[S(t) \dot{S}(t) - R(t) \dot{R}(t)]}{\sqrt{S^2(t) - R^2(t) + T^2}}$$

$$\dot{B}(t) = 2S(t) \dot{S}(t)$$

The angular displacement of link 2, $\beta(t)$, is given by equation (8)

$$\beta(t) = \sin^{-1} \left[\frac{A(t)}{R(t)} \right] \quad (15)$$

and by differentiating with respect to time the angular velocity is found as

$$\omega_2 = \dot{\beta}(t) = \frac{B(t) \dot{A}(t) - A(t) \dot{B}(t)}{B(t) \sqrt{B^2(t) - A^2(t)}} \quad (16)$$

again differentiating with respect to time is found

$$\ddot{R}(t) = 2[\dot{Z}(t)]^2 + 2[Z(t) + d - 2c \sin \beta_0][\ddot{Z}(t)]$$

$$\ddot{S}(t) = 2c \ddot{Z}(t)$$

$$\ddot{A}(t) = -R(t) \ddot{S}(t) - 2\dot{R}(t) \dot{S}(t) - \dot{R}(t) S(t)$$

$$+ \frac{T\{S(t) \ddot{S}(t) + [\dot{S}(t)]^2 - \dot{R}(t) R(t) - [R(t)]^2\}}{\sqrt{S^2(t) - R^2(t) + T^2}} - \frac{T[S(t) \dot{S}(t) - R(t) \dot{R}(t)]}{[S^2(t) - R^2(t) + T^2]^{3/2}}$$

where

$$\ddot{B}(t) = 2 \{S(t) \dot{S}(t) + [\dot{S}(t)]^2\}$$

and the angular acceleration of link 2, $\alpha_2(t) = \ddot{\beta}(t)$, is found by differentiating equation (16) with respect to time as

$$\ddot{\beta}(t) = \frac{[B(t)\ddot{A}(t) - A(t)\ddot{B}(t)]}{B(t) \sqrt{B^2(t) - A^2(t)}} \quad (17)$$

$$- \frac{[B(t)A(t) - \dot{A}(t)\dot{B}(t)]\{\dot{B}(t)[B^2(t) - A^2(t)] + B(t)[B(t)\dot{B}(t) - A(t)\dot{A}(t)]\}}{B^2(t) [B^2(t) - A^2(t)]^{3/2}}$$

Now the angular velocity, $\omega_3 = \dot{\gamma}(t)$, and the angular acceleration, $\alpha_3 = \ddot{\gamma}(t)$, of link 3 are needed.

Let

$$F = \frac{c}{d}$$

Then from equation (5)

$$\gamma(t) = \sin^{-1} \left\{ F[\cos \beta(t) - \cos \beta_0] \right\} \quad (18)$$

Now differentiating equation (18) with respect to time, t , is found the angular velocity of link 3

$$\dot{\gamma}(t) = \omega_3(t) = \frac{F \sin \beta(t) \dot{\beta}(t)}{\sqrt{1 - \{F[\cos \beta(t) - \cos \beta_0]\}^2}} \quad (19)$$

and

$$\ddot{\gamma}(t) = \alpha_3(t) = - \frac{F^3 [\sin \beta(t) \dot{\beta}(t)]^2 [\cos \beta(t) - \cos \beta_0] + F \{1 - \{F[\cos \beta(t) - \cos \beta_0]\}^2\} \{\sin \beta(t) \ddot{\beta}(t) + [\dot{\beta}(t)]^2 \cos \beta(t)\}}{1 - \{F[\cos \beta(t) - \cos \beta_0]\}^2} \quad (20)$$

With the angular velocities and accelerations now known the inertia forces for each link may be found.

The acceleration of link 2, with $\dot{\beta}(t)$ now known, in a normal direction is given by

$$A_{c.g.2n} = \sqrt{g^2 + h^2 [\dot{\beta}(t)]^2} \quad (21)$$

and is always directed toward the center of rotation. The acceleration in the tangential direction is given by

$$A_{c.g.2t} = \sqrt{g^2 + h^2 [\ddot{\beta}(t)]^2} \quad (22)$$

and its direction is determined to be consistent with the direction of $\ddot{\beta}(t)$. Let

$$\Delta = \tan^{-1} \frac{g}{h}$$

FIGURE 10

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Geometry of Link 2

The x and y components of the normal inertia force are given by

$$F_{I2xn}(t) = \frac{w_2}{386.4} A_{cg2n} \cos[\beta(t) + \Delta] \quad (23)$$

$$F_{I2yn}(t) = \frac{w_2}{386.4} A_{cg2n} \sin[\beta(t) + \Delta] \quad (24)$$

and for the x and y components of the tangential inertia force

$$F_{I2xt}(t) = \frac{w_2}{386.4} A_{cg2t} \sin[\beta(t) + \Delta] \quad (25)$$

$$F_{I2yt}(t) = \frac{w_2}{386.4} A_{cg2t} \cos[\beta(t) + \Delta] \quad (26)$$

The complete components for the inertia force are obtained by adding equation (23) and (25) and equation (24) and (26).

$$F_{I2x}(t) = F_{I2xn}(t) + F_{I2xt}(t)$$

$$F_{I2y}(t) = F_{I2yn}(t) - F_{I2yt}(t)$$

and

$$\Gamma = \tan^{-1} \left[\frac{F_{I2y}(t)}{F_{I2x}(t)} \right]$$

The inertia force of link 3 is found in a similar manner.

$$A_{2n}(t) = c[\dot{\beta}(t)]^2 \quad (27)$$

$$A_{2t}(t) = c[\ddot{\beta}(t)]^2 \quad (28)$$

By the relative acceleration method of analysis the acceleration of the c.g. for link 3 is found

$$\ddot{A}_{3cg} = \ddot{A}_2 + \ddot{A}_{cg3-2} \quad (29)$$

and for the x and y components

$$\ddot{A}_{3cgx} = \ddot{A}_{2x} + \ddot{A}_{cg3-2x} \quad (30)$$

and

$$\ddot{A}_{3cgy} = \ddot{A}_{2y} + \ddot{A}_{cg3-2y} \quad (31)$$

FIGURE 11

Geometry of Link 3

$$A_{2x}(t) = A_{2n}(t) \cos \Delta(t) + A_{2t}(t) \sin \Delta(t)$$

$$A_{2y}(t) = A_{2n}(t) \sin \Delta(t) - A_{2t}(t) \cos \Delta(t)$$

and the resulting forces are

$$F_{I2x}(t) = \frac{w_3}{386.4} A_{cg2x}(t) \quad (32)$$

$$F_{I2y}(t) = \frac{w_3}{386.4} A_{cg2y}(t) \quad (33)$$

and the direction of the inertia force F_{I2} , is given by

$$\tan \Gamma = \frac{A_{cg2y}(t)}{A_{cg2x}(t)} \quad (34)$$

FIGURE 12

Inertia Force Link 3

the acceleration of the c.g. of link 3 is then

$$A_{cg3x}(t) = \left\{ A_{2x}(t) + \frac{d}{2} \ddot{\gamma}(t) \cos \gamma(t) - \frac{d}{2} [\dot{\gamma}(t)]^2 \sin \gamma(t) \right\} \quad (35)$$

$$A_{cg3y}(t) = \left\{ A_{2y}(t) - \frac{d}{2} \ddot{\gamma}(t) \sin \gamma(t) - \frac{d}{2} [\dot{\gamma}(t)]^2 \cos \gamma(t) \right\} \quad (36)$$

and the inertia forces

$$F_{I3x}(t) = \frac{w_3}{386.4} A_{cg3x}(t) \quad (37)$$

$$F_{I3y}(t) = \frac{w_3}{386.4} A_{cg3y}(t) \quad (38)$$

Now the direction of the inertia force, F_{I3} , is given by

$$\theta(t) = \tan^{-1} \left[\frac{A_{3y}(t)}{A_{4x}(t)} \right] \quad (39)$$

For link 4, since the motion is translation only

$$F_{I4}(t) = \frac{w_4}{386.4} \ddot{Z}(t) \quad (40)$$

FIGURE 13

Inertia Force Link 4

and for link 5

FIGURE 14

Inertia Force Link 5

$$F_{I5}(t) = \frac{w_5}{386.4} \ddot{z}(t) \quad (41)$$

then

$$F_{34dy}(t) = F_{I4}(t) + F_{I5}(t) \quad (42)$$

Now apply these inertia forces to the links by using D'Alembert's principle. The magnitude of the inertia force is the same as that of the dynamic force calculated previously for the links; however, the direction must be reversed in accordance with D'Alembert's principle. This may be seen from Newton's second law

$$\Sigma F = ma \quad (43)$$

$$\Sigma F - ma = 0 \quad (44)$$

and with ma as shown in equation (44) the equation is one of static equilibrium (i.e., $\Sigma F=0$). The force ma when used in this way is an inertia force and its direction must be reversed in accordance with equation (44). This resultant inertia force is applied at the center of percussion of the link (see any standard text on kinematic analysis) and accounts for the moment of the tangential component of dynamic force around the center of rotation. The distance from the center of gravity (c.g.) of the link to the center of percussion (c.p.) is given by the expression,

$$h = \frac{I_{c.g.} \omega}{F} \quad (45)$$

where

$I_{c.g.}$ = moment of inertia of the link about the center of rotation, in.-lbs.sec²

ω = angular acceleration of rotating link, rad/sec.

F = resultant dynamic force, $F = \frac{w}{g} a_{c.g.}$, lbs

h = distance from c.g. to c.p. measured along the line drawn through the center of rotation and the c.g., inches.

With the inertia forces determined they are applied to each link and the analysis proceeds now as a static force analysis. In addition to the equilibrium of forces for each link, the forces externally applied

to the system must be in equilibrium. Hence, the polygon of external forces must close, and this provides the solution for $\lambda(t)$ which was unknown (but assumed known) at the beginning of the analysis.

The polygon includes the effect of friction in the piston rod bearings, but in the first solution the forces due to friction in the turning joints are considered zero. The value of $\lambda(t)$

FIGURE 15

Summation of External Forces

so found is the initial value of $\lambda(t)$ to be used in equation (68) for the Bolzano iterative method of finding the root of equation (68). For static equilibrium then sum forces in the x and y directions

$$\Sigma F_x = 0 = F_{\Delta p} + F_A \cos \lambda - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x} \quad (46)$$

$$\Sigma F_y = 0 = F_p + F_{B1y} + F_{B2y} + (F_{I2y} + F_{I2y} + F_{I4y} + F_{I5y}) - W_t - F_s - F_a \sin \lambda \quad (47)$$

then from equation (46) solve for $F_A \cos \lambda$

$$F_A \cos \lambda = - [F_{\Delta p} - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x}] \quad (48)$$

$$F_A \sin \lambda = [+F_p + F_{B1y} + F_{B2y} + (F_{I2y} + F_{I3y} + F_{I4y} + F_{I5y}) - W_y - F_s]$$

or

$$F_A \sin \lambda = [+F_p + F_{B1y} + F_{B2y} + F_{Ity} - W_t - F_s] \quad (49)$$

where

$$F_{Ity} = F_{I2y} + F_{I3y} + F_{I4y} + F_{I5y} \quad (50)$$

For static equilibrium of link 2 sum forces and moments.

$$M_B = 0 = F_A \overrightarrow{\cos \lambda} c \sin \beta + F_A \overrightarrow{\sin \lambda} c \cos \beta + W_2 \left\{ c \cos \beta - g^2 + b^2 \cos(\beta + \Delta) \right\} \\ - (F_{Ap} - F_{I2} \cos \Gamma) [\bar{y} \sin(\beta + \Delta) - c \sin \beta] - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta + \Delta)] \quad (51)$$

FIGURE 16

Applied Forces - Link 2

$$\Sigma F_x = 0$$

$$- F_{32} \cos \eta - F_{I2} \cos \Gamma + F_{\Delta p} + F_A \cos \lambda = 0$$

$$F_{32} \cos \eta = + F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p} \quad (52)$$

$$\Sigma F_y = 0$$

$$F_{32} \sin \eta - W_2 + F_{I2} \sin \Gamma - F_A \sin \lambda = 0$$

$$F_{32} \sin \eta = F_A \sin \lambda + W_2 - F_{I2} \sin \Gamma \quad (53)$$

$$\tan \eta = \frac{F_A \sin \lambda - F_{I2} \sin \Gamma + W_2}{F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p}} \quad (54)$$

From equation (51) regrouping terms is found

$$\begin{aligned} F_A [\sin \lambda \cos \beta + \cos \lambda \sin \beta] = & -W_2 [c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] \\ & + (F_{\Delta p} - F_{I2} \cos \Gamma) [\bar{y} \sin(\beta+\Delta) - c \sin \beta] + F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)] \end{aligned} \quad (54)$$

From which the value for F_A is found as

$$F_A = \frac{-W_2 [c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + (F_{\Delta p} - F_{I2} \cos \Gamma) [\bar{y} \sin(\beta+\Delta) - c \sin \beta] + F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)]}{c [\sin \lambda \cos \beta + \cos \lambda \sin \beta]} \quad (55)$$

Static equilibrium of link 3 is found by $\Sigma F=0$ and $\Sigma m=0$.

Free body diagram of a beam segment AB. The beam is inclined at an angle η to the horizontal. At point A, a force F_A acts at an angle λ to the beam. At point B, a force F_B acts at an angle ξ to the beam. The weight of the beam segment is W_2 , acting vertically downwards at a distance $d/2$ from point A. A force F_{23} acts at point B, with components $F_{23} \cos \eta$ and $F_{23} \sin \eta$. A force F_{13} acts at point B, with components $F_{13} \sin \theta$ and $F_{13} \cos \theta$. A force F_{43} acts at point B, with components $F_{43} \cos \xi$ and $F_{43} \sin \xi$. A coordinate system (x, y) is shown with x horizontal and y vertical.

Equilibrium equations for the beam segment AB:

$$[F_A \cos |\lambda| - F_{I2} \cos \Gamma + F_{\Delta P}] = F_{23} \cos \eta$$

$$[F_A \sin |\lambda| + W_2 - F_{I2} \sin \Gamma] = F_{23} \sin \eta$$

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$$\begin{aligned}\Sigma M_B = 0 = & W_3 \left(\frac{d}{2} \sin \gamma \right) - F_{I3} \sin \theta (L_2 \sin \gamma) + F_{I3} \cos \theta (L_2 \cos \gamma) - F_{43} (\sin \xi \, d \sin \gamma) \\ & - F_{43} (\cos \xi \, d \cos \gamma)\end{aligned}\quad (56)$$

$$\Sigma F_x = 0$$

$$[F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p}] + F_{I3} \cos \theta - F_{43} \cos \xi = 0$$

$$F_{43} \cos \xi = [F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p}] + F_{I3} \cos \theta \quad (57)$$

$$\Sigma F_y = 0$$

$$- [F_A \sin \lambda + w_2 - F_{I2} \sin \Gamma] - w_3 + F_{I3} \sin \theta + F_{43} \sin \xi = 0$$

$$F_{43} \sin \xi = + [F_A \sin \lambda + w_2 - F_{I2} \sin \Gamma] + w_3 - F_{I3} \sin \theta \quad (58)$$

For static equilibrium of link 4 is found, by $\Sigma F = 0$ and $\Sigma m = 0$.

$$\Sigma M_C = 0 - \overleftarrow{F_{B1x}} \bar{e} + \overrightarrow{F_{B2x}} (e + \ell) = 0 \quad (59)$$

$$\Sigma F_x = 0 + F_{34} \cos \xi - F_{B1x} + F_{B2x} = 0$$

$$F_{B1x} = F_{34} \cos \xi + F_{B2x} \quad (60)$$

$$\Sigma F_y = -F_{34} \sin \xi - W_4 + F_{I4} + F_{I5} + F_R + \mu F_{B1x} + \mu F_{B2x} = 0$$

$$\mu F_{B1x} = F_{34} \sin \xi + W_4 - F_{I4} - F_{I5} - F_R - \mu F_{B2x}$$

$$F_{B1x} = \frac{F_{34} \sin \xi + W_4 - F_{I4} - F_{I5} - F_R}{\mu} - F_{B2x} \quad (61)$$

combining equation (60) and equation (61) is found

$$F_{34} \cos \xi + F_{B2x} = \frac{F_{34} \sin \xi + W_4 - F_{I4} - F_{I5} - F_R}{\mu} - F_{B2x}$$

$$F_{B2x} = \frac{F_{34} \sin \xi + W_4 - F_{I4} - F_{I5} - F_R}{2\mu} - \frac{F_{34} \cos \xi}{2} \quad (62)$$

Now using equations (57) and (58) is found

$$F_{B2x} = \left\{ \frac{[F_A \sin \lambda + W_2 - F_{I2} \sin \Gamma + W_3 - F_{I3} \sin \theta] + W_4 - F_{I4} - F_{I5} - F_R}{2\mu} \right\}$$

$$- \frac{[F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p} + F_{I3} \cos \theta]}{2} \quad (63)$$

From (59)

$$F_{B2x} (\bar{e} + l) = F_{B1x} \bar{e}$$

$$F_{B1x} = F_{B2x} \left(\frac{\bar{e} + l}{\bar{e}} \right) \quad (64)$$

For static equilibrium of link 5 is found by $\Sigma F = 0$.

FIGURE 19

Applied Forces - Link 5

$$\Sigma F_y = 0 \quad F_R + F_P - F_s - W_5 = 0$$

$$F_R = F_s + W_5 - F_P \quad (65)$$

$\Sigma F_x = 0$, all forces in the x direction are assumed zero.

$\Sigma M = 0$, since forces are colinear.

From equation (48) is found

$$F_A \cos \lambda = - [F_{\Delta p} - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x}] \quad (48)$$

Now substitute equation (64) into equation (48)

$$F_A \cos \lambda = - \left[+ F_{\Delta p} - \left(\frac{\bar{e} + \ell}{e} \right) F_{B2x} - F_{I2x} + F_{B2x} + F_{I3x} \right]$$

$$F_A \cos \lambda = - F_{\Delta p} + \frac{\ell}{e} F_{B2x} + F_{I2x} - F_{I3x} \quad (66)$$

Now substitute equation (59) into equation (49) and the fact that $F_{By} = \mu F_{Bx}$

$$F_A \sin \lambda = F_p + F_{Ity} - W_t - F_s + \mu F_{B2x} + \mu \left(\frac{\bar{e} + \ell}{e} \right) F_{B2x}$$

Then

$$F_A \sin \lambda = F_p + F_{Ity} - W_t - F_s + \mu \frac{2\bar{e} + \ell}{e} F_{B2x} \quad (67)$$

From equation (55) since the numerator does not depend upon $\lambda(t)$

$$F_A = \frac{A}{c[\sin \lambda \cos \beta + \cos \lambda \sin \beta]} \quad (68)$$

where

$$\begin{aligned} A = & - W_2 [c \cos \beta - \sqrt{g^2 + h^2} \cos(\lambda + \Delta)] + [F_{\Delta p} - F_{I2} \cos \Gamma] [\bar{y} \sin(\beta + \Delta) - c \sin \beta] \\ & + F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta + \Delta)] \end{aligned} \quad (68a)$$

Now solve (66), (67) and (68) simultaneously for $\tan \lambda(t)$

Substitute equation (68) into equation (48) and

$$\frac{A}{c[\sin \lambda \cos \beta + \cos \lambda \sin \beta]} \cos \lambda = - F_{\Delta p} + \frac{\ell}{e} F_{B2x} + F_{I2x} - F_{I3x}$$

$$A \cos \lambda = [-F_{\Delta p} + F_{I2x} - F_{I3x}] c [\sin \lambda \cos \beta + \cos \lambda \sin \beta] + \frac{\ell}{e} F_{B2x} c [\sin \lambda \cos \beta + \cos \lambda \sin \beta]$$

and rearranging terms is found

$$F_{B2x} \frac{\ell}{e} c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] = -[-F_{\Delta p} + F_{I2x} - F_{I3x}] c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] + A \cos\lambda$$

From which

$$F_{B2x} = \frac{\bar{e}}{c\ell} \left\{ \frac{[+F_{\Delta p} - F_{I2x} + F_{I3x}] c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] + A \cos\lambda}{[\sin\lambda \cos\beta + \cos\lambda \sin\beta]} \right\} \quad (69)$$

Now put equation (68) into equation (49) and

$$\frac{A}{c[\cos\lambda \sin\beta + \sin\lambda \cos\beta]} \sin\lambda = F_p + F_{Ity} - W_t - F_s + \mu \left(\frac{2\bar{e} + \ell}{e} \right) F_{B2x}$$

$$A \sin\lambda = [F_p + F_{Ity} - W_t - F_s] c[\cos\lambda \sin\beta + \sin\lambda \cos\beta] + \mu \left(\frac{2\bar{e} + \ell}{e} \right) F_{B2x} c[\cos\lambda \sin\beta + \sin\lambda \cos\beta]$$

$$A \sin\lambda - [F_p + F_{Ity} - W_t - F_s] c[\cos\lambda \sin\beta + \sin\lambda \cos\beta] = \mu \left(\frac{2\bar{e} + \ell}{e} \right) c[\cos\lambda \sin\beta + \sin\lambda \cos\beta] F_{B2x}$$

and rearranging terms is found

$$F_{B2x} = \frac{A \sin\lambda - [F_p + F_{Ity} - W_t - F_s] c[\cos\lambda \sin\beta + \sin\lambda \cos\beta]}{\frac{\mu c}{e} (2\bar{e} + \ell) [\cos\lambda \sin\beta + \sin\lambda \cos\beta]} \quad (70)$$

Now equate equation (69) and equation (70) and solve for $\tan \lambda(t)$.

$$\frac{\bar{e}}{\mu c} \left\{ \frac{A \sin \lambda - [F_p + F_{Ity} - W_t - F_s] c [\cos \lambda \sin \beta + \sin \lambda \cos \beta]}{(2\bar{e} + \ell) [\cos \lambda \sin \beta + \sin \lambda \cos \beta]} \right\} = \frac{\bar{e}}{c \ell} \left\{ \frac{[F_{\Delta p} - F_{I2x} + F_{I3x}] c [\cos \lambda \sin \beta + \sin \lambda \cos \beta] + A \cos \lambda}{[\cos \lambda \sin \beta + \sin \lambda \cos \beta]} \right\}$$

$$\frac{A \sin \lambda}{\mu (2\bar{e} + \ell)} - \frac{c [F_p + F_{Ity} - W_t - F_s] [\cos \lambda \sin \beta + \sin \lambda \cos \beta]}{\mu (2\bar{e} + \ell)} = \frac{c}{\ell} [F_{\Delta p} - F_{I2x} + F_{I3x}] [\cos \lambda \sin \beta + \sin \lambda \cos \beta] + \frac{A}{\ell} \cos \lambda$$

$$\frac{A \sin \lambda}{\mu (2\bar{e} + \ell)} - \frac{A \cos \lambda}{\ell} = \frac{c}{\ell} [F_{\Delta p} - F_{I2x} + F_{I3x}] + \frac{c [F_p + F_{Ity} - W_t - F_s]}{\mu (2\bar{e} + \ell)} (\cos \lambda \sin \beta + \sin \lambda \cos \beta)$$

$$\frac{A}{\mu \ell (2\bar{e} + \ell)} (\ell \sin \lambda - \mu (2\bar{e} + \ell) \cos \lambda) = B (\cos \lambda \sin \beta + \sin \lambda \cos \beta) \quad (71)$$

where

$$D = \frac{A}{\mu \ell (2\bar{e} + \ell)}, \quad B = \left\{ \frac{c}{\ell} [F_{\Delta p} - F_{I2x} + F_{I3x}] + \frac{c [F_p + F_{Ity} - W_t + F_s]}{\mu (2\bar{e} + \ell)} \right\} \quad (72)$$

Then equation (71) becomes

$$D \ell \sin \lambda - D \mu (2\bar{e} + \ell) \cos \lambda = B \cos \lambda \sin \beta + B \sin \lambda \cos \beta$$

$$D \ell \sin \lambda - B \sin \lambda \cos \beta = B \cos \lambda \sin \beta + D \mu (2\bar{e} + \ell) \cos \lambda$$

and by collecting terms

$$\sin \lambda (D \ell - B \cos \beta) = \cos \lambda [B \sin \beta + D \mu (2\bar{e} + \ell)]$$

$$\frac{\sin \lambda}{\cos \lambda} = \frac{[B \sin \beta + D \mu (2\bar{e} + \ell)]}{[D \ell - B \cos \beta]} = \tan \lambda(t) \quad (73)$$

For which is found the initial value for $\lambda(t)$ in terms of the geometry and the applied forces of the system.

The foregoing equations are valid as long as

$$|\bar{y} \sin (\beta+\Delta)| > |c \sin \beta|$$

in equation (68a)

and the resulting moment (around point B for link 2) will be as derived. If however,

$$|c \sin \beta| > |\bar{y} \sin (\beta+\Delta)|$$

in equation (68a)

then the direction of the moment around point B is reversed, as can be seen in Figure 20, and the equation for $A(t)$, equation (68a), and $\lambda(t)$, equation (73) must be modified to equation (77) and equation (86). This, therefore, forms the criterion determining the set of equations with which to find $A(t)$ and $\lambda(t)$.

- I. If $|\bar{y} \sin (\beta+\Delta)| > |c \sin \beta|$ then use equation (69) and (73)
- II. If $|c \sin \beta| > |\bar{y} \sin (\beta+\Delta)|$ then use equation (77) and (86).

FIGURE 20

Forces and Geometry - Link 2

If

$$|c \sin \beta| > |\bar{y} \sin(\beta+\Delta)|$$

then rederive expressions for $\Sigma F=0$ and $\Sigma M=0$.

For Link 2

$$\begin{aligned} \Sigma M_B = 0 = & +(F_A \overleftarrow{\cos \lambda})c \sin \beta + (F_A \overrightarrow{\sin \lambda})c \cos \beta - W_2 \left\{ c \overrightarrow{\cos \beta} - \sqrt{g^2+h^2} \cos(\beta+\Delta) \right\} \\ & - [F_{\Delta p} - F_{I2} \cos \Gamma] [c \sin \beta - \bar{y} \sin(\beta+\Delta)] + F_{I2} \sin \Gamma [c \overleftarrow{\cos \beta} - \bar{y} \cos(\beta+\Delta)] \quad (74) \end{aligned}$$

Rearranging terms is found

$$\begin{aligned} F_A [\cos \lambda c \sin \beta + \sin \lambda c \cos \beta] = & W_2 c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta) \\ & + [F_{\Delta p} - F_{I2} \cos \Gamma] [c \sin \beta - \bar{y} \sin(\beta+\Delta)] \\ & - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)] \end{aligned}$$

From which F_A is found as

$$F_A = \frac{W_2 [c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + [F_{\Delta p} - F_{I2} \cos \Gamma] [c \sin \beta - \bar{y} \sin(\beta+\Delta)] - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)]}{c [\cos \lambda \sin \beta + \sin \lambda \cos \beta]} \quad (75)$$

Now let

$$F_A = \frac{A}{c [\cos \lambda \sin \beta + \sin \lambda \cos \beta]} \quad (76)$$

Where A is defined as

$$\begin{aligned} A = & W_2 [c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + [F_{\Delta p} - F_{I2} \cos \Gamma] [c \sin \beta - \bar{y} \sin(\beta+\Delta)] \\ & - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)] \quad (77) \end{aligned}$$

Now by a new external force diagram and $\Sigma F = 0$.

FIGURE 21

Summation of External Forces

Is found

$$\Sigma F_x = 0 = F_{\Delta p} - F_A \cos \lambda - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x} \quad (78)$$

$$\Sigma F_y = 0 = F_p + F_{B1y} + F_{B2y} + F_{I2y} - W_y - F_s + F_A \sin \lambda \quad (79)$$

From equation (78) is found

$$F_A \cos \lambda = F_{\Delta p} - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x} \quad (80)$$

And from equation (79) is found

$$- F_A \sin \lambda = F_p + F_{B1y} + F_{B2y} + F_{Ity} - w_t - F_s \quad (81)$$

Now substituting equation (64) into equation (80)

$$F_{B1x} = F_{B2x} \left(\frac{\bar{e} + \ell}{\bar{e}} \right) \quad (64)$$

is found

$$F_A \cos \lambda = F_{\Delta p} - \left(\frac{\bar{e} + \ell}{\bar{e}} \right) F_{B2x} - F_{I2x} + F_{B2x} + F_{I3x}$$

and hence

$$F_A \cos \lambda = F_{\Delta p} - \left(\frac{\ell}{\bar{e}} \right) F_{B2x} - F_{I2x} + F_{I3x} \quad (82)$$

and substituting equation (64) into equation (81) and $F_{By} = \mu F_{Bx}$ then

$$- F_A \sin \lambda = F_p + F_{Ity} - w_t - F_s + \mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) F_{B2x} \quad (83)$$

From equation (76)

$$F_A = \frac{A}{c[\cos \lambda \sin \beta + \sin \lambda \cos \beta]} \quad (76)$$

with A defined as in equation (77).

Now solve equation (80), (81), and (76) simultaneously as was done in the previous evaluation of $\tan \lambda(t)$.

Put equation (76) into equation (82)

$$\frac{A}{c[\cos\lambda \sin\beta + \sin\lambda \cos\beta]} \cos\lambda = F_{\Delta p} - \left(\frac{\ell}{\bar{e}}\right) F_{B2x} - F_{I2x} + F_{I3x}$$

$$A \cos\lambda = -c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] \left\{ F_{\Delta p} - F_{I2x} + F_{I3x} \right\} + \left(\frac{\ell}{\bar{e}}\right) F_{B2x} c[\sin\lambda \cos\beta + \cos\lambda \sin\beta]$$

$$\left(\frac{\ell}{\bar{e}}\right) F_{B2x} c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] = +c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] F_{\Delta p} - F_{I2x} + F_{I3x} + A \cos\lambda$$

and rearranging terms we find

$$F_{B2x} = \left(\frac{\bar{e}}{c\ell}\right) \left\{ \frac{[F_{\Delta p} - F_{I2x} + F_{I3x}] c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] + A \cos\lambda}{[\sin\lambda \cos\beta + \cos\lambda \sin\beta]} \right\} \quad (84)$$

Now put equation (76) into equation (81)

$$\frac{A}{-c[\sin\lambda \cos\beta + \cos\lambda \sin\beta]} \sin\lambda = F_p + F_{Ity} - W_t - F_s + \mu \left(\frac{2\bar{e} + \ell}{\bar{e}}\right) F_{B2x}$$

$$A \sin\lambda = -[F_p + F_{Ity} - W_t - F_s] c[\sin\lambda \cos\beta + \cos\lambda \sin\beta] - \mu \left(\frac{2\bar{e} + \ell}{\bar{e}}\right) F_{B2x} c[\sin\lambda \cos\beta + \cos\lambda \sin\beta]$$

$$\left\{ \frac{A \sin\lambda + [F_p + F_{Ity} - W_t - F_s] c[\sin\lambda \cos\beta + \cos\lambda \sin\beta]}{-\frac{\mu c}{\bar{e}} (2\bar{e} + \ell) [\sin\lambda \cos\beta + \cos\lambda \sin\beta]} \right\} = F_{B2x} \quad (85)$$

Now equate equation (84) and equation (85) and solve for the $\tan \lambda(t)$

$$\frac{\bar{e}}{\mu c} \left\{ \frac{A \sin \lambda + [F_p + F_{Ity} - W_t - F_s] c [\sin \lambda \cos \beta + \cos \lambda \sin \beta]}{(2\bar{e} + \ell) [\sin \lambda \cos \beta + \cos \lambda \sin \beta]} \right\} = \left(\frac{\bar{e}}{c \ell} \right) \left\{ \frac{[F_{\Delta p} - F_{I2x} + F_{I3x}] c [\sin \lambda \cos \beta + \cos \lambda \sin \beta] + A \cos \lambda}{[\sin \lambda \cos \beta + \cos \lambda \sin \beta]} \right\}$$

$$- \frac{A \sin \lambda}{\mu (2\bar{e} + \ell)} - \frac{c [F_p + F_{Ity} - W_t - F_s] [\sin \lambda \cos \beta + \cos \lambda \sin \beta]}{\mu (2\bar{e} + \ell)} = \left(\frac{c}{\ell} \right) [F_{\Delta p} - F_{I2x} + F_{I3x}] [\sin \lambda \cos \beta + \cos \lambda \sin \beta] - \frac{A}{\ell} \cos \lambda$$

$$- \frac{A \sin \lambda}{\mu (2\bar{e} + \ell)} + \frac{A}{\ell} \cos \lambda = \left\{ \left(\frac{c}{\ell} \right) [F_{\Delta p} - F_{I2x} + F_{I3x}] + \frac{c}{\mu (2\bar{e} + \ell)} [F_p + F_{Ity} - W_t - F_s] \right\} [\sin \lambda \cos \beta + \cos \lambda \sin \beta]$$

$$\frac{A [-\ell \sin \lambda + \mu (2\bar{e} + \ell) \cos \lambda]}{\mu \ell (2\bar{e} + \ell)} = B [\sin \lambda \cos \beta + \cos \lambda \sin \beta]$$

Let

$$D = \frac{A}{\mu \ell (2\bar{e} + \ell)}$$

and

$$B = \left\{ \frac{c}{\ell} [F_{\Delta p} - F_{I2x} + F_{I3x}] + \frac{c}{\mu (2\bar{e} + \ell)} [F_p + F_{Ity} - W_t - F_s] \right\}$$

and the equation becomes

$$- D \ell \sin \lambda + D \mu (2\bar{e} + \ell) \cos \lambda = B \cos \beta \sin \lambda + B \sin \beta \cos \lambda$$

$$- D \ell \sin \lambda - B \cos \beta \sin \lambda = B \sin \beta \cos \lambda - D \mu (2\bar{e} + \ell) \cos \lambda$$

$$- \sin \lambda [D \ell + B \cos \beta] = [B \sin \beta - D \mu (2\bar{e} + \ell)] \cos \lambda$$

and by rearranging and collecting terms

$$\tan \lambda = \left[\frac{B \sin \beta - D \mu (2\bar{e} + \ell)}{B \cos \beta - D \ell} \right] \quad (86)$$

Equation (86) is to be used in the solution of $\lambda(t)$ where

$$|c \sin \beta| > |\bar{y} \sin(\beta + \Delta)|$$

With the value of $\lambda(t)$ necessary for the initial iteration found by either equation (73) or equation (86), the friction circles are applied at each turning joint. The resultant force at each joint now becomes tangent to the friction circle and is directed so as its frictional torque opposes the relative motion of the two links attached at that joint. For case I then rederive the necessary expression for $\lambda(t)$.

FIGURE 22

$$z = \left[C + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta)$$

Friction Circle - Point A

The other forces on the links are as they were in the previous analysis. But now with the friction circles included, a new analysis is necessary due to the frictional torque at each joint.

Link 2

Using $\Sigma F = 0$ and $\Sigma M = 0$ is found

$$\begin{aligned} \Sigma M_B = 0 = & F_A \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta) \\ & + W_2 c \cos \beta - \sqrt{g^2 + h^2} \cos(\beta + \Delta) - (F_{\Delta p} - F_{I2} \cos \Gamma) [\bar{y} \sin(\beta + \Delta) - c \sin \beta] \\ & - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta + \Delta)] + F_{32} (\mu R_B) = 0 \end{aligned} \quad (87)$$

$$\Sigma F_X = 0 = -F_{32} \cos \eta - F_{I2} \cos \Gamma + F_{\Delta p} + F_A \cos \lambda = 0$$

$$F_{32} \cos \eta = F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p} \quad (88)$$

$$\Sigma F_Y = 0 = F_{32} \sin \eta - W_2 + F_{I2} \sin \Gamma - F_A \sin \lambda$$

$$F_{32} \sin \eta = F_A \sin \lambda + W_2 - F_{I2} \sin \Gamma \quad (89)$$

Now from equation (87) is found

$$\begin{aligned} F_A \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta) = & -W_2 c \cos \beta - \sqrt{g^2 + h^2} \cos(\beta + \Delta) \\ & + (F_{\Delta p} - F_{I2} \cos \Gamma) [\bar{y} \sin(\beta + \Delta) - c \sin \beta] \\ & + F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta + \Delta)] - F_{32} \mu R_B \end{aligned}$$

and by rearranging terms

$$F_A = \frac{-W_2[c \cos\beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + (F_{\Delta p} - F_{I2} \cos\Gamma)[\bar{y} \sin(\beta+\Delta) - c \sin\beta]}{+ F_{I2} \sin\Gamma[c \cos\beta - \bar{y} \cos(\beta+\Delta)] - F_{32} \mu R_B} \quad (90)$$

$$\left[c + \frac{\mu R_A}{\sin(|\lambda|+\beta)} \right] \sin(|\lambda|+\beta)$$

Link 3

$$\Sigma M_B = 0 = W_3 \overrightarrow{d \sin\alpha} - F_{I3} \overleftarrow{\sin\theta} L_2 \sin\alpha + F_{I3} \cos\theta L_2 \cos\alpha -$$

$$- F_{43} \left(d - \frac{\mu R_C}{\sin(90-\gamma+\xi)} \right) \sin(90-\gamma) - F_{23} \overleftarrow{\mu R_B} \quad (91)$$

$$\Sigma F_x = + F_{23} \cos\eta + F_{I3} \cos\theta - F_{43} \cos\xi = 0$$

$$F_{43} \cos\xi = F_{23} \cos\eta + F_{I3} \cos\theta \quad (92)$$

$$\Sigma F_y = 0 = - F_{23} \sin\eta - W_3 + F_{I3} \sin\theta + F_{43} \sin\xi$$

$$F_{43} \sin\xi = + F_{23} \sin\eta + W_3 - F_{I3} \sin\theta \quad (93)$$

Link 4

$$\Sigma M_C = 0 = - F_{B1x} \overleftarrow{\bar{e}} + F_{B2x} (\overleftarrow{\bar{e}+\ell}) - F_{34} \overleftarrow{\mu R_C}$$

$$F_{B1x} = F_{B2x} \frac{(\bar{e}+\ell)}{\bar{e}} - \frac{F_{34} \mu R_C}{\bar{e}} \quad (94)$$

FIGURE 23

Resultant Forces - Point A

FIGURE 24

Friction Circles and Forces - Link 2

FIGURE 25

Forces and Friction Circles - Link 3

$$\Sigma F_x = 0 = F_{34} \cos \xi - F_{B1x} + F_{B2x} = 0$$

$$F_{B1x} = F_{34} \cos \xi + F_{B2x} \quad (95)$$

$$\Sigma F_y = 0 = -F_{34} \sin \xi - W_4 + F_{I4} + F_{I5} + F_R + \mu F_{B1x} + \mu F_{B2x} = 0 \quad (96)$$

Now since the summation of all external forces must equal zero, then the vector force diagram must close as shown:

FIGURE 26

Summation of External Forces

$$\Sigma F_x = 0 = F_{\Delta P} + F_A \cos |\lambda| - F_{B1x} - F_{I2x} + F_{I3x}$$

$$F_A \cos |\lambda| = - [F_{\Delta P} - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x}] \quad (97)$$

$$\Sigma F_y = 0 = F_p + F_{Bly} + F_{B2y} + F_{Ity} - W_t - F_s - F_A \sin \lambda$$

$$F_A \sin |\lambda| = F_p + F_{Bly} + F_{B2y} + F_{Ity} - W_t - F_s \quad (98)$$

Now substitute equation (94) into equation (97) and that

$$F_{B1x} = \left(\frac{\bar{e} + \ell}{\bar{e}}\right) F_{B2x}$$

$$F_A \cos |\lambda| = - [F_{\Delta p} - \left(\frac{\bar{e} + \ell}{\bar{e}}\right) F_{I2x} - F_{B2x} + F_{B2x} + F_{I3x} + F_{34} \mu R_c]$$

$$F_A \cos |\lambda| = - F_{\Delta p} + \left(\frac{\ell}{\bar{e}}\right) F_{B2x} + F_{I2x} - F_{I3x} - F_{34} \mu R_c \quad (99)$$

Substitute equation (94) into equation (98) and is found

$$F_A \sin |\lambda| = F_p + F_{Ity} - W_t - F_s + \mu F_{B2x} + \mu \left(\frac{\bar{e} + \ell}{\bar{e}}\right) F_{B2x} - \frac{F_{34} \mu^2 R_c}{\bar{e}}$$

$$F_A \sin |\lambda| = F_p + F_{Ity} - W_t - F_s + \mu \left(\frac{2\bar{e} + \ell}{\bar{e}}\right) F_{B2x} - \frac{F_{34} \mu^2 R_c}{\bar{e}} \quad (100)$$

In order to solve for F_A equation (87) is used substituting A for its equivalent, rearranging terms, and squaring both sides of the equation we find

$$F_A \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta) - A = 0 \quad F_{32} \mu R_B$$

$$F_A^2 \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right]^2 \sin^2(|\lambda| + \beta) - 2AF_A \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta) + A^2 =$$

$$\mu R_B^2 \left\{ [F_A \sin |\lambda| + W_2 - F_{I2} \sin \tau]^2 + [F_A \cos |\lambda| - F_{I2} \cos \tau + F_{\Delta p}]^2 \right\} \quad (101)$$

Squaring the right portion

$$\begin{aligned}
& \overline{\mu R_B^2} \left\{ F_A^2 \sin^2 |\lambda| + 2 F_A W_2 \sin \lambda - 2 F_A (\sin |\lambda|) F_{I2} \sin \Gamma - 2 W_2 F_{I2} \sin \Gamma \right. \\
& + W_2^2 + F_{I2}^2 \sin^2 \Gamma + F_A^2 \cos^2 |\lambda| - 2 F_A \cos(\lambda) F_{I2} \cos \Gamma + 2 F_A \cos(\lambda) F_{\Delta p} \\
& - 2 F_{I2} \cos \Gamma F_{\Delta p} + F_{I2}^2 \cos^3 \Gamma + F_{\Delta p}^2 = \overline{\mu R_B^2} F_A^2 + F_{I2}^2 + 2 F_A [\sin(|\lambda|) F_{I2} \sin \Gamma \\
& + W_2 \sin(|\lambda|) - \cos(|\lambda|) F_{I2} \cos \Gamma + \cos(\lambda) F_{\Delta p}] + [- 2 W_2 F_{I2} \sin \Gamma \\
& \left. - 2 F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2 + W_2^2] \right\}
\end{aligned}$$

And collecting terms the right side of equation (101) becomes

$$\begin{aligned}
& \overline{\mu R_B^2} \left\{ F_A^2 + 2 F_A \sin(|\lambda|) (W_2 - F_{I2} \sin \Gamma) + \cos(|\lambda|) (F_{\Delta p} - F_{I2} \cos \Gamma) \right. \\
& \left. - 2 W_2 F_{I2} \sin \Gamma - 2 F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2 + W_2^2 \right\} \quad (102)
\end{aligned}$$

Squaring the right side of equation (101) and rearranging terms the required quadratic form in F_A results

$$\begin{aligned}
& F_A^2 \left\{ \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right]^2 \sin^2(|\lambda| + \beta) - (\mu R_B)^2 \right\} - F_A \left\{ 2 A c + \frac{R_A}{\sin(|\lambda| + \beta)} \sin(|\lambda| + \beta) \right. \\
& \left. + (\mu R_B)^2 [\sin(|\lambda|) (W_2 - F_{I2} \sin \Gamma) + \cos(|\lambda|) (F_{\Delta p} - F_{I2} \cos \Gamma)] \right\} + \\
& \left\{ A^2 - \overline{\mu R_B^2} [F_{I2}^2 - 2 W_2 F_{I2} \sin \Gamma - 2 F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2 + W_2^2] \right\} = 0 \\
& F_A^2 - F_A \left\{ 2 A \frac{\left[c + \frac{R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta) + 2 (\mu R_B)^2 \sin(|\lambda|) (W_2 - F_{I2} \sin \Gamma) + \cos(|\lambda|) (F_{\Delta p} - F_{I2} \cos \Gamma)}{\left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right]^2 \sin^2(|\lambda| + \beta) - \overline{\mu R_B^2}} \right\} \\
& + \frac{A^2 - \overline{\mu R_B^2} [F_{I2}^2 - 2 W_2 F_{I2} \sin \Gamma - 2 F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2 + W_2^2]}{\left\{ \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right]^2 \sin^2(|\lambda| + \beta) - \overline{\mu R_B^2} \right\}} = 0 \quad (103)
\end{aligned}$$

Now using the quadratic equation to solve for R_A from equation (103) and letting

$$B = \frac{2A \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right] \sin(|\lambda| + \beta) + 2(\mu R_B)^2 [\sin(|\lambda|)(W_2 - F_{I2} \sin \Gamma)] + \cos(|\lambda|)(F_{\Delta p} - F_{I2} \cos \Gamma)}{\left\{ \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right]^2 \sin^2[|\lambda| + \beta] - (\mu R_B)^2 \right\}} \quad (104)$$

$$C = \frac{A^2 - (\mu R_B)^2 [F_{I2}^2 - 2W_2 F_{I2} \sin \Gamma - 2F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2 + W_2^2]}{\left\{ \left[c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right]^2 \sin^2[|\lambda| + \beta] - (\mu R_B)^2 \right\}} \quad (105)$$

$$F_A = \frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \quad (106)$$

Now put equation (106) and (94) into equation (97) and solve for F_{B2x}

$$\begin{aligned} \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos |\lambda| &= -F_{\Delta p} + \left(\frac{\ell}{e}\right) F_{B2x} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \\ \left(\frac{\ell}{e}\right) F_{B2x} &= \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos |\lambda| + F_{\Delta p} - F_{I2x} + F_{I3x} + F_{34} \mu R_C \\ F_{B2x} &= \left(\frac{e}{\ell}\right) \left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos |\lambda| + F_{\Delta p} - F_{I2x} + F_{I3x} + F_{34} \mu R_C \right\} \quad (107) \end{aligned}$$

And by using equation (100) solve for F_{B2x}

$$F_A \sin|\lambda| = F_p + F_{Ity} - W_t - F_s + \mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) F_{B2x} - \frac{F_{34} \mu^2 R_C}{\bar{e}}$$

$$\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| = F_p + F_{Ity} - W_t - F_s + \mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) F_{B2x} - \frac{F_{34} \mu^2 R_C}{\bar{e}}$$

$$\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) F_{B2x} = \left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| - F_p - F_{Ity} + W_t + F_s + \frac{F_{34} \mu^2 R_C}{\bar{e}} \right\}$$

$$F_{B2x} = \left\{ \frac{\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| - F_p - F_{Ity} + W_t + F_s + \frac{F_{34} \mu^2 R_C}{\bar{e}}}{\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right)} \right\} \quad (108)$$

Now equating (107) and (108) eliminating F_{B2x} and solving for $\lambda(t)$

$$\left(\frac{\bar{e}}{\ell} \right) \left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| + F_{\Delta p} - F_{I2x} + F_{I3x} + F_{34} \mu R_C \right\} =$$

$$\left\{ \frac{\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| - F_p - F_{Ity} + F_s + \left(\frac{F_{34} \mu^2 R_C}{\bar{e}} \right)}{\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right)} \right\}$$

$$\left\{ -\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| - \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| \right\} = \left\{ +\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) \right\}$$

$$\left[F_{\Delta p} + F_{I2x} + F_{I3x} - F_{34} \mu R_C - F_p - F_{Ity} + W_t + F_s + \left(\frac{F_{34} \mu^2 R_C}{\bar{e}} \right) \right] \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| + \sin|\lambda| \right\} = \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x}] \right. \\ \left. F_p + F_{Ity} - W_t - F_s - F_{34} \mu^2 R_C \left(\frac{2\bar{e} + \ell}{\ell} + \frac{1}{\bar{e}} \right) \right\}$$

$$\begin{aligned}
& \left. F_p - F_{Ity} + W_t + F_s + \frac{F_{34} \mu^2 R_C}{e} \right\} \\
\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] & \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| + \sin|\lambda| \right\} = \left\{ + \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} + F_{I3x}] \right. \\
& \left. + F_p + F_{Ity} - W_t - F_s - F_{34} \mu^2 R_C \left[\frac{1}{e} + \left(\frac{2\bar{e} + \ell}{\ell} \right) \right] \right\} \quad (109)
\end{aligned}$$

Now $F_{34} \mu^2 R_C$ must be evaluated in terms of F_A and λ in order to solve for $\lambda(t)$ from equation (109).

Since

$$F_{43} = \sqrt{F_{43}^2 \cos^2 \xi + F_{43}^2 \sin^2 \xi} \quad (110)$$

Then substituting from equation (92) for $F_{43} \cos \xi$ and from equation (93) for $R_{43} \sin \xi$, equation (110) becomes

$$F_{43} = \sqrt{[F_{23} \cos \eta + F_{I3} \cos \theta]^2 + [F_{23} \sin \eta + W_3 - F_{I3} \sin \theta]^2} \quad (111)$$

Substituting from equation (88) for $F_{23} \cos \eta$ and from equation (89) for $F_{23} \sin \eta$, equation (111) becomes

$$F_{43} = \sqrt{[F_A \cos|\lambda| - F_{I2} \cos \Gamma + F_{\Delta p} + F_{I3} \cos \theta]^2 + [F_A \sin|\lambda| + W_2 - F_{I2} \sin \Gamma + W_3 - F_{I3} \sin \theta]^2} \quad (112)$$

and substituting equation (106) for F_A into equation (112) is found

$$\begin{aligned}
F_{43} = & \sqrt{\left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| - F_{I2} \cos \Gamma + F_{\Delta p} + F_{I3} \cos \theta \right\}^2} \\
& + \left\{ \left[\frac{B}{2} \pm \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| + W_2 - F_{I2} \sin \Gamma + W_3 - F_{I3} \sin \theta \right\}^2 \quad (113)
\end{aligned}$$

This is the expression for F_{43} which is used in equation (109). On substitution of equation (113) into equation (109) is found equation (114)

(Case I)

$$\begin{aligned} & \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| - \sin|\lambda| \right\} - \mu^2 R_C \left[\frac{1}{\bar{e}} + \left(\frac{2\bar{e} + \ell}{\ell} \right) \right] \\ & \sqrt{\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| - F_{I2} \cos\Gamma + F_{\Delta p} + F_{I3} \cos\theta}^2 \\ & + \left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| + W_2 + F_{I2} \sin\Gamma + W_3 - F_{I3} \sin\theta \right\}^2 = \\ & \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x}] + F_p + F_{Ity} - W_t - F_s \right\} \end{aligned} \quad (114)$$

This is the equation which must be solved for $\lambda(t)$ in case I; i.e.,

$$|\bar{y} \sin(\beta + \Delta)| > |C \sin \beta|$$

where

$$B = \frac{2A \left(c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right) \sin(|\lambda| + \beta) + 2(\mu R_B)^2 [\sin|\lambda| (W_2 - F_{I2} \sin\Gamma)] + \cos|\lambda| [(F_{\Delta p} - F_{I2} \cos\Gamma)]}{\left[\left(c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right)^2 \sin^2(|\lambda| + \beta) - \mu R_B^2 \right]} \quad (115)$$

$$C = \frac{A^2 - (\mu R_B)^2 [F_{I2}^2 - 2W_2 F_{I2} \sin\Gamma - 2F_{\Delta p} F_{I2} \cos\Gamma + F_{\Delta p}^2 + W_2^2]}{\left(c + \frac{\mu R_A}{\sin(|\lambda| + \beta)} \right)^2 \sin^2(|\lambda| + \beta) - \mu R_B^2} \quad (116)$$

$$A = W_2[c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + [F_{\Delta p} - F_{I2} \cos \Gamma][c \sin \beta - \bar{y} \sin(\beta+\Delta)] \\ - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)]$$

Equation (114) is to be solved for $\lambda(t)$ when $|\bar{y} \sin(\beta+\Delta)| \geq |C \sin \beta|$ and includes the effects of friction in the turning joints. Equation (114) is so involved that the Bolzano iteration technique was used for solution using the value of $\lambda(t)$ found in equation (73) as a first trial value. For Case II $|c \sin \beta| > |\bar{y} \sin(\beta+\Delta)|$ and the derivation of $\lambda(t)$ follows the same method as in Case I. The only change is that the moment of F_A around point B is reversed in direction and the $F \cos \lambda$ component is reversed in direction. Using $\Sigma F = 0$ and $\Sigma M = 0$ is found

$$\Sigma M_B = 0 = +F_A \left[c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right] \sin(|\lambda| - \beta) + W_2 [c \cos \beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] \\ - (F_{\Delta p} - F_{I2} \cos \Gamma) [\bar{y} \sin(\beta+\Delta) - c \sin \beta] - F_{I2} \sin \Gamma [c \cos \beta - \bar{y} \cos(\beta+\Delta)] + F_{32} \mu R_B = 0 \quad (117)$$

$$\Sigma F_x = -F_{32} \cos \eta - F_{I2} \cos \Gamma + F_{\Delta p} - F_A \cos \lambda = 0$$

$$F_{32} \cos \eta = -F_A \cos \lambda - F_{I2} \cos \Gamma + F_{\Delta p} \quad (118)$$

$$\Sigma F_y = 0 = F_{32} \sin \eta - W_2 + F_{I2} \sin \Gamma - F_A \sin \lambda$$

$$F_{32} \sin \eta = F_A \sin \lambda + W_2 - F_{I2} \sin \Gamma \quad (119)$$

Links 3 and 4 remain the same as before in Case I. From the summation of all external forces is found

$$\Sigma F_x = 0 = F_{\Delta p} - F_A \cos|\lambda| - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x}$$

$$F_A \cos|\lambda| = F_{\Delta p} - F_{B1x} - F_{I2x} + F_{B2x} + F_{I3x} \quad (120)$$

$$\Sigma F_y = 0 = F_p + F_{B1y} + F_{B2y} + F_{Ity} - W_t - F_s - F_A \sin|\lambda|$$

$$F_A \sin|\lambda| = F_p + F_{B1y} + F_{B2y} + F_{Ity} - W_t - F_s \quad (121)$$

Now substitute equation (94) into equation (120)

$$F_A \cos|\lambda| = F_{\Delta p} - \left(\frac{\bar{e} + l}{\bar{e}} \right) F_{B2x} - F_{I2x} + F_{B2x} + F_{I3x} + F_{34} \mu R_C$$

$$F_A \cos|\lambda| = F_{\Delta p} - \left(\frac{l}{\bar{e}} \right) F_{B2x} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \quad (122)$$

Now substitute equation (94) into equation (121)

$$F_A \sin|\lambda| = F_p + F_{Ity} - W_t - F_s + \mu \left(\frac{2\bar{e} + l}{\bar{e}} \right) F_{B2x} - \frac{F_{34} \mu^2 R_C}{\bar{e}} \quad (123)$$

Now by equation (117) is found, by rearranging terms and squaring both sides of the equation, that

$$F_A^2 \left[c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right]^2 \sin^2(|\lambda| - \beta) - 2AF_A \left[c + \frac{R_A}{\sin(|\lambda| - \beta)} \right] \sin(|\lambda| - \beta) + A^2$$

$$(\mu R_B)^2 \left[\sqrt{[F_A \sin|\lambda| + W_2 - F_{I2} \sin \Gamma]^2 + [-F_A \cos|\lambda| - F_{I2} \cos \Gamma + F_{\Delta p}]^2} \right]^2 \quad (124)$$

Squaring the right hand portion of this equation is found

$$\begin{aligned}
& (\mu R_B)^2 \left\{ F_A^2 \sin^2 |\lambda| + 2F_A W_2 \sin |\lambda| - [2F_A \sin \Gamma] F_{I2} \sin |\lambda| - 2W_2 F_{I2} \sin \Gamma + W_2^2 + F_{I2}^2 \sin^2 \Gamma \right. \\
& \quad \left. + F_A \cos^2 |\lambda| + 2F_A (\cos |\lambda|) F_{I2} \cos \Gamma - 2F_A (\cos |\lambda|) F_{\Delta p} - 2F_{I2} (\cos \Gamma) F_{\Delta p} + F_{I2}^2 \cos^2 \Gamma + F_{\Delta p}^2 \right\} \\
& = (\mu R_B)^2 \left\{ F_A^2 + F_{I2}^2 + 2F_A [W_2 (\sin |\lambda|) - \sin |\lambda| F_{I2} \sin \Gamma + (\cos |\lambda|) F_{I2} \cos \Gamma - \cos |\lambda| F_{\Delta p}] \right. \\
& \quad \left. + [-2W_2 F_{I2} \sin \Gamma + W_2^2 - 2F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2 - W_2^2] \right\} \quad (125)
\end{aligned}$$

The left hand side of the equation would be the same as in case I; therefore, rearranging and collecting like terms

$$\begin{aligned}
& F_A^2 \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right)^2 \sin^2(|\lambda| - \beta) - \overline{\mu R_B^2} - (2A) F_A \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right) \\
& \quad \sin(|\lambda| - \beta) + 2\overline{\mu R_B^2} [\sin |\lambda| (W_2 - F_{I2} \sin \Gamma) + (\cos |\lambda|) (F_{I2} \cos \Gamma - F_{\Delta p})] \\
& \quad + \left\{ A^2 - \overline{\mu R_B^2} [F_{I2}^2 - 2W_2 F_{I2} \sin \Gamma + W_2^2 - 2F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2] \right\} = 0 \quad (126)
\end{aligned}$$

$$\begin{aligned}
& F_A^2 - F_A \frac{2A \left\{ \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right) \sin(|\lambda| - \beta) + 2\overline{\mu R_B^2} [\sin |\lambda| (W_2 - F_{I2} \sin \Gamma) + \cos |\lambda| (F_{I2} \cos \Gamma - F_{\Delta p})] \right\}}{\left\{ \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right)^2 \sin^2(|\lambda| - \beta) - \overline{\mu R_B^2} \right\}} \\
& \quad + \frac{A^2 - (\mu R_B)^2 [F_{I2}^2 - 2W_2 F_{I2} \sin \Gamma + W_2^2 - 2F_{\Delta p} F_{I2} \cos \Gamma + F_{\Delta p}^2]}{\left\{ \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right)^2 \sin^2(|\lambda| - \beta) - \overline{\mu R_B^2} \right\}} = 0 \quad (127)
\end{aligned}$$

Since equation (126) is in quadratic form it may be solved using the quadratic equation, therefore

$$F_A = \frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \quad (128)$$

where

$$B = \left\{ \frac{2A \left[c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right] \sin(|\lambda| - \beta) + 2(\mu R_B)^2 [\sin(|\lambda|)(W_2 - F_{I2} \sin \Gamma)] + \cos |\lambda| (F_{I2} \cos \Gamma - F_{\Delta p})}{\left\{ \left[c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right]^2 \sin^2(|\lambda| - \beta) - (\mu R_B)^2 \right\}} \right\}$$

$$C = \frac{\{A^2 - (\mu R_B)^2 [F_{I2}^2 - 2W_2 F_{I2} \sin \Gamma + W_2^2 - 2F_{\Delta p} + F_{I2} \cos \Gamma + F_{\Delta p}^2]\}}{\left\{ \left[c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right]^2 \sin^2(|\lambda| - \beta) - (\mu R_B)^2 \right\}}$$

Now put equation (128) into equation (122) in order to solve for F_{B2x}

$$\begin{aligned} \left(\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right) \cos |\lambda| &= F_{\Delta p} - \left(\frac{l}{e} \right) F_{B2x} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \\ \left(\frac{l}{e} \right) F_{B2x} &= - \left(\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right) \cos |\lambda| + F_{\Delta p} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \end{aligned} \quad (129)$$

Rearranging and solving for R_{B2x} , then

$$F_{B2x} = \left(\frac{\bar{e}}{l} \right) \left\{ - \left(\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right) \cos |\lambda| + F_{\Delta p} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \right\} \quad (130)$$

And substituting equation (64) into equation (121) in order to obtain a second equation for R_{B2x} is found

$$F_A \sin|\lambda| = F_p + F_{Ity} - W_t - F_s + \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) F_{B2x} - \frac{F_{34} \mu^2 R_C}{\bar{e}}$$

$$\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| = F_p + F_{Ity} - W_t - F_s + \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) F_{B2x} - \frac{F_{34} \mu^2 R_C}{\bar{e}}$$

Rearranging and collecting terms then

$$F_{B2x} = \frac{\left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| - F_p - F_{Ity} + W_t + F_s + \frac{F_{34} \mu^2 R_C}{\bar{e}} \right\}}{\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right)} \quad (131)$$

Now equating equation (130) and 131) solve for $\lambda(t)$

$$\begin{aligned} & \left(\frac{\bar{e}}{\ell} \right) \left\{ - \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| + F_{\Delta p} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \right\} = \\ & \left\{ \frac{\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| - F_p - F_{Ity} + W_t + F_s + \frac{F_{34} \mu^2 R_C}{\bar{e}}}{\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right)} \right\} \\ & \mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right) \left(\frac{\bar{e}}{\ell} \right) \left\{ - \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| + F_{\Delta p} + F_{I2x} - F_{I3x} - F_{34} \mu R_C \right\} = \left\{ \frac{\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| - F_p - F_{Ity} + W_t + F_s + \frac{F_{34} \mu^2 R_C}{\bar{e}}}{\mu \left(\frac{2\bar{e} + \ell}{\bar{e}} \right)} \right\} \\ & \left\{ - \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos|\lambda| - \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin|\lambda| \right\} = - \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x} - F_{34} \mu R_C] - F_p - F_{Ity} + W_t + F_s - \left(\frac{F_{34} \mu^2 R_C}{\bar{e}} \right) \\ & \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| + \sin|\lambda| \right\} = \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x} - F_{34} \mu R_C] + F_p + F_{Ity} - W_t - F_s - \left(\frac{F_{34} \mu^2 R_C}{\bar{e}} \right) \right\} \\ & \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| + \sin|\lambda| \right\} = \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x}] + F_p + F_{Ity} - W_t - F_s - F_{34} \mu^2 R_C \left[\frac{2\bar{e} + \ell}{\ell} + \frac{1}{\bar{e}} \right] \right\} \quad (132) \end{aligned}$$

Now $F_{34}\mu R_C$ must be evaluated in terms of F_A and $\lambda(t)$.

F_{34} may be found by taking the square root of the sum of the squares of equations (93) and (94).

$$F_{43} \sin \xi = F_{23} \sin \eta + W_3 - F_{I3} \sin \theta \quad (93)$$

$$(F_{43} \sin \xi)^2 = [F_{23} \sin \eta + W_3 - F_{I3} \sin \theta]^2 \quad (133)$$

$$F_{43} \cos \xi = F_{23} \cos \eta + F_{I3} \cos \theta \quad (94)$$

$$(F_{43} \cos \xi)^2 = [F_{23} \cos \eta + F_{I3} \cos \theta]^2 \quad (134)$$

Then

$$F_{43} = \sqrt{(F_{43} \sin \xi)^2 + (F_{43} \cos \xi)^2} \quad (135)$$

and substituting equation (133) and (134) into equation (135)

$$F_{43} = \sqrt{[F_{23} \sin \eta + W_3 - F_{I3} \sin \theta]^2 + [F_{23} \cos \eta + F_{I3} \cos \theta]^2} \quad (136)$$

Now substituting equation (118) and equation (119) for $F_{23} \sin \eta$ and $F_{23} \cos \eta$ results in

$$F_{43} = \sqrt{[-F_A \cos |\lambda| - F_{I2} \cos \tau + F_{\Delta p} + F_{I3} \cos \theta]^2 + [F_A \sin |\lambda| + W_2 - F_{I2} \sin \tau + W_3 - F_{I3} \cos \theta]^2} \quad (137)$$

Now put equation (137) into equation (132) the resultant equation (138) must be solved for $\lambda(t)$

$$\begin{aligned}
& \left(\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right) \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| + \sin|\lambda| \right\} + \mu^2 R_C \left[\left(\frac{2\bar{e} + \ell}{\bar{e}} \right) + \frac{1}{\bar{e}} \right] \\
& \sqrt{ - \left\{ \left(\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right) \cos|\lambda| - F_{I2} \cos\Gamma + F_{\Delta p} + F_{I3} \cos\theta \right\}^2 \left\{ \left(\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right) \sin|\lambda| + W_2 + F_{I2} \sin|\lambda| + W_3 - F_{I3} \sin\theta \right\}^2 - \right. \\
& \quad \left. \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x}] + F_p + F_{Ity} - W_t - F_s \right\}^2 \right. \quad (138)
\end{aligned}$$

where

$$B = \frac{2A \left\{ c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \sin(|\lambda| - \beta) + 2\mu R_B^2 (W_2 - F_{I2} \sin\Gamma) \sin|\lambda| + (F_{I2} \cos\Gamma - F_{\Delta p}) \cos|\lambda| \right\}}{\left\{ \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right)^2 \sin^2(|\lambda| - \beta) - \mu R_B^2 \right\}} \quad (139)$$

$$C = \left\{ \frac{A^2 - \mu R_B^2 [F_{I2}^2 - 2W_2 F_{I2} \sin\Gamma + W_2^2 - 2F_{\Delta p} F_{I2} \cos\Gamma + F_{\Delta p}^2]}{\left\{ \left(c + \frac{\mu R_A}{\sin(|\lambda| - \beta)} \right)^2 \sin^2(|\lambda| - \beta) - \mu R_B^2 \right\}} \right\} \quad (140)$$

$$A = W_2 [\cos\beta - \sqrt{g^2 + h^2} \cos(\beta + \Delta)] + [F_{\Delta p} - F_{I2} \cos\Gamma] [c \sin\beta - \bar{y} \sin(\beta + \Delta)]$$

$$= F_{I2} \sin\Gamma [\cos\beta - \bar{y} \cos(\beta + \Delta)] \quad (141)$$

Equations (138), (139), (140), and (141) are for Case II, $|C \sin\beta| > |\bar{y} \sin(\beta + \Delta)|$, including the effect of friction in the turning joints.

BEARING ANALYSIS

The bearing contact stress analysis follows the analytical method of Radzimovsky^[4], the only deviation being the use of an equivalent length at turning joint A. This was necessary since the loading was not normal to the journal (see Figure 27). The equivalent contact length was found as

$$\ell_e = .880 \sqrt{\frac{|P| R_1 R_2}{(R_2 - R_1)} \left(\frac{E_1 + E_2}{E_1 E_2} \right)} \quad (140)$$

where

$|P|$ = the total force at each joint (from the force analysis).
The absolute value is used to insure a solution whose
whose direction is of no consequence.

R_1 = maximum journal radius

R_2 = minimum bearing radius

E_1, E_2 = Young's Modulus

and

$$P_{\max} = \sqrt{\frac{1}{\pi(1-\mu_1^2)}} \cdot \frac{|P|}{\ell_e} \left(\frac{R_1 + R_2}{R_1 R_2} \right) \left(\frac{E_1 E_2}{E_1 + E_2} \right) \quad (141)$$

where

μ_1 = Poisson's Ratio

ℓ_e = equivalent journal length

$P_{\max}$ = maximum loading in the contact area

The limiting value of the maximum pressure, $P_{\max}$, σ_g , at which the initial fatigue failure in the contact zone is expected, is the critical value of $P_{\max}$ and is denoted by $P_{\max} = \sigma_g$, then

$$\sigma_g = K \sigma_s \quad (142)$$

where

σ_s = yield point in tension of the bearing material

FIGURE 27

Main Bearings of Check Valve

$$K = \frac{1}{A - B \left(\frac{\sigma_s}{\tau_s} \right)^2 + C \left(\frac{\sigma_s}{\tau_s - 1} \right)^2} \quad (143)$$

The coefficient K shows the relationship between the yield point σ_s of the material and the critical pressure σ_g on the surface. The values A, B, and C, depend only upon the position of the point under consideration, while K and hence σ_g depend upon properties of the materials as well as the distance of the layer below the surface. The values of the coefficients are given in Table II.

TABLE II

Coefficients A, B, and C and the Ratio, K, Between Critical Pressure on the Surface and Yield Point of Different Steels, for Various Layers Below Contact Surface

Distance From Surface, x	Coefficients			Ratio $K = \sigma_g / \sigma_s$ for Steel No.					
	A	B	C	1	2	3	4	5	6
0.0	2.560	0.600	0.0000	0.889	1.025	1.003	1.018	0.972	1.026
0.1b	2.365	0.540	0.0213	0.873	0.989	0.971	0.965	0.901	0.931
0.2b	2.161	0.482	0.0380	0.372	0.972	0.961	0.938	0.862	0.881
0.5b	1.528	0.306	0.0655	0.909	0.985	0.976	0.930	0.827	0.8205
0.78b	0.953	0.1482	0.0543	1.046	1.102	1.095	1.039	0.935	0.929
1.0b	0.6856	0.0855	0.0475	1.157	1.125	1.199	1.134	1.020	1.008
1.2b	0.5242	0.0538	0.042	1.275	1.304	1.302	1.227	1.102	1.087
1.5b	0.367	0.0298	0.0317	1.465	1.502	1.499	1.413	1.388	1.251

The critical layer in the contact zone is that one for which the value of σ_g is a maximum. Hence

$$M.S. = \frac{\sigma_g}{p_{\max}} \quad (144)$$

where

M.S. = margin of safety.

In addition to the margin of safety, the stresses are also mapped by solving the expressions for σ_x , σ_y , τ_{xy} at various values of $x(b)$ and $y(b)$. At $x=0$, the equation for stress at the surface or contact is the value of the ordinate, σ_x , assuming parabolic load distribution as shown below. Note that $\sigma_x = \sigma_y$ and $\tau_{xy}=0$ on this surface.

FIGURE 28

Bearing contact zone loading

$$\sigma_x = - \frac{2|P|e^{-u}}{\pi b} \sin\beta - \frac{2|P|}{\pi b} \sin\beta \sinh\alpha \left(1 - \frac{\sinh 2\alpha}{(\cosh 2\alpha - \cos 2\beta)} \right) \quad (147)$$

$$\sigma_{xy} = - \frac{2|P|}{\pi b} \sinh \alpha \sin \beta \left(\frac{\sin 2\beta}{(\cosh 2\alpha - \cos 2\beta)} \right) \quad (148)$$

where

$$\sin \beta = \pm \sqrt{\frac{(b^2 - y^2 - x^2) + (b^2 - y^2 - x^2) + 4b^2 x^2}{2b^2}}$$

$$\sin h \alpha = \pm \sqrt{\frac{-(b^2 - y^2 - x^2) + (b^2 - y^2 - x^2)^2 + 4b^2 x^2}{2b^2}}$$

b = the half width of the contact area and is given by

$$b = \sqrt{\frac{(1-\mu^2)}{\pi} \frac{P}{l_e} \left(\frac{R_1}{R_2 - R_1} \right) \left(\frac{E_1 + E_2}{E_1 E_2} \right)}$$

$$\cos \beta = \sqrt{1 - \sin^2 \beta}$$

$$\cosh \alpha = \sqrt{1 + \sinh^2 \alpha}$$

$$\sin 2\beta = 2 \sin \beta \cos \beta$$

$$\cos 2\beta = 1 - 2 \sin^2 \beta$$

$$\sinh^2 \alpha = 2 \sinh \alpha \cosh \alpha$$

$$\cosh^2 \alpha = \cosh^2 \alpha + \sinh^2 \alpha$$

$$e^{-\alpha} = \cosh \alpha - \sinh \alpha$$

These stress values were mapped at the following values of the variables

$$t = 0, .1, .2 \text{ --- } 1.94 \text{ sec.}$$

$$x = 0, .16, .26, .56, .786, 1.06, 1.26, 1.56 \text{ in.}$$

$$y = \pm 0, .56, 1.06, 1.56, 2.06 \text{ in.}$$

These are shown in Figure 30 for time t = 1.94 seconds and joint A.

FIGURE 29

Contract Zone Stresses

FIGURE 30

Contact Zone Stresses

TABLE III

Constants For Equation (143)

X	A	B	C
0	2.560	0.600	0.0000
.16	2.365	0.540	0.0213
.26	2.161	0.482	0.0380
.56	1.528	0.306	0.0655
.786	0.953	0.1482	0.0543
1.06	0.6856	0.0855	0.0475
1.26	0.5242	0.0538	0.0420
1.56	0.367	0.0298	0.0317

Material Properties Table
for Equation (143)

	σ_s	τ_s	τ_n
1	35,000	24,200	15,700
2	58,800	37,000	27,000
3	88,300	54,100	42,200
4	125,000	79,200	67,500 #1075 17-4 PH
5	150,000	90,900	70,000 #975 17-4 PH
6	90,000	45,000	34,450 Nitrided Nitralloy

Known Constants Used in the Computer Solution

Define:

$c = 6.75 \text{ in.}$	$W_t = 351.165 \text{ lbs.}$
$h = 3.5 \text{ in.}$	$W_2 = 235 \text{ lbs.}$
$g = 2.5 \text{ in.}$	$W_3 = 14.257 \text{ lbs.}$
$\bar{y} = 3.25 \text{ in.}$	$W_4 = 55.608 \text{ lbs.}$
$j = 13.125 \text{ in.}$	$W_p = W_5 = 46.3 \text{ lbs.}$
$d = 4.5 \text{ in.}$	$\sin \beta_0 = .62592$
$\ell = 9.5 \text{ in.}$	$\cos \beta_0 = .77988$
$\mu = .032 \text{ in.}$	$\cos \beta_0 = .676315 \text{ RAD or } 38^\circ-45^1$
$q = 4.25 \text{ in.}$	$K = 60 \text{ lbs/in.}$
$p = 9.625 \text{ in.}$	$\delta_i = 2.88999$
$\phi = \tan^{-1}$	$A_p = 113.0599 \text{ in.}^2$
$\mu = \tan^{-1}(.032)$	$L_2 = 5.5055 \text{ in.}$
$E = 29 \times 10^6$	$g+h = 2.5 + 3.5 = 4.3011626335 \text{ in.}$

TABLE

Location	$R_1(\text{in.})$	$R_2(\text{in.})$	$\ell(\text{in.})$
A	1.503	1.565	e
B	.7475	.7550	1.5
C	.7475	.7550	1.5
B_1	1.245	1.254	1.5
B_2	1.245	1.254	1.5

FIGURE 31

Margin of Safety

FIGURE 32

Stress VS Time


```

0001      IMPLICIT REAL*8(A-H,O-Z)
0002      REAL*8 LL,L,MU,J,K,L2,MT,LAMBOA,LAMPHI,MU1
0003      DIMENSION R1(5),R2(5),LL(5),AA(8),BB(8),CC(8),SIGMAS(6),TAUS(6),
1      TAUN(6)
0004      COMMON/TABLE1/R1,R2,LL
0005      COMMON/TABLE2/AA,BB,CC
0006      COMMON/TABLE3/SIGMAS,TAUS,TAUN
0007      COMMON/JUNK/AARN,C,MU,COSPHI,BETA,W2,FI2YT,FDELPT,FI2XT,FI2T
0008      COMMON/PILE/EBART,L,FI3XT,W3,FPT,FITY,WT,FST,DT,FI3YT
0009      ABS(X)=DABS(X)
0010      SQRT(X)=DSQRT(X)
0011      SIN(X)=DSIN(X)
0012      COS(X)=DCOS(X)
0013      ARSIN(X)=DARSIN(X)
0014      ATAN(X)=DATAN(X)
0015      DELTAP(T)=256.0*T/1.95
0016      FDELP(T)=DELTAP(T)*AREA*SINBT
0017      Z(T)=((((0.896792*T-6.167576)*T+15.612802)*T-17.827503)*T+
1      7.983562)*T-1.135639)*T+2.889985
0018      R(T)=Z(T)**2+2.0*C*C+2.0*Z(T)*D-2.0*C*(Z(T)+D)*SINBO
0019      S(T)=2.0*C*(Z(T)+D-C*SINBO)
0020      READ(5,1000) (R1(I),R2(I),LL(I),I=1,5)
0021      1000 FORMAT(3E15.6)
0022      READ(5,1000) (AA(I),BB(I),CC(I),I=1,8)
0023      READ(5,1000) (SIGMAS(I),TAUS(I),TAUN(I),I=1,6)
0024      READ(5,1005) C,H,G,YBAR,J,D,L,MU,Q,P,WT,W2,W3,W4,W5,SINBO,COSBO,
1      BO,K,DELTAI,AP,L2,DI,MU1
0025      1005 FORMAT(8F10.3)
0026      READ(5,1006) E1,E2
0027      1006 FORMAT(2E15.6)
0028      PI=3.14159
0029      WRITE(6,500)
0030      500 FORMAT(1H1,21X,48HSTATIC, DYNAMIC AND TOTAL FORCES ON ATR PRESSURE
1      1,27H VALVE WITH STRESS ANALYSIS//)
0031      READ(5,300) TSTART,DELT,TSTOP
0032      300 FORMAT(3F10.3)
0033      WRITE(6,400) TSTART,DELT,TSTOP
0034      400 FORMAT(1H0,10X,15HSTARTING TIME =,F7.3,10X,17HTIME INCREMENTS =,
1      F6.3,10X,13HENDING TIME =,F7.3)
0035      T=TSTART
0036      AREA=PI*DI**2/4.0
0037      TT=2.0*C*C*COSBO
0038      1 ST=S(T)
0039      RT=R(T)
0040      ZT=Z(T)
0041      STTT=ST*ST+TT*TT
0042      BETAT=ARSIN((-RT*ST+TT*SQRT(STTT-RT*RT))/STTT)
0043      SINBT=SIN(BETAT)
0044      COSBT=COS(BETAT)
0045      AT=FDELP(T)*(C-YBAR)*SINBT+W2*(C-H)*COSBT+W2*G*SINBT
0046      EBART=J+C*SINBT-D*SQRT(1.0-((COSBT-COSBO)*C/D)**2)
0047      CARN = MU * (2.0 * EBART + L)
0048      DT = CARN / L
0049      FST=K*(ZT+DELTAI)
0050      PT=((((254.0226*T-1432.51)*T+3222.6769)*T-3626.07031)*T+
1      2050.2743)*T-464.1679

```

V. COMPUTER PROGRAM

```

0051      FPT=AP*PT
0052      BT=DT*FDELPI(T)-WT-FST+FPT
0053      ZDT=((15.380752*T-30.83788)*T+62.451208)*T-53.482509)*T+
1      15.967124)*T-1.135639
0054      ZDDT=((126.90376*T-123.35152)*T+187.353624)*T-106.965018)*T+
1      15.967124
0055      BOFT=STTT
0056      BOFTRT=BOFT-RT**2
0057      SBOFT=SQRT(BOFTRT)
0058      AOFT=-RT*ST+TT*SBOFT
0059      BETA=ARSIN(AOFT/BOFT)
0060      RDT=2.0*ZDT*(ZT+D-C*SINBO)
0061      SDT=2.0*C*ZDT
0062      ADT=-RT*SDT-RDT*ST+TT*(ST*SDT-RT*RDT)/SBOFT
0063      BDT=2.0*ST*SDT
0064      AANDB = BOFT*ADT - AOFT*BDT
0065      BT2AT2 = BOFT**2 - AOFT**2
0066      BETAD = AANDB/(BOFT*SQRT(BT2AT2))
0067      RDDT=2.0*ZDT**2+2.0*(ZT+D-2.0*C*SINBO)*ZDDT
0068      SDDT=2.0*C*ZDDT
0069      SFUNC=ST*SDDT+SDT**2
0070      RFUNC=RT*RDDT+RDT**2
0071      ADDT=-RT*SDDT-2.0*RDT*SDT-RDDT*ST+TT*(SFUNC-RFUNC)/SBOFT-
1      TT*(ST*SDT-RT*RDT)**2/(BOFTRT*SBOFT)
0072      BDDT=2.0*SFUNC
0073      BETADD = (BOFT*ADDT-AOFT*BDDT-AANDB*(BDT*BT2AT2+BOFT*(BOFT*BDT-
1      AOFT*ADT))/(BOFT*BT2AT2))/(BOFT*SQRT(BT2AT2))
0074      F=C/D
0075      E=F*COSBO
0076      DIFF=COS(BETA)-COSBO
0077      FDIFF=F*DIFF
0078      GAMMAT=ARSIN(FDIFF)
0079      COSGAM=COS(GAMMAT)
0080      FDIFF1=1.0-FDIFF**2
0081      SINBT=SIN(BETA)
0082      COSBT=COS(BETA)
0083      SFDIF1=SQRT(FDIFF1)
0084      GAMMAD=F*SINBT*BETAD/SFDIF1
0085      SINGAM=SIN(GAMMAT)
0086      GAMADD=(-F**3*(SINBT*BETAD)**2*DIFF+F*FDIFF1*(SINBT*BETADD+BETAD*
1      BETAD*COSBT))/(FDIFF1*SFDIF1)
0087      GH2=G**2+H**2
0088      GH212=SQRT(GH2)
0089      AN2=GH212*BETAD**2
0090      AT2=GH212*BETADD
0091      DEL=ATAN(G/H)
0092      SINBDL=SIN(BETA+DEL)
0093      COSBDL=COS(BETA+DEL)
0094      W2DIV=W2/386.4
0095      FI2XNT=AN2*COSBDL*W2DIV
0096      FI2YNT=AN2*SINBDL*W2DIV
0097      FI2XTT=AT2*SINBDL*W2DIV
0098      FI2YTT=AT2*COSBDL*W2DIV
0099      FI2XT=FI2XNT+FI2XTT
0100      FI2YT=FI2YNT+FI2YTT
0101      FI2T = SQRT(FI2XT**2 + FI2YT**2)

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0102      A2XT=AN2*COSBDL+AT2*SINBDL
0103      A2YT=AN2*SINBDL+AT2*COSBDL
0104      A3XT=A2XT+D*GAMADD*COSGAM/2.0-D*GAMMAD**2*SINGAM/2.0
0105      A3YT=A2YT-D*GAMADD*SINGAM/2.0-D*GAMMAD**2*COSGAM/2.0
0106      THETA=ATAN(A3YT/A3XT)
0107      STHETA=SIN(THETA)
0108      CTHETA=COS(THETA)
0109      W3DIV=W3/386.4
0110      FI3XT=W3DIV*A3XT
0111      FI3YT=W3DIV*A3YT
0112      FI4T=W4*ZDDT/386.4
0113      FI5T=W5*ZDDT/386.4
0114      FRT=FPT-FST-W5
0115      PHI=ATAN(MU)
0116      SINPHI=SIN(PHI)
0117      COSPHI=COS(PHI)
0118      FDELPT=FDELP(T)
0119      FITY = FI2YT + FI3YT + FI4T + FI5T
0120      AARN = -W2 * (C*COSBT - GH2I2*COSBDL)
0121      AARN = AARN + (FDELPT - FI2XT) * (YBAR*SINBDL - C*SINBT)
0122      AARN = AARN + FI2YT * (C*COSBT - YBAR*COSBDL)
0123      BARN = C * (FDELPT - FI2XT + FI3XT)/L
0124      BARN = BARN + C * (FPT + FITY - WT - FST)/CARN
0125      DARN = AARN / (L*CARN)
0126      TANLAM = (BARN * SINBT + CARN * DARN) / (L * DARN - BARN * COSBT)
0127      WRITE(6,7000) T
0128      7000 FORMAT(///45X,6HTIME =,F7.4//)
0129      WRITE(6,2000)
0130      2000 FORMAT(/12X,4HAREA,17X,1HT,18X,4HS(T),16X,4HR(T),16X,4HZ(T),12X,11
        1HS**2 + T**2)
0131      WRITE(6,6000)AREA,TT,ST,RT,ZT,STTT
0132      WRITE(6,2001)
0133      2001 FORMAT(/12X,4HBETA,13X,9HSIN(BETA),11X,9HCO$(BETA),14X,4HA(T),15X,
        1THEBAR(T),11X,10HMU*2EBAR+L)
0134      WRITE(6,6000)BETAT,SINBT,COSBT,AT,EBART,CARN
0135      WRITE(6,2002)
0136      2002 FORMAT(/12X,4HD(T),16X,5HFS(T),15X,4HP(T),16X,5HFP(T),15X,4HB(T),
        115X,6HZPRIME)
0137      WRITE(6,6000)DT,FST,PT,FPT,BT,ZDT
0138      WRITE(6,2003)
0139      2003 FORMAT(/11X,7HZDPRIME,14X,4HB(T),12X,12HB(T)-R(T)**2,5X,18HSQRT(B(
        1T)-R(T)**2),8X,6HA(T)-2,14X,6HRPRIME)
0140      WRITE(6,6000)ZDDT,BOFT,BOFTRT,SBOFT,AOFT,RDT
0141      WRITE(6,2004)
0142      2004 FORMAT(/11X,6HSPRIME,14X,6HAPRIME,14X,6HBPRIME,15X,5HAANDB,9X,15HB
        1(T)**2-A(T)**2,7X,10HBETA PRIME)
0143      WRITE(6,6000)SDT,ADT,BDT,AANDB,BT2AT2,BETAD
0144      WRITE(6,2005)
0145      2005 FORMAT(/10X,7HROPRIME,13X,7HSDPRIME,15X,5HSFUNC,15X,5HRFUNC,14X,7H
        1ADPRIME,13X,7HBDPRIME)
0146      WRITE(6,6000)RDDT,SDDT,SFUNC,RFUNC,ADDT,BDDT
0147      WRITE(6,2006)
0148      2006 FORMAT(/8X,11HBETAD PRIME,15X,1HF,19X,1HE,12X,14HCOS(B)-COS(B0),11
        1X,5HFDIFF,15X,5HGAMMA)
0149      WRITE(6,6000)BETADD,F,E,DIFF,FDIFF,GAMMAT
0150      WRITE(6,2007)

```

```

0151      2007 FORMAT(/9X,10HCOS(GAMMA),9X,12H1 - FDIFF**2,11X,6HSFDF1,11X,11HGA
0152          MMA PRIME,10X,10HSIN(GAMMA),9X,12HGAMMAD PRIME)
0153          WRITE(6,6000)COSGAM,FDIFF1,SFDF1,GAMMAD,SINGAM,GAMADD
0154          WRITE(6,2008)
0155      2008 FORMAT(/8X,11HG**2 + H**2,12X,5HGH212,16X,3HAN2,17X,3HAT2,17X,3HDE
0156          IL,12X,13HSIN(BETA+DEL))
0157          WRITE(6,6000)GH2,GH212,AN2,AT2,DEL,SINBDL
0158          WRITE(6,2009)
0159      2009 FORMAT(/7X,13HCOS(BETA+DEL),10X,8HW2/386.4,12X,8HFI2XN(T),12X,8HFI
0160          12YN(T),12X,8HFI2XT(T),12X,8HFI2YT(T))
0161          WRITE(6,6000)COSBDL,W2DIV,FI2XNT,FI2YNT,FI2XTT,FI2YTT
0162          WRITE(6,2010)
0163      2010 FORMAT(/11X,7HFI2X(T),13X,7HFI2Y(T),14X,4HFI2T,15X,6HA2X(T),14X,6H
0164          1A2Y(T),14X,6HA3X(T))
0165          WRITE(6,6000)FI2XT,FI2YT,FI2T,A2XT,A2YT,A3XT
0166          WRITE(6,2011)
0167      2011 FORMAT(/11X,6HA3Y(T),15X,5HTHETA,12X,10HSIN(THETA),10X,10HCOS(THET
0168          A),11X,8HW3/386.4,13X,7HFI3X(T))
0169          WRITE(6,6000)A3YT,THETA,STHETA,CTHETA,W3DIV,FI3XT
0170          WRITE(6,2012)
0171      2012 FORMAT(/11X,7HFI3Y(T),14X,4HFI4T,16X,4HFI5T,16X,5HFR(T),16X,3HPHI,
0172          114X,8HSIN(PHI))
0173          WRITE(6,6000)FI3YT,FI4T,FI5T,FRT,PHI,SINPHI
0174          WRITE(6,2013)
0175      2013 FORMAT(/10X,8HCOS(PHI),12X,9HFD(LTAP),13X,4HFITY,16X,4HAARN,16X,4
0176          1HBARN,16X,4HDARN)
0177          WRITE(6,6000)COSPHI,FDELPT,FITY,AARN,BARN,DARN
0178          WRITE(6,2014)
0179      2014 FORMAT(/8X,11HTAN(LAMBDA))
0180          WRITE(6,6000)TANLAM
0181      6000 FORMAT(6D20.6)
0182          LAMBDA = ATAN(TANLAM)
0183          IF(ABS(C*SINBT).LE.ABS(YBAR*SINBDL)) GO TO 1200
0184          AARN = - AARN
0185          DARN = AARN / (L * CARN)
0186          TANLAM = (BARN * SINBT - DARN * CARN)
0187          TANLAM = TANLAM / (BARN * COSBT - DARN * L)
0188          LAMBDA = ATAN(TANLAM)
0189          N = 2
0190          GO TO 1010
0191      1200 CONTINUE
0192          N = 1
0193          IF(LAMBDA.GE.0.0) GO TO 1010
0194          N = 2
0195      1010 CONTINUE
0196          WRITE(6,6001) LAMBDA
0197      6001 FORMAT(/40X,26HINITIAL VALUE OF LAMBDA = ,D20.6/)
0198          LAMBDA = 2.0 * LAMBDA
0199          XKEEP = 0.0
0200          YKEEP = LAMBDA
0201          LOOP = 0
0202      99 CONTINUE
0203          CALL EVAL(BQUAD,CQUAD,LAMBDA,N)
0204          CALL ITRATE(BQUAD,CQUAD,LAMBDA,ZVALUE,N,SIDEL,SIDER)
0205          IF(LOOP.NE.0) GO TO 97
0206          WRITE(6,6005) N

```

```

0200      6005 FORMAT(/48X,5HCASE ,I1/)
0201      VALUE0 = ZVALUE
0202      ROOT0 = LAMBDA
0203      LAMBDA = XKEEP
0204      LOOP = LOOP + 1
0205      GO TO 99
0206      97 IF(LOOP.NE.1) GO TO 96
0207      VALUE1 = ZVALUE
0208      ROOT1 = LAMBDA
0209      LAMBDA = (XKEEP + YKEEP) / 2.0
0210      LOOP = LOOP + 1
0211      GO TO 99
0212      96 VALUE2 = ZVALUE
0213      ROOT2 = LAMBDA
0214      IF(ABS(VALUE2).LE.0.5) GO TO 83
0215      PRODUC = VALUE0 * VALUE2
0216      IF(PRODUC.LE.0.0) GO TO 95
0217      VALUE0 = VALUE2
0218      ROOT0 = ROOT2
0219      GO TO 94
0220      95 VALUE1 = VALUE2
0221      ROOT1 = ROOT2
0222      94 TEST = VALUE2
0223      IF(LOOP.GT.30) GO TO 98
0224      LAMBDA = (ROOT0 + ROOT1) / 2.0
0225      LOOP = LOOP + 1
0226      GO TO 99
0227      98 CONTINUE
0228      WRITE(6,6004) LAMBDA , TEST
0229      6004 FORMAT(/30X,38HMAXIMUM NUMBER OF ITERATIONS EXCEEDED./30X,33HST
        1ARTING OVER WITH NEW TIME STEP./30X,9HLAMBDA = ,D20.6,10X,7HTEST =
        1 ,D20.6/)
        GO TO 3
0230      83 LAMBDA = ROOT2
0231      TEST = VALUE2
0232      WRITE(6,6002) LAMBDA
0233      6002 FORMAT(/40X,24HFINAL VALUE OF LAMBDA = ,D20.6/)
0234      FAIS = BQUAD / 2.0 + SQRT(BQUAD**2 / 4.0 - CQUAD)
0235      FACL = FAIS * COS(LAMBDA)
0236      FASL = FAIS * SIN(LAMBDA)
0237      PRO1 = FAIS * COS(LAMBDA) - FI2XT + FDELPT
0238      F431 = PRO1 + FI3XT
0239      PRO2 = FAIS * SIN(LAMBDA) + W2 - FI2YT
0240      F433 = PRO2 + W3 - FI3YT
0241      F43FOR = SQRT(F431**2 + F433**2)
0242      F32FOR = SQRT(PRO2**2 + PRO1**2)
0243      PRO3 = FAIS * SIN(LAMBDA) - FPT - FITY + WT + FST
0244      PRO4 = PRO3 + F43FOR * MU * MU * R1(3) / EBART
0245      FB2X = PRO4 * EBART / CARN
0246      FB1X = (FB2X * (EBART + L) - F43FOR * MU * R1(3)) / EBART
0247      WRITE(6,6003) BQUAD,CQUAD,TEST
0248      6003 FORMAT(/20X,8HBQUAD = ,D20.6,10X,8HCQUAD = ,D20.6,10X,7HTEST = ,D2
        10.6/)
0249      WRITE(6,2015)
0250      2015 FORMAT(/13X,2HFA,12X,14HFA*COS(LAMBDA),6X,14HFA*SIN(LAMBDA),12X,3H
        1F43,17X,3HF32,16X,4HFB2X)

```

```
0252      WRITE(6,6000)FAIS,FACL,FASL,F43FOR,F32FOR,FB2X
0253      WRITE(6,2016)
0254      2016 FORMAT(/12X,4HFB1X)
0255      WRITE(6,6000)FB1X
0256      FAIS = ABS(FAIS)
0257      F43FOR = ABS(F43FOR)
0258      F32FOR = ABS(F32FOR)
0259      FB2X = ABS(FB2X)
0260      FB1X = ABS(FB1X)
0261      KKK=1
0262      CALL STRESS(FAIS,KKK,MU1,E1,E2,MU)
0263      KKK=2
0264      CALL STRESS(F43FOR,KKK,MU1,E1,E2,MU)
0265      KKK=3
0266      CALL STRESS(F32FOR,KKK,MU1,E1,E2,MU)
0267      KKK=4
0268      CALL STRESS(FB1X,KKK,MU1,E1,E2,MU)
0269      KKK=5
0270      CALL STRESS(FB2X,KKK,MU1,E1,E2,MU)
0271      3 T=T+DELT
0272      IF(T-(TSTOP+0.0001))1,1,2
0273      2 CONTINUE
0274      IF(T - 2.0001) 4,4,5
0275      4 T = 1.94
0276      GO TO 1
0277      5 CONTINUE
0278      END
```

COMMON BLOCK /TABLE1 / MAP SIZE 78		COMMON BLOCK /TABLE2 / MAP SIZE 80		COMMON BLOCK /TABLE3 / MAP SIZE 90		COMMON BLOCK /JUNK / MAP SIZE 50		COMMON BLOCK /FILE / MAP SIZE 50	
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
R1	0	R2	28	LL	50				
AA	0	BB	40	CC	80				
SIGMAS	0	TAUS	30	TAUN	60				
AARN	0	C	8	MU	10	COSPHI	18	BETA	20
W2	28	FI2YT	30	FOELPT	38	FI2XT	40	FI2T	48
EBART	0	L	8	F13XT	10	W3	18	FPT	20
FITY	28	WT	30	FST	38	DT	40	F13YT	48
SCALAR MAP		SCALAR MAP		SCALAR MAP		SCALAR MAP		SCALAR MAP	
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
AREA	1C0	SINBT	1C8	D	1D0	SINB0	1D8	H	1E0
G	1E8	YBAR	1F0	J	1F8	Q	200	P	208
W4	210	W5	218	COSB0	220	B0	228	K	230
DELTA1	238	AP	240	L2	248	DI	250	MU1	258
E1	260	E2	268	PI	270	TSTART	278	DELT	280
TSTOP	288	T	290	TT	298	ST	2A0	RT	2A8
ZT	280	STTT	288	BETAT	2C0	COSBT	2C8	AT	2D0
CARN	2D8	PT	2E0	BT	2E8	ZDT	2F0	ZDDT	2F8
BOFT	300	BOFTRT	308	SBOFT	310	AOFT	318	ROT	320
SDT	328	ADT	330	BDT	338	AANDB	340	BT2AT2	348
BETAD	350	RDDT	358	SDDT	360	SFUNC	368	RFUNC	370
ADDT	378	BDDT	380	BETADD	388	F	390	E	398
DIFF	3A0	FDIFF	3A8	GAMMAT	380	COSGAM	388	FDIFF1	3C0
SFDIF1	3C8	GAMMAD	3D0	SINGAM	3D8	GAMADD	3E0	GH2	3E8
GH212	3F0	AN2	3F8	AT2	400	DEL	408	SINBDL	410
COSBDL	418	W2DIV	420	F12XNT	428	F12YNT	430	F12XTT	438
FI2YTT	440	A2XT	448	A2YT	450	A3XT	458	A3YT	460
THETA	468	STHETA	470	CTHETA	478	W3DIV	480	F14T	488
F15T	490	FRT	498	PHI	4A0	SINPHI	4A8	BARN	480
DARN	488	TANLAM	4C0	LAMBDA	4C8	XKEEP	4D0	YKEEP	4D8
BQUAD	4E0	CQUAD	4E8	ZVALUE	4F0	SIDEL	4F8	SIDER	500
VALUE0	508	ROOT0	510	VALUE1	518	ROOT1	520	VALUE2	528
ROOT2	530	PRODUC	538	TEST	540	FAIS	548	FACL	550
FASL	558	PRQ1	560	F431	568	PRO2	570	F433	578
F43FOR	580	F32FOR	588	PRO3	590	PRO4	598	F82X	5A0
FB1X	5A8	I	580	N	5B4	LOOP	5B8	KKK	5B8

FORTRAN IV G LEVEL 1, MOD 3

MAIN

DATE = 69230

12/17/18

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SUBPROGRAMS CALLED

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
IBCOM#	5C0	EVAL	5C4	ITRATE	5C8	STRESS	5CC	DSQRT	5D0
DSIN	5D4	DCOS	5D8	DARSIN	5DC	DATAN	5E0		

FORMAT STATEMENT MAP

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
1000	780	1005	787	1006	78E	500	795	300	7ED
400	7F4	7000	838	2000	84F	2001	886	2002	8CC
2003	903	2004	953	2005	99E	2006	9DF	2007	A1F
2008	A77	2009	A88	2010	B08	2011	B47	2012	B90
2013	BCA	2014	C06	6000	C18	6001	C1F	6005	C44
6004	C54	6002	CCA	6003	CED	2015	D1D	2016	D60

TOTAL MEMORY REQUIREMENTS 002A32 BYTES


```

0001      SUBROUTINE EVAL(BQUAD,CQUAD,LAMBDA,N)
0002      IMPLICIT REAL*8(A-H,O-Z)
0003      REAL*8 LL,MU,MRB2,LAMBDA
0004      DIMENSION R1(5),R2(5),LL(5)
0005      COMMON/TABLE1/R1,R2,LL
0006      COMMON/JUNK/AARN,C,MU,COSPHI,BETA,W2,FI2YT,FDELPT,FI2XT,FI2T
0007      SIN(X) = DSIN(X)
0008      COS(X) = DCOS(X)
0009      ABS(X) = DABS(X)

      C
      C      B AND C FROM THE EQUATION
      C      FA**2 + 3*FA + C
      C      ARE CALCULATED AS FOLLOWS:
      C

0010      MRB2 = MU**2 * R1(2)**2
0011      ABSOLT = ABS(LAMBDA)
0012      GO TO (1,2),N

      C
      C      CALCULATION OF B AND C FOR CASE I
      C

0013      1 Q = ABSOLT + BETA
0014      Z = C + MU * R1(1) / SIN(Q)
0015      S1 = 2.0 * AARN * Z * SIN(Q)
0016      S2 = SIN(ABSOLT) * (W2 - FI2YT) + COS(ABSOLT) * (FDELPT - FI2XT)
0017      BNUM = S1 + 2.0 * MRB2 * S2
0018      DENOM = Z**2 * (SIN(Q)**2 - MRB2)
0019      S3 = FI2T**2 - 2.0 * W2 * FI2YT
0020      S4 = S3 - 2.0 * FDELPT * FI2XT + FDELPT**2 + W2**2
0021      CNUM = AARN**2 - MRB2 * S4
0022      GO TO 5

      C
      C      CALCULATION OF B AND C FOR CASE II
      C

0023      2 Q = ABSOLT - BETA
0024      Z = C + MU * R1(1) / SIN(Q)
0025      S1 = 2.0 * AARN * Z * SIN(Q)
0026      S2 = SIN(ABSOLT) * (W2 - FI2YT) + COS(ABSOLT) * (FI2XT - FDELPT)
0027      BNUM = S1 + 2.0 * MRB2 * S2
0028      DENOM = Z**2 * (SIN(Q)**2 - MRB2)
0029      S3 = FI2T**2 - 2.0 * W2 * FI2YT
0030      S4 = S3 - 2.0 * FDELPT * FI2XT + FDELPT**2 + W2**2
0031      CNUM = AARN**2 - MRB2 * S4
0032      GO TO 5
0033      5 CONTINUE
0034      BQUAD = BNUM / DENOM
0035      CQUAD = CNUM / DENOM
0036      RETURN
0037      END

```

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093D 05	0.787102D 00	0.116027D 01
0.598000 05	0.370000 05	0.270000 05	0.717175D 05	0.139005D 01	0.119929D 01
0.883000 05	0.541000 05	0.422000 05	0.108216D 06	0.209747D 01	0.122554D 01
0.125000 06	0.792000 05	0.675000 05	0.156800D 06	0.303915D 01	0.125440D 01
0.150000 06	0.909000 05	0.700000 05	0.183132D 06	0.354952D 01	0.122088D 01
0.900000 05	0.450000 05	0.344520D 05	0.110137D 06	0.213471D 01	0.122375D 01

X = 0.1348D 01 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359D 05	0.861269D 00	0.126960D 01
0.598000 05	0.370000 05	0.270000 05	0.778732D 05	0.150936D 01	0.130223D 01
0.883000 05	0.541000 05	0.422000 05	0.117497D 06	0.227736D 01	0.133066D 01
0.125000 06	0.792000 05	0.675000 05	0.171021D 06	0.331479D 01	0.136817D 01
0.150000 06	0.909000 05	0.700000 05	0.198583D 06	0.384899D 01	0.132369D 01
0.900000 05	0.450000 05	0.344520D 05	0.116616D 06	0.226029D 01	0.129573D 01

X = 0.1685D 01 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813D 05	0.997825D 00	0.147069D 01
0.598000 05	0.370000 05	0.270000 05	0.896783D 05	0.173817D 01	0.149964D 01
0.883000 05	0.541000 05	0.422000 05	0.135223D 06	0.262093D 01	0.153140D 01
0.125000 06	0.792000 05	0.675000 05	0.197278D 06	0.382370D 01	0.157822D 01
0.150000 06	0.909000 05	0.700000 05	0.228373D 06	0.442638D 01	0.152248D 01
0.900000 05	0.450000 05	0.344520D 05	0.132106D 06	0.256052D 01	0.146765D 01

STRESS ANALYSIS
P_{MAX} = 0.389975D 05 B = 0.849112D 00 P = 0.780212D 05

TOTAL FORCE AT B2

X = 0.0

Y	SIGMA X
0.0	0.3900D 05
0.4246D 00	0.2925D 05
0.8491D 00	-0.0

TOTAL FORCE AT B2

X = 0.8491D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3880D 05	-0.3178D 05	0.0
0.4246D 00	-0.3348D 05	-0.3145D 05	-0.2193D 04
0.8491D 00	-0.6006D 04	-0.3109D 05	-0.5714D 04
0.1274D 01	-0.3224D 02	-0.1610D 05	-0.2704D 03
0.1698D 01	-0.4951D 01	-0.1103D 05	-0.7435D 02

TOTAL FORCE AT B2

X = 0.1698D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3824D 05	-0.2570D 05	0.0
0.4246D 00	-0.3269D 05	-0.2552D 05	-0.4073D 04
0.8491D 00	-0.8254D 04	-0.2704D 05	-0.7470D 04
0.1274D 01	-0.2319D 03	-0.1690D 05	-0.9898D 03
0.1698D 01	-0.3840D 02	-0.1152D 05	-0.2892D 03

```

0001      SUBROUTINE ITRATE(BQUAD,CQUAD,LAMBDA,TEST,N,SIDEL,SIDER)
0002      IMPLICIT REAL*8(A-H,O-Z)
0003      REAL*8 LL,MU,L,LAMBDA
0004      DIMENSION R1(5),R2(5),LL(5)
0005      COMMON/TABLE1/R1,R2,LL
0006      COMMON/JUNK/AARN,C,MU,COSPHI,BETA,W2,FI2YT,FDELPT,FI2XT,FI2T
0007      COMMON/PILE/EBART,L,FI3XT,W3,FPT,FITY,WT,FST,DT,FI3YT
0008      SQRT(X) = DSQRT(X)
0009      SIN(X) = DSIN(X)
0010      COS(X) = DCOS(X)
0011      ABS(X) = DABS(X)

      C
      C      THE EQUATION Z = F(X) - G(X) IS
      C      EVALUATED FOR EACH B, C, AND LAMBDA AS FOLLOWS:
      C

0012      ABSOLT = ABS(LAMBDA)
0013      GO TO (1,2),N

      C
      C      EVALUATION OF Z = F(X) - G(X) FOR CASE I
      C

0014      1 A = SQRT(BQUAD * BQUAD / 4.0 - CQUAD)
0015      A1 = BQUAD / 2.0 + A
0016      A2 = A1 * (DT * COS(ABSOLT) - SIN(ABSOLT))
0017      B = (A1 * COS(ABSOLT) - FI2XT + FDELPT + FI3XT)**2
0018      B1 = (A1 * SIN(ABSOLT) + W2 + FI2YT + W3 - FI3YT)**2
0019      B2 = B + B1
0020      B3 = SQRT(B2)
0021      B4 = MU * MU * R1(3) * (-1.0 / EBART + (2.0 * EBART + L) / L) * B3
0022      SIDEL = A2 - B4
0023      STEP1 = FDELPT - FI2XT + FI3XT
0024      STEP2 = FPT + FITY - WT - FST
0025      SIDER = -DT * STEP1 - STEP2
0026      GO TO 5

      C
      C      EVALUATION OF Z = F(X) - G(X) FOR CASE II
      C

0027      2 A = SQRT(BQUAD * BQUAD / 4.0 - CQUAD)
0028      A1 = BQUAD / 2.0 + A
0029      A2 = A1 * (DT * COS(ABSOLT) + SIN(ABSOLT))
0030      B = (-A1 * COS(ABSOLT) - FI2XT + FDELPT + FI3XT)**2
0031      B1 = (A1 * SIN(ABSOLT) + W2 + FI2YT + W3 - FI3YT)**2
0032      B2 = B + B1
0033      B3 = SQRT(B2)
0034      B4 = MU * MU * R1(3) * (1.0 / EBART + (2.0 * EBART + L) / L) * B3
0035      SIDEL = A2 + B4
0036      STEP1 = FDELPT + FI2XT - FI3XT
0037      STEP2 = FPT + FITY - WT - FST
0038      SIDER = DT * STEP1 + STEP2
0039      GO TO 5
0040      5 CONTINUE
0041      TEST = SIDEL - SIDER
0042      RETURN
0043      END

```

		COMMON BLOCK /TABLE1 / MAP SIZE 78							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
R1	0	R2	28	LL	50				
		COMMON BLOCK /JUNK / MAP SIZE 50							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
AARN	0	C	8	MU	10	COSPHI	18	BETA	20
W2	28	FI2YT	30	FDELPT	38	FI2XT	40	FI2T	48
		COMMON BLOCK /PILE / MAP SIZE 50							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
EBART	0	L	8	FI3XT	10	W3	18	FPT	20
FITY	28	WT	30	FST	38	DT	40	FI3YT	48
		SCALAR MAP							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
ABSOLT	E8	LAMBDA	F0	A	F8	BQUAD	100	CQUAD	108
A1	110	A2	118	B	120	B1	128	B2	130
B3	138	B4	140	SIDEL	148	STEP1	150	STEP2	158
SIDER	160	TEST	168	N	170				
		SUBPROGRAMS CALLED							
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
DSQRT	174	DSIN	178	DCOS	17C				

TOTAL MEMORY REQUIREMENTS 00071A BYTES

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0001      SUBROUTINE STRESS(P,K,MU,E1,E2,MU1)
0002      IMPLICIT REAL*8(A-H,O-Z)
0003      REAL*8 MU,L,KAY,MARSAF,MU1
0004      DIMENSION R1(5),R2(5),L(5),X(10),Y(10),ANAME(5),AA(8),BB(8),CC(8),STRS0000
1SIGMAS(6),TAUS(6),TAUN(6)                                STRS0010
0005      SQRT(X)=DSQRT(X)
0006      ABS(X) = DABS(X)
0007      COMMON/TABLE1/R1,R2,L                                STRS0030
0008      COMMON/TABLE2/AA,BB,CC                                STRS0040
0009      COMMON/TABLE3/SIGMAS,TAUS,TAUN                        STRS0050
0010      DATA ANAME/7HJOINT A,7HJOINT 2,7HJOINT 3,2HB1,2HB2/ STRS0060
0011      PIE = 3.14159                                         STRS0070
C
C          CALCULATE L EQUIVALENT                             STRS0080
0012      IF(K.NE.1)GO TO 1000                                  STRS0081
0013      L(1)=0.880*(P*R1(1)*R2(1)*2.0/((R2(1)-R1(1))*E1))*0.3333333 STRS0082
0014      1000 CONTINUE                                         STRS0083
C          CALCULATE PMAX                                       STRS0090
C
0015      TEMPA = (1.0/R1(K) - 1.0/R2(K))
0016      TEMP = TEMPA / (1.0/E1 + 1.0/E2)
0017      TEMP1=1.0/(PIE*(1.0-MU**2))                             STRS0120
0018      TEMP2=TEMP*TEMP1                                         STRS0130
0019      PDL=P/L(K)                                               STRS0140
0020      500 TEMP3=TEMP2*PDL                                       STRS0150
0021      HUNG1 = ABS(TEMP3)
0022      PMAX=SQRT(HUNG1)
C
C          CALCULATE B                                           STRS0170
C
0023      TEMP55=TEMP2*PIE**2                                       STRS0180
0024      501 TEMP5=PDL/TEMP55                                       STRS0190
0025      HUNG2 = ABS(TEMP5)                                       STRS0200
0026      B=2.0*SQRT(HUNG2)                                       STRS0210
C
C          SET UP THE X AND Y ARRAYS.                             STRS0230
C
0027      X(1)=0.0                                                 STRS0240
0028      X(2)=0.1*B                                               STRS0250
0029      X(3)=0.2*B                                               STRS0260
0030      X(4)=0.5*B                                               STRS0270
0031      X(5)=0.78*B                                              STRS0280
0032      X(6)=1.0*B                                              STRS0290
0033      X(7)=1.2*B                                              STRS0300
0034      X(8)=1.5*B                                              STRS0310
0035      Y(1)=0.0                                                 STRS0320
0036      Y(2)=0.5*B                                              STRS0330
0037      Y(3)=1.0*B                                              STRS0340
0038      Y(4)=1.5*B                                              STRS0350
0039      Y(5)=2.0*B                                              STRS0360
0040      WRITE(6,100)                                             STRS0370
0041      100 FORMAT(1X,/,50X,15HSTRESS ANALYSIS)                STRS0380
0042      WRITE(6,300)PMAX,B,P                                       STRS0390
0043      300 FORMAT(1H ,25X,6HPMAX =,E15.6,10X,3HB =,E15.6,10X,3HP =,E15.6/) STRS0400
C          CALCULATE THE STRESSES SIGMA-X,SIGMA-Y,TAU-XY.        STRS0410
C

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C
0044      DO 5 I=1,8                                STRS0450
0045      IF(K.NE.1)GO TO 400                        STRS0460
0046      WRITE(6,401) L(1),ANAME(1),X(I)           STRS0461
0047      401 FORMAT(1X,/,6X,14HL EQUIVALENT =,E11.4,6X,15HTOTAL FORCE AT,A8, STRS0462
        110X,3HX =,E12.4)                          STRS0463
0048      GO TO 402                                  STRS0464
0049      400 WRITE(6,120) ANAME(K),X(I)            STRS0465
0050      120 FORMAT(1X,/,40X,15HTOTAL FORCE AT ,A8,10X,3HX =,E12.4) STRS0470
0051      402 BA=B**2                                STRS0480
0052      IF(X(I)-0.0)49,49,53                      STRS0510
0053      49 WRITE(6,51)
0054      51 FORMAT(1H0,20X,1HY,16X,7HSIGMA X/)
0055      DO 50 INK=1,3
0056      SIGMAZ = (BA - Y(INK)**2) * PMAX / BA
0057      WRITE(6,52) Y(INK) , SIGMAZ
0058      52 FORMAT(10X,2E18.4)
0059      50 CONTINUE
0060      GO TO 5
0061      53 IF(K.LE.3) GO TO 101
0062      WRITE(6,125)                                STRS0490
0063      125 FORMAT(1H0,20X,1HY,16X,7HSIGMA X,11X,7HSIGMA Y,11X,6HTAU XY/) STRS0500
0064      GO TO 102
0065      101 WRITE(6,126)
0066      126 FORMAT(1H0,20X,1HY,16X,7HSIGMA X,11X,7HSIGMA Y,11X,6HTAU XY,11X,15
        1HSHEARING STRESS,9X,11HTAU + SHEAR/)
0067      SSRESS = (P * MU1) / (B * L(K))
0068      102 XA=X(I)**2                                STRS0520
0069      BAXA=BA*XA                                STRS0530
0070      DO 6 J=1,5                                STRS0540
0071      TERM=BA-Y(J)**2-XA                        STRS0550
0072      TERM1=TERM**2+4.0*BAXA                    STRS0560
0073      STEP=SQRT(TERM1)                          STRS0570
0074      BA2=2.0*BA                                STRS0580
0075      ABTERM = ABS(TERM + STEP) / BA2
0076      ABSTEP = ABS(STEP - TERM) / BA2
0077      IF(X(I))15,15,20                          STRS0590
0078      15 IF(Y(J)-B)25,30,35                      STRS0600
0079      25 SINB = SQRT(ABTERM)
0080      SINHA=0.0                                STRS0620
0081      GO TO 40                                  STRS0630
0082      30 SINB=0.0                                STRS0640
0083      SINHA=0.0                                STRS0650
0084      GO TO 40                                  STRS0660
0085      35 SINB=0.0                                STRS0670
0086      SINHA = SQRT(ABSTEP)
0087      GO TO 40                                  STRS0690
0088      20 SINB = SQRT(ABTERM)
0089      SINHA = SQRT(ABSTEP)
0090      40 SINB2=SINB**2                          STRS0720
0091      ABSIN2 = ABS(1.0 - SINB2)
0092      COSB = SQRT(AB SIN2)
0093      COS2B=1.0-2.0*SINB2                      STRS0740
0094      SET=SINHA**2                              STRS0750
0095      COSHA=SQRT(1.0+SET)                      STRS0760
0096      COSH2A=COSHA**2+SET                      STRS0770

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0097      SIN2B=2.0*SINB*COSB      STRS0780
0098      SINH2A=2.0*SINHA*COSHA    STRS0790
0099      EMINA=COSHA-SINHA         STRS0800
0100      UA=SINB*SINHA             STRS0810
0101      UB=-2.0*PDL/(PIE*B)       STRS0820
0102      UC=COSH2A-COS2B           STRS0830
0103      UD=1.0-SINH2A/UC          STRS0840
0104      UE=UA*UD                  STRS0850
0105      SIGMAX=UB*(EMINA*SINB+UE)  STRS0860
0106      SIGMAY=UB*(EMINA-UE)       STRS0870
0107      TAUXY=UB*UA*SIN2B/UC       STRS0880
0108      IF(K.LE.3) GO TO 103
0109      WRITE(6,130)Y(J),SIGMAX,SIGMAY,TAUXY      STRS0890
0110      130 FORMAT(10X,4E18.4)          STRS0900
0111      GO TO 6
0112      103 SUMTRS = SSRESS + ABS(TAUXY)
0113      WRITE(6,131) Y(J),SIGMAX,SIGMAY,TAUXY,SSRESS,SUMTRS
0114      131 FORMAT(10X,4E18.4,3X,E18.4,5X,E18.4)
0115      6 CONTINUE                      STRS0910
0116      5 CONTINUE                      STRS0920
C                                         STRS0930
C                                         STRS0940
C                                         STRS0950
C                                         STRS0960
C                                         STRS0970
C                                         STRS0980
C                                         STRS0990
C                                         STRS1000
C                                         STRS1010
C                                         STRS1020
C                                         STRS1030
C                                         STRS1040
C                                         STRS1050
C                                         STRS1060
C                                         STRS1080
C                                         STRS1090
C                                         STRS1100
C                                         STRS1110
C                                         STRS1120
C                                         STRS1130
C                                         STRS1140
C                                         STRS1150
C                                         STRS1160
      DO 8 KK=1,8
      WRITE(6,200)X(KK),AA(KK),BB(KK),CC(KK)
200      FORMAT(1H0,10X,3HX =,E12.4,10X,3HA =,E12.4,10X,3HBCSTRS0980
1 =,E12.4)
      WRITE(6,201)
201      FORMAT(1H0,10X,7HSIGMA S,14X,5HTAU S,14X,5HTAU N,14X,7HSIGMA G,12XSTRS1010
1,16HMARGIN OF SAFETY,BX,1HK/)
      DO 9 JJ=1,6
      STOR=(SIGMAS(JJ)/TAUS(JJ))**2
      STOR1=(SIGMAS(JJ)/TAUN(JJ))**2
502      STOR2=AA(KK)-BB(KK)*STOR+CC(KK)*STOR1
      HUNG2 = ABS(STOR2)
      STOR3=SQRT(HUNG2)
      KAY=1.0/STOR3
      SIGMAG=KAY*SIGMAS(JJ)
      MARSAF=SIGMAG/PMAX
      WRITE(6,205)SIGMAS(JJ),TAUS(JJ),TAUN(JJ),SIGMAG,MARSAF,KAY
205      FORMAT(5X,E15.6,5X,E15.6,4X,E15.6,5X,E15.6,10X,E15.6,E15.6)
      9 CONTINUE
      8 CONTINUE
      RETURN
      END

```

COMMON BLOCK /TABLE1 / MAP SIZE 78		COMMON BLOCK /TABLE2 / MAP SIZE 80		COMMON BLOCK /TABLE3 / MAP SIZE 90			
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
R1	0	R2	28	L	50		
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
AA	0	BB	40	CC	80		
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SIGMAS	0	TAUS	30	TAUN	60		
SCALAR MAP		SCALAR MAP		SCALAR MAP		SCALAR MAP	
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
PIE	158	P	160	E1	168	TEMPA	170
E2	180	TEMP1	188	MU	190	TEMP2	198
TEMP3	1A8	HUNG1	180	PMAX	188	TEMP55	1C0
HUNG2	1D0	B	1D8	BA	1E0	SIGMAZ	1E8
MU1	1F8	XA	200	BAXA	208	TERM	210
STEP	220	BA2	228	ABTERM	230	ABSTEP	238
SINHA	248	SINB2	250	ABSIN2	258	COSB	260
SET	270	COSHA	278	COSH2A	280	SIN2B	288
EMINA	298	UA	2A0	UB	2A8	UC	280
UE	2C0	SIGMAX	2C8	SIGMAY	2D0	TAUXY	2D8
STOR	2E8	STOR1	2F0	STOR2	2F8	STOR3	300
SIGMAG	310	MARSAF	318	K	320	I	324
J	32C	KK	330	JJ	334		
ARRAY MAP		ARRAY MAP		ARRAY MAP		ARRAY MAP	
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
X	338	Y	388	ANAME	3D8		
SUBPROGRAMS CALLED		SUBPROGRAMS CALLED		SUBPROGRAMS CALLED		SUBPROGRAMS CALLED	
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
FDXPD#	400	IBCOM#	404	DSQRT	408		
FORMAT STATEMENT MAP		FORMAT STATEMENT MAP		FORMAT STATEMENT MAP		FORMAT STATEMENT MAP	
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
100	460	300	479	401	4A0	120	4DA
52	515	125	51E	126	549	130	596
200	582	201	5DF	205	626		

TOTAL MEMORY REQUIREMENTS 001050 BYTES


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IEF285I SYS69230.T074819.SV000.WJSV#H04.R0001479 SYSOUT
IEF285I VOL SER NOS= SPOL04.
IEF285I SYS69230.T074819.RV000.WJSV#H04.LOADSET PASSED
IEF285I VOL SER NOS= DSK003.
IEF285I SYS69230.T074819.RV000.WJSV#H04.S0001480 SYSIN
IEF285I VOL SER NOS= SPOL03.
IEF285I SYS69230.T074819.RV000.WJSV#H04.S0001480 DELETED
IEF285I VOL SER NOS= SPOL03.
STP=01 C 69/230 TOD= 12/17/41.55 COR=0153600 REL= 1 SCPU=*****.18 WAIT=*****.06 IOR=
XXL EXEC PGM=IEWL,PARM='&LMAP,LET,LIST,&OVLY', X00000120
XX COND=(4,LT,C),REGION=100K,TIME=&LTIME 00000130
XXSYSLIN DD DSNAME=&LOAD,DISP=(OLD,DELETE) 00000140
XX DD DDNAME=SYSIN 00000150
XXSYSLIB DD SPACE=(3072,(30,10)),UNIT=DKSCRA 00000160
XXSYSLIB DD DSNAME=SYS1.FORTLIB,DISP=SHR 00000170
XXSYSPRINT DD SYSOUT=A 00000180
XXSYSLMOD DD DSNAME=&GDSET&MEMB,DISP=&DISP,UNIT=&UNIT,SPACE=&SPACE 00000190
STP=02 L 69/230 TOD= 12/17/51.56 COR=0102400 REL= 1
IEF236I ALLOC. FOR WJSV#H04 L STEP
IEF237I SYSLIN ON 231
IEF237I SYSUT1 ON 231
IEF237I SYSLIB ON 137
IEF237I SYSPRINT ON 235
IEF237I SYSLMOD ON 232

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VI. COMPUTER RESULTS

STATIC, DYNAMIC AND TOTAL FORCES ON ATR PRESSURE VALVE WITH STRESS ANALYSIS

STARTING TIME = 0.700

TIME INCREMENTS = 0.100

ENDING TIME = 1.900

TIME = 0.7000

AREA 0.432113D 03	T 0.710666D 02	S(T) 0.402941D 02	R(T) 0.619334D 02	Z(T) 0.270970D 01	S**2 + T**2 0.667407D 04
BETA 0.194599D 00	SIN(BETA) 0.193373D 00	COS(BETA) 0.981125D 00	A(T) 0.606004D 04	EBAR(T) 0.101402D 02	MU*2EBAR+L 0.952972D 00
D(T) 0.100313D 00	FS(T) 0.335982D 03	P(T) -0.162166D 01	FP(T) -0.183344D 03	B(T) -0.100202D 03	ZPRIME -0.124415D 01
ZDPRIME -0.295509D 01	B(T) 0.667407D 04	B(T)-R(T)**2 0.283832D 04	SQRT(B(T)-R(T)**2) 0.532759D 02	A(T)-2 0.129059D 04	RPRIME -0.742693D 01
SPRIME -0.167960D 02	APRIME 0.105029D 04	BPRIME -0.135356D 04	AANDB 0.875660D 07	B(T)**2-A(T)**2 0.428776D 08	BETA PRIME 0.200365D 00
RDPRIME 0.104257D 02	SDPRIME -0.398938D 02	SFUNC -0.132538D 04	RFUNC 0.700859D 03	ADPRIME -0.923779D 03	8CPRIME -0.265075D 04
BETAD PRIME 0.263897D-01	F 0.150000D 01	E 0.116982D 01	COS(B1-COS(B0) 0.201245D 00	FDIFF 0.301868D 00	GAMMA 0.306651D 00
COS(GAMMA) 0.953350D 00	1 - FDIFF**2 0.908876D 00	SFDIF1 0.953350D 00	GAMMA PRIME 0.609628D-01	SIN(GAMMA) 0.301868D 00	GAMMAD PRIME 0.688283D-01
G**2 + H**2 0.185000D 02	GH212 0.430116D 01	AN2 0.172681D 00	AT2 0.113506D 00	DEL 0.620249D 00	SIN(BETA+DEL) 0.727622D 00
COS(BETA+DEL) 0.685979D 00	W2/386.4 0.608178D 00	FI2XN(T) 0.720422D-01	FI2YN(T) 0.764156D-01	FI2XT(T) 0.502293D-01	FI2YT(T) 0.473546D-01
FI2X(T) 0.122271D 00	FI2Y(T) 0.123770D 00	FI2T 0.173981D 00	A2X(T) 0.201045D 00	A2Y(T) 0.203510D 00	A3X(T) 0.346161D 00
A3Y(T) 0.148789D 00	THETA 0.405953D 00	SIN(THETA) 0.394894D 00	COS(THETA) 0.916727D 00	W3/386.4 0.368970D-01	FI3X(T) 0.127723D-01
FI3Y(T) 0.543988D-02	FI4T -0.425277D 00	FI5T -0.354091D 00	FR(T) -0.565626D 03	PHI 0.319891D-01	SIN(PHI) 0.319836D-01
COS(PHI) 0.999488D 00	F(DELTAP) 0.767886D 04	FITY -0.650108D 00	AARN 0.727324D 04	BARN -0.714424D 03	DARN 0.803386D 03
TAN(LAMBDA) 0.752965D-01					

INITIAL VALUE OF LAMBDA = 0.751547D-01

CASE 1

FINAL VALUE OF LAMBDA = 0.6928330-01

BQUAD = 0.804659D 04 CQUAD = 0.161630D 08 TEST = 0.446574D 00

FA 0.417808D 04 FA*COS(LAMBDA) 0.416805D 04 FA*SIN(LAMBDA) 0.289239D 03 F43 0.118590D 05 F32 0.118584D 05 FB2X 0.123567D 05

FB1X
0.239052D 05

STRESS ANALYSIS

PMAX = 0.534786D 05 B = 0.254662D 00 P = 0.417808D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A K = 0.0

Y	SIGMA X
0.0	0.5348D 05
0.1273D 00	0.4011D 05
0.2547D 00	-0.0

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.2547D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5321D 05	-0.4358D 05	-0.7890D-04	0.2688D 04	0.2688D 04
0.1273D 00	-0.4591D 05	-0.4313D 05	-0.3008D 04	0.2688D 04	0.5696D 04
0.2547D 00	-0.8237D 04	-0.4263D 05	-0.7835D 04	0.2688D 04	0.1052D 05
0.3820D 00	-0.4422D 02	-0.2208D 05	-0.3708D 03	0.2688D 04	0.3059D 04
0.5093D 00	-0.6790D 01	-0.1512D 05	-0.1020D 03	0.2688D 04	0.2790D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.5093D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5244D 05	-0.3524D 05	0.0	0.2688D 04	0.2688D 04
0.1273D 00	-0.4482D 05	-0.3500D 05	-0.5586D 04	0.2688D 04	0.8274D 04
0.2547D 00	-0.1132D 05	-0.3708D 05	-0.1024D 05	0.2688D 04	0.1293D 05
0.3820D 00	-0.3181D 03	-0.2318D 05	-0.1357D 04	0.2688D 04	0.4045D 04
0.5093D 00	-0.5266D 02	-0.1580D 05	-0.3966D 03	0.2688D 04	0.3085D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.1273D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4783D 05	-0.1827D 05	0.0	0.2688D 04	0.2688D 04
0.1273D 00	-0.3982D 05	-0.1993D 05	-0.9401D 04	0.2688D 04	0.1209D 05
0.2547D 00	-0.1621D 05	-0.2555D 05	-0.1265D 05	0.2688D 04	0.1534D 05
0.3820D 00	-0.2845D 04	-0.2265D 05	-0.5316D 04	0.2688D 04	0.8004D 04
0.5093D 00	-0.6743D 03	-0.1678D 05	-0.2074D 04	0.2688D 04	0.4762D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.1986D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4217D 05	-0.1005D 05	0.0	0.2688D 04	0.2688D 04
0.1273D 00	-0.3526D 05	-0.1254D 05	-0.9403D-04	0.2688D 04	0.1209D 05
0.2547D 00	-0.1819D 05	-0.1836D 05	-0.1243D 05	0.2688D 04	0.1512D 05
0.3820D 00	-0.5913D 04	-0.1942D 05	-0.7752D 04	0.2688D 04	0.1044D 05
0.5093D 00	-0.1926D 04	-0.1624D 05	-0.3904D 04	0.2688D 04	0.6592D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.2547D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3782D 05	-0.6488D 04	0.0	0.2688D 04	0.2688D 04
0.1273D 00	-0.3214D 05	-0.8944D 04	-0.8535D 04	0.2688D 04	0.1122D 05
0.2547D 00	-0.1880D 05	-0.1425D 05	-0.1162D 05	0.2688D 04	0.1431D 05
0.3820D 00	-0.7935D 04	-0.1658D 05	-0.8624D 04	0.2688D 04	0.1131D 05
0.5093D 00	-0.3139D 04	-0.1514D 05	-0.5078D 04	0.2688D 04	0.7766D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.3056D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3424D 05	-0.4488D 04	0.0	0.2688D 04	0.2688D 04
0.1273D 00	-0.2962D 05	-0.6686D 04	-0.7584D 04	0.2688D 04	0.1027D 05
0.2547D 00	-0.1890D 05	-0.1138D 05	-0.1070D 05	0.2688D 04	0.1339D 05
0.3820D 00	-0.9349D 04	-0.1418D 05	-0.8869D 04	0.2688D 04	0.1156D 05
0.5093D 00	-0.4247D 04	-0.1388D 05	-0.5846D 04	0.2688D 04	0.8534D 04

L EQUIVALENT = 0.1953D 00 TOTAL FORCE AT JOINT A X = 0.3820D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2966D 05	-0.2719D 04	0.0	0.2688D 04	0.2688D 04
0.1273D 00	-0.2635D 05	-0.4444D 04	-0.6220D 04	0.2688D 04	0.8908D 04
0.2547D 00	-0.1853D 05	-0.8214D 04	-0.9263D 04	0.2688D 04	0.1195D 05
0.3820D 00	-0.1078D 05	-0.1111D 05	-0.8648D 04	0.2688D 04	0.1134D 05
0.5093D 00	-0.5733D 04	-0.1187D 05	-0.6495D 04	0.2688D 04	0.9183D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.572914D 00	0.875389D 00
0.593000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.112231D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.168375D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.226449D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.291451D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.420729D 01	0.250000D 01

X = 0.2547D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.565095D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.108665D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.163509D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.223582D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.281564D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.284320D 01	0.168945D 01

X = 0.5093D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.565029D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.107186D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.161647D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.223813D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.277318D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.239849D 01	0.142520D 01

X = 0.1273C 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.317729D 05		0.594124D 00		0.907797D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.583593D 05		0.109126D 01		0.975907D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.883176D 05		0.165146D 01		0.100020C 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.125605D 06		0.234871D 01		0.100484D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.150338D 06		0.281118D 01		0.100225D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.103855D 06		0.194199D 01		0.115394D 01	
X = 0.1586C 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.684992D 00		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.122574D 01		0.109616D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.185072D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.256361D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167833D 06		0.313832D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.196868D 01		0.116980D 01	
X = 0.2547C 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.759357D 00		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.134105D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.202353D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.293202D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.342441D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.205947D 01		0.122375D 01	
X = 0.3056D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.830910D 00		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.145616D 01		0.130223D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.117497D 06		0.219709D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.319794D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.198583D 06		0.371332D 01		0.132389D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116516D 06		0.218061D 01		0.129573D 01	
X = 0.3820D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.962652D 00		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.167690D 01		0.149964D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.252855D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.197278D 06		0.368892D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.427036D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.247026D 01		0.146785D 01	

STRESS ANALYSIS

PMAX = 0.230844D 05

B = 0.218032D 00

P = 0.118590D 05

TOTAL FORCE AT JOINT 2

X = 0.0

Y	SIGMA X
0.0	0.2308D 05
0.1090D 00	0.1731D 05
0.2180D 00	-0.0

TOTAL FORCE AT JOINT 2			X = 0.2180D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2297D 05	-0.1881D 05	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1982D 05	-0.1862D 05	-0.1298D 04	0.1160D 04	0.2459D 04
0.2180D 00	-0.3555D 04	-0.1840D 05	-0.3382D 04	0.1160D 04	0.4542D 04
0.3270D 00	-0.1909D 02	-0.9531D 04	-0.1601D 03	0.1160D 04	0.1320D 04
0.4361D 00	-0.2931D 01	-0.6526D 04	-0.4401D 02	0.1160D 04	0.1204D 04

TOTAL FORCE AT JOINT 2			X = 0.4361D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2264D 05	-0.1521D 05	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1935D 05	-0.1511D 05	-0.2411D 04	0.1160D 04	0.3571D 04
0.2180D 00	-0.4886D 04	-0.1600D 05	-0.4422D 04	0.1160D 04	0.5582D 04
0.3270D 00	-0.1373D 03	-0.1000D 05	-0.5859D 03	0.1160D 04	0.1746D 04
0.4361D 00	-0.2273D 02	-0.6818D 04	-0.1712D 03	0.1160D 04	0.1332D 04

TOTAL FORCE AT JOINT 2			X = 0.1090D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2065D 05	-0.7887D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1719D 05	-0.8603D 04	-0.4058D 04	0.1160D 04	0.5218D 04
0.2180D 00	-0.6596D 04	-0.1103D 05	-0.5463D 04	0.1160D 04	0.6623D 04
0.3270D 00	-0.1228D 04	-0.9778D 04	-0.2295D 04	0.1160D 04	0.3455D 04
0.4361D 00	-0.2911D 03	-0.7245D 04	-0.8951D 03	0.1160D 04	0.2055D 04

TOTAL FORCE AT JOINT 2			X = 0.1701D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1820D 05	-0.4339D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1522D 05	-0.5414D 04	-0.4059D 04	0.1160D 04	0.5219D 04
0.2180D 00	-0.7851D 04	-0.7924D 04	-0.5365D 04	0.1160D 04	0.6525D 04
0.3270D 00	-0.2552D 04	-0.8382D 04	-0.3346D 04	0.1160D 04	0.4507D 04
0.4361D 00	-0.8315D 03	-0.7012D 04	-0.1685D 04	0.1160D 04	0.2845D 04

TOTAL FORCE AT JOINT 2			X = 0.2180D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1632D 05	-0.2801D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1387D 05	-0.3861D 04	-0.3684D 04	0.1160D 04	0.4845D 04
0.2180D 00	-0.8116D 04	-0.6151D 04	-0.5016D 04	0.1160D 04	0.6176D 04
0.3270D 00	-0.3425D 04	-0.7155D 04	-0.3722D 04	0.1160D 04	0.4883D 04
0.4361D 00	-0.1355D 04	-0.6537D 04	-0.2192D 04	0.1160D 04	0.3352D 04

TOTAL FORCE AT JOINT 2			X = 0.2616D 00
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Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1478D 05	-0.1937D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1279D 05	-0.2886D 04	-0.3274D 04	0.1160D 04	0.4434D 04
0.2180D 00	-0.8158D 04	-0.4912D 04	-0.4619D 04	0.1160D 04	0.5779D 04
0.3270D 00	-0.4036D 04	-0.6120D 04	-0.3828D 04	0.1160D 04	0.4989D 04
0.4361D 00	-0.1833D 04	-0.5993D 04	-0.2524D 04	0.1160D 04	0.3684D 04

TOTAL FORCE AT JOINT 2 X = 0.3270D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1280D 05	-0.1174D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1137D 05	-0.1918D 04	-0.2685D 04	0.1160D 04	0.3845D 04
0.2180D 00	-0.7997D 04	-0.3546D 04	-0.3998D 04	0.1160D 04	0.5159D 04
0.3270D 00	-0.4654D 04	-0.4797D 04	-0.3733D 04	0.1160D 04	0.4893D 04
0.4361D 00	-0.2475D 04	-0.5124D 04	-0.2803D 04	0.1160D 04	0.3964D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157300D 05	0.306386D 05	0.132724D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.259999D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.390066D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.524604D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.675190D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.974683D 01	0.250000D 01

X = 0.2180D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.120913D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.251739D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.378792D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.517961D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.652284D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.658670D 01	0.168945D 01

X = 0.4361D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.130897D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.248312D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.374479D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.518496D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.642448D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.555647D 01	0.142520D 01

X = 0.1090D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.137638D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.252808D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.382585D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.544113D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.651251D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.449890D 01	0.115394D 01

X = 0.1701D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.158689D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.283960D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.428748D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.617065D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.727040D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.456075D 01	0.116980D 01

X = 0.2180D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.175917D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.310675D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.468782D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.679247D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.793315D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.477107D 01	0.122375D 01

X = 0.2616D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.192493D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.337341D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.508989D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.740852D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198533D 06	0.860246D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.505172D 01	0.129573D 01

X = 0.3270D 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.223013D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.388480D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.585776D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.854593D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.989292D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.572274D 01	0.146785D 01

STRESS ANALYSIS
P_{MAX} = 0.230838D 05 B = 0.218026D 00 P = 0.118584D 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.2308D 05
0.1090D 00	0.1731D 05
0.2180D 00	-0.0

TOTAL FORCE AT JOINT 3 X = 0.2180D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2297D 05	-0.1881D 05	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1982D 05	-0.1862D 05	-0.1298D 04	0.1160D 04	0.2459D 04
0.2180D 00	-0.3555D 04	-0.1840D 05	-0.3382D 04	0.1160D 04	0.4542D 04
0.3270D 00	-0.1909D 02	-0.9530D 04	-0.1601D 03	0.1160D 04	0.1320D 04
0.4361D 00	-0.2931D 01	-0.6526D 04	-0.4401D 02	0.1160D 04	0.1204D 04

TOTAL FORCE AT JOINT 3			X = 0.4361D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2264D C5	-0.1521D 05	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1935D 05	-0.1511D 05	-0.2411D 04	0.1160D 04	0.3571D 04
0.2180D 00	-0.4886D 04	-0.1600D 05	-0.4422D 04	0.1160D 04	0.5582D 04
0.3270D 00	-0.1373D 03	-0.1000D 05	-0.5859D 03	0.1160D 04	0.1746D 04
0.4361D 00	-0.2273D 02	-0.6818D 04	-0.1712D 03	0.1160D 04	0.1332D 04

TOTAL FORCE AT JOINT 3			X = 0.1090D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2065D 05	-0.7886D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1719D 05	-0.8602D 04	-0.4058D 04	0.1160D 04	0.5218D 04
0.2180D 00	-0.6996D 04	-0.1103D 05	-0.5462D 04	0.1160D 04	0.6623D 04
0.3270D 00	-0.1228D 04	-0.9778D 04	-0.2295D 04	0.1160D 04	0.3455D 04
0.4361D 00	-0.2911D 03	-0.7245D 04	-0.8950D 03	0.1160D 04	0.2055D 04

TOTAL FORCE AT JOINT 3			X = 0.1701D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1820D C5	-0.4339D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1522D 05	-0.5414D 04	-0.4059D 04	0.1160D 04	0.5219D 04
0.2180D 00	-0.7851D C4	-0.7924D 04	-0.5365D 04	0.1160D 04	0.6525D 04
0.3270D 00	-0.2552D C4	-0.8381D 04	-0.3346D 04	0.1160D 04	0.4507D 04
0.4361D 00	-0.8315D C3	-0.7012D 04	-0.1685D 04	0.1160D 04	0.2845D 04

TOTAL FORCE AT JOINT 3			X = 0.2190D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1632D 05	-0.2801D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1387D C5	-0.3861D 04	-0.3684D 04	0.1160D 04	0.4844D 04
0.2180D 00	-0.8116D 04	-0.6151D 04	-0.5016D 04	0.1160D 04	0.6176D 04
0.3270D 00	-0.3425D 04	-0.7155D 04	-0.3722D 04	0.1160D 04	0.4883D 04
0.4361D 00	-0.1355D 04	-0.6537D 04	-0.2192D 04	0.1160D 04	0.3352D 04

TOTAL FORCE AT JOINT 3			X = 0.2616D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1478D 05	-0.1937D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1279D 05	-0.2886D 04	-0.3274D 04	0.1160D 04	0.4434D 04
0.2180D 00	-0.8158D 04	-0.4912D 04	-0.4619D 04	0.1160D 04	0.5779D 04
0.3270D 00	-0.4035D 04	-0.6120D 04	-0.3828D 04	0.1160D 04	0.4588D 04
0.4361D 00	-0.1833D 04	-0.5993D 04	-0.2524D 04	0.1160D 04	0.3684D 04

TOTAL FORCE AT JOINT 3			X = 0.3270D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1280D 05	-0.1174D 04	0.0	0.1160D 04	0.1160D 04
0.1090D 00	-0.1137D 05	-0.1918D 04	-0.2685D 04	0.1160D 04	0.3845D 04
0.2180D 00	-0.7996D 04	-0.3545D 04	-0.3598D 04	0.1160D 04	0.5159D 04
0.3270D 00	-0.4654D 04	-0.4797D 04	-0.3733D 04	0.1160D 04	0.4893D 04
0.4361D 00	-0.2475D 04	-0.5124D 04	-0.2803D 04	0.1160D 04	0.3964D 04

X = 0.0	A = 0.25600 01	B = 0.60000 00	C = 0.0
SIGMA S	TAU S	TAU N	SIGMA G
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06
MARGIN OF SAFETY	K		
0.1327280 01	0.8753850 00		
0.2600060 01	0.1003670 01		
0.3900770 01	0.1019760 01		
0.5246180 01	0.9688150 00		
0.6752080 01	0.1039090 01		
0.9747100 01	0.2500000 01		
X = 0.21800-01	A = 0.23650 01	B = 0.54000 00	C = 0.21300-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06
MARGIN OF SAFETY	K		
0.1309160 01	0.8634420 00		
0.2517460 01	0.9717800 00		
0.3788030 01	0.9902830 00		
0.5179750 01	0.9565470 00		
0.6523020 01	0.1003840 01		
0.6586880 01	0.1689450 01		
X = 0.43610-01	A = 0.21610 01	B = 0.48200 00	C = 0.38000-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06
MARGIN OF SAFETY	K		
0.1309010 01	0.8633410 00		
0.2483190 01	0.9585540 00		
0.3744850 01	0.9750070 00		
0.5185100 01	0.9575340 00		
0.6424660 01	0.9887030 00		
0.5556620 01	0.1425200 01		
X = 0.10900 00	A = 0.15280 01	B = 0.30600 00	C = 0.65500-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06
MARGIN OF SAFETY	K		
0.1376420 01	0.9077970 00		
0.2528150 01	0.9759070 00		
0.3825950 01	0.1000200 01		
0.5441280 01	0.1004840 01		
0.6512690 01	0.1002250 01		
0.4499020 01	0.1153940 01		
X = 0.17010 00	A = 0.95300 00	B = 0.14820 00	C = 0.54300-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06
MARGIN OF SAFETY	K		
0.1586930 01	0.1046640 01		
0.2839680 01	0.1096160 01		
0.4287590 01	0.1120880 01		
0.6170820 01	0.1139570 01		
0.7270600 01	0.1118890 01		
0.4560880 01	0.1169800 01		
X = 0.21800 00	A = 0.68560 00	B = 0.85500-01	C = 0.47500-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06
MARGIN OF SAFETY	K		
0.1759210 01	0.1160270 01		
0.3106830 01	0.1199290 01		
0.4687550 01	0.1225540 01		
0.6792650 01	0.1254400 01		
0.7933370 01	0.1220880 01		
0.4771200 01	0.1223750 01		
X = 0.26160 00	A = 0.52420 00	B = 0.53800-01	C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.192498D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.337350D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.509003D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.740872D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.360269D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.505185D 01	0.129573D 01

X = 0.3270D 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.223019D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.388490D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.585792D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.854616D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.989320D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.572289D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.215863D 05 B = 0.470008D 00 P = 0.239052D 05

TOTAL FORCE AT B1 X = 0.0

Y	SIGMA X
0.0	0.2159D 05
0.2350D 00	0.1619D 05
0.4700D 00	-0.0

TOTAL FORCE AT B1 X = 0.4700D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2148D 05	-0.1759D 05	0.0
0.2350D 00	-0.1853D 05	-0.1741D 05	-0.1214D 04
0.4700D 00	-0.3325D 04	-0.1721D 05	-0.3163D 04
0.7050D 00	-0.1785D 02	-0.8912D 04	-0.1497D 03
0.9400D 00	-0.2741D 01	-0.6103D 04	-0.4115D 02

TOTAL FORCE AT B1 X = 0.9400D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2117D 05	-0.1423D 05	0.0
0.2350D 00	-0.1809D 05	-0.1413D 05	-0.2255D 04
0.4700D 00	-0.4569D 04	-0.1497D 05	-0.4135D 04
0.7050D 00	-0.1284D 03	-0.9355D 04	-0.5479D 03
0.9400D 00	-0.2125D 02	-0.6376D 04	-0.1601D 03

TOTAL FORCE AT B1 X = 0.2350D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1931D 05	-0.7375D 04	0.0
0.2350D 00	-0.1607D 05	-0.8044D 04	-0.3795D 04
0.4700D 00	-0.6542D 04	-0.1031D 05	-0.5108D 04
0.7050D 00	-0.1148D 04	-0.9144D 04	-0.2146D 04
0.9400D 00	-0.2722D 03	-0.6775D 04	-0.8370D 03

TOTAL FORCE AT B1

X = 0.3666D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1702D 05	-0.4057D 04	0.0
0.2350D 00	-0.1423D 05	-0.5063D 04	-0.3795D 04
0.4700D 00	-0.7341D 04	-0.7410D 04	-0.5017D 04
0.7050D 00	-0.2387D 04	-0.7838D 04	-0.3129D 04
0.9400D 00	-0.7775D 03	-0.6557D 04	-0.1576D 04

TOTAL FORCE AT B1

X = 0.4700D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1526D 05	-0.2619D 04	0.0
0.2350D 00	-0.1297D 05	-0.3610D 04	-0.3445D 04
0.4700D 00	-0.7589D 04	-0.5752D 04	-0.4690D 04
0.7050D 00	-0.3203D 04	-0.6691D 04	-0.3481D 04
0.9400D 00	-0.1267D 04	-0.6113D 04	-0.2050D 04

TOTAL FORCE AT B1

X = 0.5640D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1382D 05	-0.1811D 04	0.0
0.2350D 00	-0.1196D 05	-0.2699D 04	-0.3061D 04
0.4700D 00	-0.7629D 04	-0.4593D 04	-0.4319D 04
0.7050D 00	-0.3774D 04	-0.5723D 04	-0.3580D 04
0.9400D 00	-0.1714D 04	-0.5604D 04	-0.2360D 04

TOTAL FORCE AT B1

X = 0.7050D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1157D 05	-0.1098D 04	0.0
0.2350D 00	-0.1063D 05	-0.1794D 04	-0.2510D 04
0.4700D 00	-0.7478D 04	-0.3315D 04	-0.3739D 04
0.7050D 00	-0.4352D 04	-0.4486D 04	-0.3491D 04
0.9400D 00	-0.2314D 04	-0.4792D 04	-0.2622D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.141936D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.278044D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.417138D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.561014D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.722051D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.104233D 02	0.250000D 01

X = 0.4700D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.139999D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.269211D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.405082D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.553910D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.697556D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.704385D 01	0.168945D 01

X = 0.9400D-01		A = 0.2161D 01		B = 0.4820D 00		C = 0.3800D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFTEY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.139982D 01	0.863341D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.265546D 01	0.958554D 00		
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.400469D 01	0.979007D 00		
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.554482D 01	0.957534D 00		
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.687037D 01	0.988703D 00		
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.594211D 01	0.142520D 01		
X = 0.2350D 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFTEY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.147190D 01	0.907797D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.270354D 01	0.975907D 00		
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.409138D 01	0.100020D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.581877D 01	0.100484D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.696451D 01	0.100225D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.481114D 01	0.115394D 01		
X = 0.3666D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFTEY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.169702D 01	0.104664D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.303668D 01	0.109616D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.458505D 01	0.112088D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.659852D 01	0.113957D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.777499D 01	0.111889D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.487729D 01	0.116980D 01		
X = 0.4700D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFTEY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.188126D 01	0.116027D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.332237D 01	0.119929D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.501317D 01	0.122554D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.726390D 01	0.125440D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.848375D 01	0.122088D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.510220D 01	0.122375D 01		
X = 0.5640D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFTEY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.205853D 01	0.126960D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.360754D 01	0.130223D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.544315D 01	0.133066D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.792270D 01	0.136817D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.919950D 01	0.132389D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.540233D 01	0.129573D 01		
X = 0.7050D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFTEY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.238491D 01	0.147089D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.415442D 01	0.149964D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.626431D 01	0.153140D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.913905D 01	0.157822D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.105795D 02	0.152248D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.611992D 01	0.146785D 01		

STRESS ANALYSIS
 >MAX = 0.155196D 05 B = 0.337916D 00 P = 0.123567D 05

TOTAL FORCE AT B2 X = 0.0

Y	SIGMA X
0.0	0.1552D 05
0.1690D 00	0.1164D 05
0.3379D 00	-0.0

TOTAL FORCE AT B2 X = 0.3379D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1544D 05	-0.1265D 05	0.0
0.1690D 00	-0.1332D 05	-0.1252D 05	-0.8728D 03
0.3379D 00	-0.2390D 04	-0.1237D 05	-0.2274D 04
0.5069D 00	-0.1283D 02	-0.6407D 04	-0.1076D 03
0.6758D 00	-0.1970D 01	-0.4388D 04	-0.2959D 02

TOTAL FORCE AT B2 X = 0.6758D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1522D 05	-0.1023D 05	0.0
0.1690D 00	-0.1301D 05	-0.1016D 05	-0.1621D 04
0.3379D 00	-0.3285D 04	-0.1076D 05	-0.2973D 04
0.5069D 00	-0.9230D 02	-0.6726D 04	-0.3939D 03
0.6758D 00	-0.1528D 02	-0.4584D 04	-0.1151D 03

TOTAL FORCE AT B2 X = 0.1690D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1388D 05	-0.5302D 04	0.0
0.1690D 00	-0.1156D 05	-0.5784D 04	-0.2728D 04
0.3379D 00	-0.4704D 04	-0.7414D 04	-0.3673D 04
0.5069D 00	-0.8257D 03	-0.6574D 04	-0.1543D 04
0.6758D 00	-0.1957D 03	-0.4871D 04	-0.6017D 03

TOTAL FORCE AT B2 X = 0.2636D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1224D 05	-0.2917D 04	0.0
0.1690D 00	-0.1023D 05	-0.3640D 04	-0.2729D 04
0.3379D 00	-0.5278D 04	-0.5327D 04	-0.3607D 04
0.5069D 00	-0.1716D 04	-0.5635D 04	-0.2250D 04
0.6758D 00	-0.5590D 03	-0.4714D 04	-0.1133D 04

TOTAL FORCE AT B2 X = 0.3379D 00

Y	SIGMA X	SIGMA Y	TAU XY
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0.0	-0.1097D 05	-0.1883D 04	0.0
0.1690D 00	-0.9327D 04	-0.2596D 04	-0.2477D 04
0.3379D 00	-0.5456D 04	-0.4135D 04	-0.3372D 04
0.5069D 00	-0.2303D 04	-0.4811D 04	-0.2503D 04
0.6758D 00	-0.9108D 03	-0.4395D 04	-0.1474D 04

TOTAL FORCE AT B2

X = 0.4055D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.9935D 04	-0.1302D 04	0.0
0.1690D 00	-0.8597D 04	-0.1940D 04	-0.2201D 04
0.3379D 00	-0.5485D 04	-0.3302D 04	-0.3105D 04
0.5069D 00	-0.2713D 04	-0.4114D 04	-0.2574D 04
0.6758D 00	-0.1233D 04	-0.4029D 04	-0.1697D 04

TOTAL FORCE AT B2

X = 0.5069D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.8609D 04	-0.7892D 03	0.0
0.1690D 00	-0.7646D 04	-0.1290D 04	-0.1805D 04
0.3379D 00	-0.5376D 04	-0.2384D 04	-0.2688D 04
0.5069D 00	-0.3129D 04	-0.3225D 04	-0.2510D 04
0.6758D 00	-0.1664D 04	-0.3445D 04	-0.1885D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306336D 05	0.197418D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.386731D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.580198D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.780314D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.100430D 02	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.144978D 02	0.250000D 01

X = 0.3379E-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.194724D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.374445D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.563428D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.770433D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.970230D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.979728D 01	0.168945D 01

X = 0.6758E-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302165D 05	0.194701D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.359348D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.557013D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.771228D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.955599D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.826488D 01	0.142520D 01

X = 0.1690D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
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0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.204727D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.376035D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.565070D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.809332D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.968693D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.669182D 01	0.115394D 01

X = 0.2636D 00		A = 0.5530D 00		B = 0.1482D 00		C = 0.5430D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.236039D 01	0.104664D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.422372D 01	0.109616D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.637734D 01	0.112088D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.917844D 01	0.113957D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.108142D 02	0.111889D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.678382D 01	0.116980D 01		

X = 0.3379D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.261664D 01	0.116027D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.462108D 01	0.119929D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.657282D 01	0.122554D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.101033D 02	0.125440D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.118000D 02	0.122088D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.709665D 01	0.122375D 01		

X = 0.4055D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.286320D 01	0.126960D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.501772D 01	0.130223D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.757087D 01	0.133066D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.110197D 02	0.136817D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.127956D 02	0.132389D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.751410D 01	0.129573D 01		

X = 0.5069D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.331717D 01	0.147089D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.577838D 01	0.149964D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.871303D 01	0.153140D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.127115D 02	0.157822D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.147151D 02	0.152248D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.851220D 01	0.146785D 01		

TIME = 0.8000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	-0.710666D 02	0.384401D 02	0.611325D 02	0.257237D 01	0.652810D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.216834D 00	0.215139D 00	0.976583D 00	0.822415D 04	0.102775D 02	0.961762D 00
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.101238D 00	0.327742D 03	0.186342D 01	0.210678D 03	0.520224D 03	-0.148376D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.183477D 01	0.652810D 04	0.279092D 04	0.528291D 02	0.140445D 04	-0.844973D 01

SPRIME	APRIME	3PRIME	AANCB	B(T)**2-A(T)**2	BETA PRIME
-0.200307D 02	0.120842D 04	-0.153996D 04	0.100515D 08	0.406436D 08	0.241517D 00
ROPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.945804D 01	-0.247695D 02	-0.550911D 03	0.649591D 03	-0.833748D 03	-0.110182D 04
BETAD PRIME	F	E	COS(B)-COS(B0)	FDIFF	GAMMA
0.331993D-01	0.150000D 01	0.116982D 01	0.196703D 00	0.295055D 00	0.299513D 00
COS(GAMMA)	1 - FDIFF**2	SFDIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.955480D 00	0.912942D 00	0.955480D 00	0.815710D-01	0.295055D 00	0.985861D-01
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.250888D 00	0.142796D 00	0.620249D 00	0.742693D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.669632D 00	0.608178D 00	0.102175D 00	0.113324D 00	0.644993D-01	0.581543D-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.166675D 00	0.171478D 00	0.239134D 00	0.274056D 00	0.281953D 00	0.481582D 00
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.202200D 00	0.397514D 00	0.387128D 00	0.922026D 00	0.368970D-01	0.177689D-01
FI3Y(T)	FI4T	F15T	FR(T)	PHI	SIN(PHI)
0.746058D-02	-0.264048D 00	-0.219850D 00	-0.163364D 03	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTA)	F1TY	AARN	BARN	DARN
0.999488D 00	0.976364D 04	-0.304960D 00	0.851672D 04	0.364888D 04	0.932140D 03
TAN(LAMBDA)					
0.317752D 00					

INITIAL VALUE OF LAMBDA = 0.307663D 00

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FINAL VALUE OF LAMBDA = 0.284228D 00

BQUAD = 0.517781D 04 CQUAD = 0.669445D 07 TEST = 0.102391D 00

FA	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	FB2X
0.267822D 04	0.257076D 04	0.751015D 03	0.123747D 05	0.123736D 05	0.130421D 05
FB1X					
0.250688D 05					

STRESS ANALYSIS
P_{MAX} = 0.461108D 05 E = 0.219577D 00 P = 0.267822D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.0

Y	SIGMA X
0.0	0.4611D 05
0.1098D 00	0.3458D 05
0.2196D 00	-0.0

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.2196D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4588D 05	-0.3758D 05	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.3959D 05	-0.3719D 05	-0.2593D 04	0.2318D 04	0.4511D 04
0.2196D 00	-0.7102D 04	-0.3676D 05	-0.6756D 04	0.2318D 04	0.9074D 04
0.3294D 00	-0.3813D 02	-0.1904D 05	-0.3197D 03	0.2318D 04	0.2637D 04
0.4392D 00	-0.5854D 01	-0.1304D 05	-0.8791D 02	0.2318D 04	0.2406D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.4392D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4522D 05	-0.3039D 05	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.3865D 05	-0.3018D 05	-0.4816D 04	0.2318D 04	0.7134D 04
0.2196D 00	-0.9760D 04	-0.3197D 05	-0.8833D 04	0.2318D 04	0.1115D 05
0.3294D 00	-0.2742D 03	-0.1998D 05	-0.1170D 04	0.2318D 04	0.3488D 04
0.4392D 00	-0.4540D 02	-0.1362D 05	-0.3420D 03	0.2318D 04	0.2660D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.1098D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4124D 05	-0.1575D 05	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.3434D 05	-0.1718D 05	-0.8106D 04	0.2318D 04	0.1042D 05
0.2196D 00	-0.1398D 05	-0.2203D 05	-0.1091D 05	0.2318D 04	0.1323D 05
0.3294D 00	-0.2453D 04	-0.1953D 05	-0.4584D 04	0.2318D 04	0.6902D 04
0.4392D 00	-0.5814D 03	-0.1447D 05	-0.1788D 04	0.2318D 04	0.4106D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.1713D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3636D 05	-0.8667D 04	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.3040D 05	-0.1081D 05	-0.8108D 04	0.2318D 04	0.1043D 05
0.2196D 00	-0.1568D 05	-0.1583D 05	-0.1072D 05	0.2318D 04	0.1303D 05
0.3294D 00	-0.5098D 04	-0.1674D 05	-0.6684D 04	0.2318D 04	0.9002D 04
0.4392D 00	-0.1661D 04	-0.1401D 05	-0.3366D 04	0.2318D 04	0.5684D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.2196D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3261D 05	-0.5594D 04	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.2771D 05	-0.7712D 04	-0.7359D 04	0.2318D 04	0.9677D 04
0.2196D 00	-0.1621D 05	-0.1229D 05	-0.1002D 05	0.2318D 04	0.1234D 05
0.3294D 00	-0.6842D 04	-0.1429D 05	-0.7436D 04	0.2318D 04	0.9753D 04
0.4392D 00	-0.2706D 04	-0.1306D 05	-0.4379D 04	0.2318D 04	0.6656D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.2635D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2952D 05	-0.3869D 04	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.2554D 05	-0.5765D 04	-0.6539D 04	0.2318D 04	0.8857D 04
0.2196D 00	-0.1630D 05	-0.9812D 04	-0.9227D 04	0.2318D 04	0.1154D 05
0.3294D 00	-0.8061D 04	-0.1222D 05	-0.7647D 04	0.2318D 04	0.9964D 04
0.4392D 00	-0.3662D 04	-0.1197D 05	-0.5041D 04	0.2318D 04	0.7359D 04

L EQUIVALENT = 0.1684D 00 TOTAL FORCE AT JOINT A X = 0.3294D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2558D 05	-0.2345D 04	0.0	0.2318D 04	0.2318D 04
0.1098D 00	-0.2272D 05	-0.3832D 04	-0.5363D 04	0.2318D 04	0.7680D 04
0.2196D 00	-0.1597D 05	-0.7082D 04	-0.7987D 04	0.2318D 04	0.1030D 05
0.3294D 00	-0.9296D 04	-0.9583D 04	-0.7457D 04	0.2318D 04	0.9775D 04
0.4392D 00	-0.4943D 04	-0.1024D 05	-0.5600D 04	0.2318D 04	0.7918D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.664456D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.130163D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.195279D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.262632D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.338020D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.487955D 01	0.250000D 01

X = 0.2196D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.655388D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.591125D 05	0.126028D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.185635D 01	0.950283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.259307D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.326553D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.329750D 01	0.168945D 01

X = 0.4392D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.655311D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.124312D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.187475D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.259574D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.321628D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.278173D 01	0.142520D 01

X = 0.1098D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.689055D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.593593D 05	0.126563D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.191533D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.272399D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.326035D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.225228D 01	0.115394D 01

X = 0.1713D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.356324D 05	0.794442D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.142159D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.214644D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.308921D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.157833D 06	0.363977D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.228325D 01	0.116980D 01

X = 0.2196D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.880690D 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.155533D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.234686D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.340051D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.397157D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.238854D 01	0.122375D 01

X = 0.2635D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.963676D 00	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.168883D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.254815D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.370892D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.430664D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.252904D 01	0.129573D 01

X = 0.3294D 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.111647D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.194484D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.293256D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.427834D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.495269D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.286497D 01	0.146785D 01

STRESS ANALYSIS
 PMAX = 0.235810D 05 B = 0.222722D 00 P = 0.123747D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.2358D 05
0.1114D 00	0.1769D 05
0.2227D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.2227D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2346D 05	-0.1922D 05	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.2024D 05	-0.1902D 05	-0.1326D 04	0.1185D 04	0.2511D 04
0.2227D 00	-0.3632D 04	-0.1880D 05	-0.3455D 04	0.1185D 04	0.4640D 04
0.3341D 00	-0.1950D 02	-0.9736D 04	-0.1635D 03	0.1185D 04	0.1349D 04
0.4454D 00	-0.2994D 01	-0.6667D 04	-0.4496D 02	0.1185D 04	0.1230D 04

TOTAL FORCE AT JOINT 2 X = 0.4454D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2312D 05	-0.1554D 05	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1976D 05	-0.1543D 05	-0.2463D 04	0.1185D 04	0.3648D 04
0.2227D 00	-0.4991D 04	-0.1635D 05	-0.4517D 04	0.1185D 04	0.5702D 04
0.3341D 00	-0.1402D 03	-0.1022D 05	-0.5985D 03	0.1185D 04	0.1784D 04
0.4454D 00	-0.2322D 02	-0.6965D 04	-0.1749D 03	0.1185D 04	0.1360D 04

TOTAL FORCE AT JOINT 2

X = 0.1114D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2109D 05	-0.8056D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1756D 05	-0.8788D 04	-0.4145D 04	0.1185D 04	0.5331D 04
0.2227D 00	-0.7147D 04	-0.1126D 05	-0.5580D 04	0.1185D 04	0.6765D 04
0.3341D 00	-0.1255D 04	-0.9989D 04	-0.2344D 04	0.1185D 04	0.3529D 04
0.4454D 00	-0.2973D 03	-0.7401D 04	-0.9143D 03	0.1185D 04	0.2100D 04

TOTAL FORCE AT JOINT 2

X = 0.1737D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1859D 05	-0.4432D 04	-0.1704D-03	0.1185D 04	0.1185D 04
0.1114D 00	-0.1555D 05	-0.5531D 04	-0.4146D 04	0.1185D 04	0.5331D 04
0.2227D 00	-0.8020D 04	-0.8095D 04	-0.5480D 04	0.1185D 04	0.6666D 04
0.3341D 00	-0.2607D 04	-0.8562D 04	-0.3418D 04	0.1185D 04	0.4604D 04
0.4454D 00	-0.8494D 03	-0.7163D 04	-0.1721D 04	0.1185D 04	0.2907D 04

TOTAL FORCE AT JOINT 2

X = 0.2227D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1667D 05	-0.2861D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1417D 05	-0.3944D 04	-0.3763D 04	0.1185D 04	0.4949D 04
0.2227D 00	-0.8291D 04	-0.6283D 04	-0.5124D 04	0.1185D 04	0.6309D 04
0.3341D 00	-0.3499D 04	-0.7309D 04	-0.3803D 04	0.1185D 04	0.4988D 04
0.4454D 00	-0.1384D 04	-0.6678D 04	-0.2239D 04	0.1185D 04	0.3425D 04

TOTAL FORCE AT JOINT 2

X = 0.2673D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1510D 05	-0.1979D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1306D 05	-0.2948D 04	-0.3344D 04	0.1185D 04	0.4530D 04
0.2227D 00	-0.8334D 04	-0.5018D 04	-0.4718D 04	0.1185D 04	0.5904D 04
0.3341D 00	-0.4122D 04	-0.6251D 04	-0.3911D 04	0.1185D 04	0.5096D 04
0.4454D 00	-0.1873D 04	-0.6122D 04	-0.2578D 04	0.1185D 04	0.3763D 04

TOTAL FORCE AT JOINT 2

X = 0.3341D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1308D 05	-0.1199D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1162D 05	-0.1960D 04	-0.2742D 04	0.1185D 04	0.3528D 04
0.2227D 00	-0.8169D 04	-0.3622D 04	-0.4084D 04	0.1185D 04	0.5270D 04
0.3341D 00	-0.4754D 04	-0.4901D 04	-0.3813D 04	0.1185D 04	0.4999D 04
0.4454D 00	-0.2528D 04	-0.5234D 04	-0.2864D 04	0.1185D 04	0.4049D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500CCD 05	0.2420CCD 05	0.157000D 05	0.306386D 05	0.129929D 01	0.875389D 00
0.5980CCD 05	0.3700CCD 05	0.270000D 05	0.600193D 05	0.254524D 01	0.100367D 01
0.8830CCD 05	0.5410CCD 05	0.422000D 05	0.900445D 05	0.381852D 01	0.101976D 01
0.1250CCD 06	0.792000D 05	0.675000D 05	0.121102D 06	0.513557D 01	0.968815D 00
0.1500CCD 06	0.9090CCD 05	0.700000D 05	0.155864D 06	0.660971D 01	0.103909D 01
0.9000CCD 05	0.4500CCD 05	0.344520D 05	0.225000D 06	0.954157D 01	0.250000D 01

X = 0.2227D-01	A = 0.2365D 01	B = 0.5400D 00	C = 0.2130D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.128156D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.246437D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.370815D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.507053D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.638548D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.644799D 01	0.168945D 01
X = 0.4454D-01	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.128141D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.243083D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.366593D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.507577D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.628919D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.543945D 01	0.142520D 01
X = 0.1114D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.134739D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.247484D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.374528D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.532655D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.637537D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.440416D 01	0.115394D 01
X = 0.1737D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.155347D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.277980D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.419719D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.604071D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.711729D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.446471D 01	0.116980D 01
X = 0.2227D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.172212D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.304132D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.458910D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.664943D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.776609D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.467059D 01	0.122375D 01
X = 0.2673D 00	A = 0.5242D 00	B = 0.5380D-01	C = 0.4200D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.188439D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.330237D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.458270D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.725251D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.842130D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.494533D 01	0.129573D 01

X = 0.3341D 00 A = 0.367CD 00 B = 0.2980C-01 C = 0.3170D-01
 SIGMA S TAU S TAU N SIGMA G MARGIN OF SAFETY K
 0.350000D 05 0.242000D 05 0.157000D 05 0.514813D 05 0.219317D 01 0.147089D 01
 0.598000D 05 0.370000D 05 0.270000D 05 0.896783D 05 0.380299D 01 0.149964D 01
 0.883000D 05 0.541000D 05 0.422000D 05 0.135223D 06 0.573440D 01 0.153140D 01
 0.125000D 06 0.792000D 05 0.675000D 05 0.197278D 06 0.836596D 01 0.157822D 01
 0.150000D 06 0.909000D 05 0.700000D 05 0.228373D 06 0.968459D 01 0.152248D 01
 0.900000D 05 0.450000D 05 0.344520D 05 0.132106D 06 0.560222D 01 0.146785D 01

STRESS ANALYSIS
 PMAX = 0.235799D 05 B = 0.222711D 00 P = 0.123736D 05

TOTAL FORCE AT JOINT 3 X = 0.0
 Y SIGMA X
 0.0 0.2358D 05
 0.1114D 00 0.1768D 05
 0.2227D 00 -0.0

TOTAL FORCE AT JOINT 3 X = 0.2227D-01
 Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
 0.0 -0.2246D 05 -0.1922D 05 0.0 0.1185D 04 0.1185D 04
 0.1114D 00 -0.2024D 05 -0.1902D 05 -0.1326D 04 0.1185D 04 0.2511D 04
 0.2227D 00 -0.3632D 04 -0.1880D 05 -0.3455D 04 0.1185D 04 0.4640D 04
 0.3341D 00 -0.1950D 02 -0.9735D 04 -0.1635D 03 0.1185D 04 0.1349D 04
 0.4454D 00 -0.2994D 01 -0.6666D 04 -0.4495D 02 0.1185D 04 0.1230D 04

TOTAL FORCE AT JOINT 3 X = 0.4454D-01
 Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
 0.0 -0.2312D 05 -0.1554D 05 0.0 0.1185D 04 0.1185D 04
 0.1114D 00 -0.1976D 05 -0.1543D 05 -0.2463D 04 0.1185D 04 0.3648D 04
 0.2227D 00 -0.4991D 04 -0.1635D 05 -0.4517D 04 0.1185D 04 0.5702D 04
 0.3341D 00 -0.1402D 03 -0.1022D 05 -0.5985D 03 0.1185D 04 0.1784D 04
 0.4454D 00 -0.2322D 02 -0.6965D 04 -0.1749D 03 0.1185D 04 0.1360D 04

TOTAL FORCE AT JOINT 3 X = 0.1114D 00
 Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
 0.0 -0.2109D 05 -0.8056D 04 0.0 0.1185D 04 0.1185D 04
 0.1114D 00 -0.1756D 05 -0.8787D 04 -0.4145D 04 0.1185D 04 0.5330D 04
 0.2227D 00 -0.7147D 04 -0.1126D 05 -0.5580D 04 0.1185D 04 0.6765D 04
 0.3341D 00 -0.1255D 04 -0.9988D 04 -0.2344D 04 0.1185D 04 0.3529D 04
 0.4454D 00 -0.2973D 03 -0.7400D 04 -0.9143D 03 0.1185D 04 0.2100D 04

TOTAL FORCE AT JOINT 3 X = 0.1737D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1859D 05	-0.4432D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1555D 05	-0.5530D 04	-0.4146D 04	0.1185D 04	0.5331D 04
0.2227D 00	-0.8019D 04	-0.8094D 04	-0.5480D 04	0.1185D 04	0.6665D 04
0.3341D 00	-0.2607D 04	-0.8562D 04	-0.3418D 04	0.1185D 04	0.4603D 04
0.4454D 00	-0.8493D 03	-0.7162D 04	-0.1721D 04	0.1185D 04	0.2906D 04

TOTAL FORCE AT JOINT 3

X = 0.2227D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1667D 05	-0.2861D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1417D 05	-0.3944D 04	-0.3763D 04	0.1185D 04	0.4949D 04
0.2227D 00	-0.8290D 04	-0.6283D 04	-0.5124D 04	0.1185D 04	0.6309D 04
0.3341D 00	-0.3499D 04	-0.7309D 04	-0.3802D 04	0.1185D 04	0.4988D 04
0.4454D 00	-0.1384D 04	-0.6677D 04	-0.2239D 04	0.1185D 04	0.3424D 04

TOTAL FORCE AT JOINT 3

X = 0.2673D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1510D 05	-0.1979D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1306D 05	-0.2948D 04	-0.3344D 04	0.1185D 04	0.4529D 04
0.2227D 00	-0.8333D 04	-0.5017D 04	-0.4718D 04	0.1185D 04	0.5903D 04
0.3341D 00	-0.4122D 04	-0.6251D 04	-0.3910D 04	0.1185D 04	0.5056D 04
0.4454D 00	-0.1873D 04	-0.6122D 04	-0.2578D 04	0.1185D 04	0.3763D 04

TOTAL FORCE AT JOINT 3

X = 0.3341D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1208D 05	-0.1199D 04	0.0	0.1185D 04	0.1185D 04
0.1114D 00	-0.1162D 05	-0.1960D 04	-0.2742D 04	0.1185D 04	0.3928D 04
0.2227D 00	-0.8168D 04	-0.3622D 04	-0.4084D 04	0.1185D 04	0.5269D 04
0.3341D 00	-0.4754D 04	-0.4900D 04	-0.3813D 04	0.1185D 04	0.4998D 04
0.4454D 00	-0.2528D 04	-0.5234D 04	-0.2864D 04	0.1185D 04	0.4049D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.129935D 01	0.375385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.254536D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.381870D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.513581D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.661002D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.954202D 01	0.250000D 01

X = 0.2227D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.128162D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.246449D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.370833D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.507077D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.638578D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.644830D 01	0.168945D 01

X = 0.4454D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.1281470 01	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.2430950 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.3666100 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.5076010 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.6289480 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.5439710 01	0.1425200 01

X = 0.11140 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.1247460 01	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.2474960 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.3745460 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.5326800 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.6375670 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.4404370 01	0.1153940 01

X = 0.17370 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.1553540 01	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.2779930 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.5897400 05	0.4197380 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.6040990 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.7117630 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.4464920 01	0.1169800 01

X = 0.22270 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1722200 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.3041470 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.4589310 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.6649740 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.7766460 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.4670810 01	0.1223750 01

X = 0.26730 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1894480 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.3302520 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.4982530 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.7252850 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.8421690 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.4945570 01	0.1295730 01

X = 0.33410 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.2183270 01	0.1470850 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.3803170 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.5734670 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.8366350 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.9685050 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.5602490 01	0.1467850 01

STRESS ANALYSIS

PMAX = 0.2210530 05

B = 0.4813100 00

P = 0.2506880 05

TOTAL FORCE AT B1		X = 0.0	
Y	SIGMA X		
0.0	0.2211D 05		
0.2407D 00	0.1658D 05		
0.4813D 00	-0.0		

TOTAL FORCE AT B1		X = 0.4813D-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2200D 05	-0.1801D 05	0.0
0.2407D 00	-0.1898D 05	-0.1783D 05	-0.1243D 04
0.4813D 00	-0.3405D 04	-0.1762D 05	-0.3239D 04
0.7220D 00	-0.1828D 02	-0.9126D 04	-0.1533D 03
0.9626D 00	-0.2806D 01	-0.6250D 04	-0.4214D 02

TOTAL FORCE AT B1		X = 0.9626D-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2168D 05	-0.1457D 05	0.0
0.2407D 00	-0.1853D 05	-0.1447D 05	-0.2309D 04
0.4813D 00	-0.4679D 04	-0.1533D 05	-0.4234D 04
0.7220D 00	-0.1315D 03	-0.9580D 04	-0.5611D 03
0.9626D 00	-0.2177D 02	-0.6529D 04	-0.1640D 03

TOTAL FORCE AT B1		X = 0.2407D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1977D 05	-0.7552D 04	0.0
0.2407D 00	-0.1646D 05	-0.8238D 04	-0.3886D 04
0.4813D 00	-0.6700D 04	-0.1056D 05	-0.5231D 04
0.7220D 00	-0.1176D 04	-0.9364D 04	-0.2197D 04
0.9626D 00	-0.2787D 03	-0.6938D 04	-0.8571D 03

TOTAL FORCE AT B1		X = 0.3754D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1743D 05	-0.4155D 04	0.0
0.2407D 00	-0.1457D 05	-0.5185D 04	-0.3887D 04
0.4813D 00	-0.7518D 04	-0.7588D 04	-0.5137D 04
0.7220D 00	-0.2444D 04	-0.8026D 04	-0.3204D 04
0.9626D 00	-0.7962D 03	-0.6714D 04	-0.1614D 04

TOTAL FORCE AT B1		X = 0.4813D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1563D 05	-0.2682D 04	0.0
0.2407D 00	-0.1328D 05	-0.3697D 04	-0.3528D 04
0.4813D 00	-0.7772D 04	-0.5890D 04	-0.4803D 04
0.7220D 00	-0.3280D 04	-0.6852D 04	-0.3565D 04
0.9626D 00	-0.1297D 04	-0.6260D 04	-0.2099D 04

TOTAL FORCE AT B1

X = 0.5776D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1415D 05	-0.1855D 04	0.0
0.2407D 00	-0.1225D 05	-0.2764D 04	-0.3135D 04
0.4813D 00	-0.7812D 04	-0.4704D 04	-0.4423D 04
0.7220D 00	-0.3864D 04	-0.5860D 04	-0.3666D 04
0.9626D 00	-0.1756D 04	-0.5739D 04	-0.2417D 04

TOTAL FORCE AT B1

X = 0.7220D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1226D 05	-0.1124D 04	0.0
0.2407D 00	-0.1089D 05	-0.1837D 04	-0.2571D 04
0.4813D 00	-0.7658D 04	-0.3395D 04	-0.3829D 04
0.7220D 00	-0.4456D 04	-0.4594D 04	-0.3575D 04
0.9626D 00	-0.2370D 04	-0.4907D 04	-0.2685D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.138603D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.271515D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.407343D 01	0.101576D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.547840D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.705095D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.101785D 02	0.250000D 01

X = 0.4813D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.136711D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.262889D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.395570D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.540902D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.681175D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.687844D 01	0.168945D 01

X = 0.9626D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.136695D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.259311D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.391065D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.541461D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.670903D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.580257D 01	0.142520D 01

X = 0.2407D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.143734D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.264005D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.395530D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.568213D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.680096D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.465816D 01	0.115394D 01

X = 0.3754D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.1657170 01	0.1046640 01
0.5930000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.2965370 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.4477380 01	0.1120880 01
0.1250000 05	0.7920000 05	0.6750000 05	0.1424460 06	0.6443960 01	0.1139570 01
0.1500000 05	0.9090000 05	0.7000000 05	0.1678330 06	0.7592410 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.4762760 01	0.1169800 01

X = 0.43130 00

A = 0.68560 00

B = 0.85500-01

C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1837080 01	0.1160270 01
0.5930000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.3244350 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.4895450 01	0.1225540 01
0.1250000 05	0.7920000 05	0.6750000 05	0.1568000 06	0.7093320 01	0.1254400 01
0.1500000 05	0.9090000 05	0.7000000 05	0.1831320 06	0.8284530 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.4982390 01	0.1223750 01

X = 0.57760 00

A = 0.52420 00

B = 0.53800-01

C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.2010190 01	0.1269600 01
0.5930000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.3522820 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.5315330 01	0.1330660 01
0.1250000 05	0.7920000 05	0.6750000 05	0.1710210 06	0.7736660 01	0.1368170 01
0.1500000 05	0.9090000 05	0.7000000 05	0.1985830 06	0.8983470 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.5275470 01	0.1295730 01

X = 0.72200 00

A = 0.36700 00

B = 0.29800-01

C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.2328910 01	0.1470890 01
0.5930000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.4056860 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.6117200 01	0.1531400 01
0.1250000 05	0.7920000 05	0.6750000 05	0.1972780 06	0.8924440 01	0.1578220 01
0.1500000 05	0.9090000 05	0.7000000 05	0.2283730 06	0.1033110 02	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.5976210 01	0.1467850 01

STRESS ANALYSIS

P_{MAX} = 0.1594430 05

B = 0.3471620 00

P = 0.1304210 05

TOTAL FORCE AT B2

X = 0.0

Y	SIGMA X
0.0	0.15940 05
0.17360 00	0.11960 05
0.34720 00	-0.0

TOTAL FORCE AT B2

X = 0.34720-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.15870 05	-0.12990 05	0.0
0.17360 00	-0.13690 05	-0.12860 05	-0.89670 03
0.34720 00	-0.24560 04	-0.12710 05	-0.23360 04
0.52070 00	-0.13180 02	-0.65830 04	-0.11060 03
0.69430 00	-0.20240 01	-0.45080 04	-0.30400 02

TOTAL FORCE AT B2			X = 0.6943D-01
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1563D 05	-0.1051D 05	0.0
0.1736D 00	-0.1336D 05	-0.1044D 05	-0.1665D 04
0.3472D 00	-0.3375D 04	-0.1105D 05	-0.3054D 04
0.5207D 00	-0.9483D 02	-0.6910D 04	-0.4047D 03
0.6943D 00	-0.1570D 02	-0.4709D 04	-0.1183D 03

TOTAL FORCE AT B2			X = 0.1736D 00
Y	SIGMA X	SIGMA Y	TAL XY
0.0	-0.1426D 05	-0.5447D 04	0.0
0.1736D 00	-0.1187D 05	-0.5942D 04	-0.28C3D 04
0.3472D 00	-0.4832D 04	-0.7617D 04	-0.3713D 04
0.5207D 00	-0.8483D 03	-0.6754D 04	-0.15E5D 04
0.6943D 00	-0.2010D 03	-0.5004D 04	-0.61E2D 03

TOTAL FORCE AT B2			X = 0.2708D 00
Y	SIGMA X	SIGMA Y	TAL XY
0.0	-0.1257D 05	-0.2997D 04	0.0
0.1736D 00	-0.1051D 05	-0.3740D 04	-0.28G3D 04
0.3472D 00	-0.5423D 04	-0.5473D 04	-0.37C6D 04
0.5207D 00	-0.1763D 04	-0.5789D 04	-0.2311D 04
0.6943D 00	-0.5743D 03	-0.4843D 04	-0.1164D 04

TOTAL FORCE AT B2			X = 0.3472D 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1127D 05	-0.1934D 04	0.0
0.1736D 00	-0.9582D 04	-0.2667D 04	-0.2545D 04
0.3472D 00	-0.5606D 04	-0.4248D 04	-0.3464D 04
0.5207D 00	-0.2366D 04	-0.4942D 04	-0.2571D 04
0.6943D 00	-0.9357D 03	-0.4515D 04	-0.1514D 04

TOTAL FORCE AT B2			X = 0.4166D 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1021D 05	-0.1338D 04	0.0
0.1736D 00	-0.8832D 04	-0.1993D 04	-0.2261D 04
0.3472D 00	-0.5635D 04	-0.3393D 04	-0.3190D 04
0.5207D 00	-0.2787D 04	-0.4227D 04	-0.2644D 04
0.6943D 00	-0.1266D 04	-0.4140D 04	-0.1743D 04

TOTAL FORCE AT B2			X = 0.5207C 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.8844D 04	-0.8108D 03	0.0
0.1736D 00	-0.7855D 04	-0.1325D 04	-0.1854D 04
0.3472D 00	-0.5523D 04	-0.2449D 04	-0.2762D 04
0.5207D 00	-0.3214D 04	-0.3313D 04	-0.2573D 04
0.6943D 00	-0.1709D 04	-0.3539D 04	-0.1936D 04

X = 0.0	A = 0.2560D 01	B = 0.6000D 00	C = 0.0
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05
0.125000D 05	0.792000D 05	0.675000D 05	0.121102D 06
0.150000D 05	0.909000D 05	0.700000D 05	0.155864D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06
MARGIN OF SAFETY	K		
0.192160D 01	0.875389D 00		
0.376431D 01	0.100367D 01		
0.564745D 01	0.101576D 01		
0.759532D 01	0.968815D 00		
0.977553D 01	0.103909D 01		
0.141116D 02	0.250000D 01		
X = 0.3472D-01	A = 0.2365D 01	B = 0.5400D 00	C = 0.2130D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06
MARGIN OF SAFETY	K		
0.189538D 01	0.863442D 00		
0.364472D 01	0.971780D 00		
0.548422D 01	0.990283D 00		
0.749914D 01	0.956547D 00		
0.944390D 01	0.100384D 01		
0.953635D 01	0.168945D 01		
X = 0.6543D-01	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06
MARGIN OF SAFETY	K		
0.189516D 01	0.863341D 00		
0.359511D 01	0.958554D 00		
0.542178D 01	0.975007D 00		
0.750688D 01	0.957534D 00		
0.930148D 01	0.988703D 00		
0.804475D 01	0.142520D 01		
X = 0.1736D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06
MARGIN OF SAFETY	K		
0.159275D 01	0.907797D 00		
0.366020D 01	0.975907D 00		
0.553914D 01	0.100020D 01		
0.787777D 01	0.100484D 01		
0.942893D 01	0.100225D 01		
0.651359D 01	0.115394D 01		
X = 0.2708D 00	A = 0.5530D 00	B = 0.1482D 00	C = 0.5430D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06
MARGIN OF SAFETY	K		
0.229752D 01	0.104664D 01		
0.411123D 01	0.109616D 01		
0.620749D 01	0.112088D 01		
0.893398D 01	0.113957D 01		
0.105262D 02	0.111889D 01		
0.660314D 01	0.116980D 01		
X = 0.3472D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06
MARGIN OF SAFETY	K		
0.254695D 01	0.116027D 01		
0.449801D 01	0.119929D 01		
0.678711D 01	0.122554D 01		
0.983426D 01	0.125440D 01		
0.114858D 02	0.122088D 01		
0.690764D 01	0.122375D 01		

X = 0.41660 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01
 SIGMA S TAU S TAU N SIGMA G MARGIN OF SAFETY K
 0.3500000 05 0.2420000 05 0.1570000 05 0.4443590 05 0.2786950 01 0.1269600 01
 0.5980000 05 0.3700000 05 0.2700000 05 0.7787320 05 0.4884080 01 0.1302230 01
 0.8830000 05 0.5410000 05 0.4220000 05 0.1174970 06 0.7369230 01 0.1330660 01
 0.1250000 06 0.7920000 05 0.6750000 05 0.1710210 06 0.1072620 02 0.1368170 01
 0.1500000 06 0.9090000 05 0.7000000 05 0.1985830 06 0.1245480 02 0.1323890 01
 0.9000000 05 0.4530000 05 0.3445200 05 0.1166160 06 0.7313970 01 0.1295730 01

X = 0.52070 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01
 SIGMA S TAU S TAU N SIGMA G MARGIN OF SAFETY K
 0.3500000 05 0.2420000 05 0.1570000 05 0.5148130 05 0.3228820 01 0.1470850 01
 0.5980000 05 0.3700000 05 0.2700000 05 0.8967830 05 0.5624480 01 0.1499640 01
 0.8830000 05 0.5410000 05 0.4220000 05 0.1352230 06 0.3480970 01 0.1531400 01
 0.1250000 06 0.7920000 05 0.6750000 05 0.1972780 06 0.1237300 02 0.1578220 01
 0.1500000 06 0.9090000 05 0.7000000 05 0.2283730 06 0.1432320 02 0.1522480 01
 0.9000000 05 0.4500000 05 0.3445200 05 0.1321060 06 0.8285490 01 0.1467850 01

TIME = 0.9000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.4321130 03	0.7106660 02	0.3633720 02	0.6026970 02	0.2416600 01	0.6370850 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.2423450 00	0.2399800 00	0.9707780 00	0.1117350 05	0.1043330 02	0.9717310 00
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.1022870 00	0.3183960 03	0.3428220 01	0.3875940 03	0.9712960 03	-0.1614580 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.8166660 00	0.6370850 04	0.2738420 04	0.5232990 02	0.1528870 04	-0.8691740 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.2179680 02	0.1265310 04	-0.1584070 04	0.1048290 08	0.3825030 08	0.2660530 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.7718140 01	-0.1102500 02	0.7448350 02	0.5407160 03	-0.6637230 03	0.1489670 03
BETAD PRIME	F	E	COS(B)-COS(80)	FDIFF	GAMMA
0.3670530-01	0.1500000 01	0.1169820 01	0.1908980 00	0.2863470 00	0.2904120 00
COS(GAMMA)	1 - FDIFF**2	SFDIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.9581260 00	0.9180050 00	0.9581260 00	0.9995660-01	0.2863470 00	0.1183830 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.1850000 02	0.4301160 01	0.3044550 00	0.1579750 00	0.6202490 00	0.7595330 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.6504690 00	0.6081780 00	0.1204430 00	0.1406370 00	0.7292760-01	0.6245570-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.1933700 00	0.2030930 00	0.2804260 00	0.3179500 00	0.3339360 00	0.5667200 00
A3Y(T)	T-THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.2361260 00	0.3947790 00	0.3846050 00	0.9230810 00	0.3689700-01	0.2091030-01

FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.871233D-02	-0.117529D 00	-0.978562D-01	0.228982D 02	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTAP)	FITY	AARN	BARN	DARN
0.999488D 00	0.122524D 05	-0.357994D-02	0.951589D 04	0.674683D 04	0.103081D 04
TAN(LAMBDA)					
0.808120D 00					

INITIAL VALUE OF LAMBDA = 0.679672D 00

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FINAL VALUE OF LAMBDA = 0.609316D 00

BQUAD = 0.371286D 04 CQUAD = 0.344217D 07 TEST = 0.405635D-01

FA/	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	FB2X
0.192099D 04	0.157528D 04	0.109939D 04	0.138931D 05	0.138917D 05	0.148424D 05
FB1X					
0.283252D 05					

STRESS ANALYSIS

PMAX = 0.412758D 05 B = 0.196553D 00 P = 0.192099D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT JOINT A X = 0.0

Y	SIGMA X
0.0	0.4128D 05
0.9828D-01	0.3096D 05
0.1966D 00	-0.0

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT JOINT A X = 0.1966D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4107D 05	-0.3364D 05	0.0	0.2075D 04	0.2075D 04
0.9828D-01	-0.3544D 05	-0.3329D 05	-0.2321D 04	0.2075D 04	0.4396D 04
0.1966D 00	-0.6357D 04	-0.3291D 05	-0.6047D 04	0.2075D 04	0.8122D 04
0.2948D 00	-0.3413D 02	-0.1704D 05	-0.2862D 03	0.2075D 04	0.2361D 04
0.3931D 00	-0.5240D 01	-0.1167D 05	-0.7869D 02	0.2075D 04	0.2153D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT JOINT A X = 0.3931D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4047D 05	-0.2720D 05	0.0	0.2075D 04	0.2075D 04
0.9828D-01	-0.3459D 05	-0.2702D 05	-0.4311D 04	0.2075D 04	0.6386D 04
0.1966D 00	-0.8737D 04	-0.2862D 05	-0.7906D 04	0.2075D 04	0.9981D 04
0.2948D 00	-0.2455D 03	-0.1789D 05	-0.1048D 04	0.2075D 04	0.3122D 04
0.3931D 00	-0.4064D 02	-0.1219D 05	-0.3061D 03	0.2075D 04	0.2381D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT,JOINT A X = 0.9828D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3692D 05	-0.1410D 05	0.0	0.2075D 04	0.2075D 04
0.9828D-01	-0.3074D 05	-0.1538D 05	-0.7256D 04	0.2075D 04	0.9331D 04
0.1966D 00	-0.1251D 05	-0.1972D 05	-0.9767D 04	0.2075D 04	0.1184D 05
0.2948D 00	-0.2196D 04	-0.1748D 05	-0.4103D 04	0.2075D 04	0.6178D 04
0.3931D 00	-0.5204D 03	-0.1295D 05	-0.1600D 04	0.2075D 04	0.3675D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT,JOINT A X = 0.1533D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3255D 05	-0.7758D 04	0.0	0.2075D 04	0.2075D 04
0.9828D-01	-0.2721D 05	-0.9681D 04	-0.7257D 04	0.2075D 04	0.9332D 04
0.1966D 00	-0.1404D 05	-0.1417D 05	-0.9593D 04	0.2075D 04	0.1167D 05
0.2948D 00	-0.4564D 04	-0.1499D 05	-0.5983D 04	0.2075D 04	0.8058D 04
0.3931D 00	-0.1487D 04	-0.1254D 05	-0.3013D 04	0.2075D 04	0.5088D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT,JOINT A X = 0.1966D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2919D 05	-0.5008D 04	0.0	0.2075D 04	0.2075D 04
0.9828D-01	-0.2481D 05	-0.6903D 04	-0.6588D 04	0.2075D 04	0.8662D 04
0.1966D 00	-0.1451D 05	-0.1100D 05	-0.8969D 04	0.2075D 04	0.1104D 05
0.2948D 00	-0.6124D 04	-0.1279D 05	-0.6656D 04	0.2075D 04	0.8731D 04
0.3931D 00	-0.2422D 04	-0.1169D 05	-0.3919D 04	0.2075D 04	0.5994D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT,JOINT A X = 0.2359D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2642D 05	-0.3464D 04	-0.3025D-03	0.2075D 04	0.2075D 04
0.9828D-01	-0.2286D 05	-0.5161D 04	-0.5854D 04	0.2075D 04	0.7928D 04
0.1966D 00	-0.1459D 05	-0.8783D 04	-0.8259D 04	0.2075D 04	0.1033D 05
0.2948D 00	-0.7216D 04	-0.1054D 05	-0.6845D 04	0.2075D 04	0.8920D 04
0.3931D 00	-0.3278D 04	-0.1072D 05	-0.4512D 04	0.2075D 04	0.6587D 04

L EQUIVALENT = 0.1507D 00 TOTAL FORCE AT,JOINT A X = 0.2948D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2290D 05	-0.2099D 04	0.0	0.2075D 04	0.2075D 04
0.9828D-01	-0.2033D 05	-0.3430D 04	-0.4800D 04	0.2075D 04	0.6875D 04
0.1966D 00	-0.1430D 05	-0.6340D 04	-0.7149D 04	0.2075D 04	0.9224D 04
0.2948D 00	-0.8321D 04	-0.8578D 04	-0.6675D 04	0.2075D 04	0.8750D 04
0.3931D 00	-0.4425D 04	-0.9162D 04	-0.5013D 04	0.2075D 04	0.7087D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.742290D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.145410D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.218153D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.293397D 01	0.968815D 00
0.150000D 06	0.969000D 05	0.700000D 05	0.155864D 06	0.377615D 01	0.103909D 01
0.960000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.545114D 01	0.250000D 01

X = 0.1966D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.732160D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.140791D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.211848D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.289681D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.364805D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.368376D 01	0.168945D 01

X = 0.39310-G1

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.732074D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.138874D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.205436D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.289981D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.359304D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.310758D 01	0.142520D 01

X = 0.9828D-G1

A = -0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.769771D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.141389D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.213969D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.304308D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.364227D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.251611D 01	0.115394D 01

X = 0.1533D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.887502D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.158811D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.235787D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.345108D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.406613D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.255070D 01	0.116980D 01

X = 0.1966D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.983853D 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.173752D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.262177D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.379884D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.443680D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.266833D 01	0.122375D 01

X = 0.2359D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.107656D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.188666D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.284663D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.414338D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.481112D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.282529D 01	0.129573D 01

X = 0.2948D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.124725D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.217266D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.327608D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.477950D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.553284D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.320057D 01	0.146785D 01

STRESS ANALYSIS
 PMAX = 0.249858D 05 B = 0.235990D 00 P = 0.138931D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.2499D 05
0.1180D 00	0.1E74D 05
0.2360D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.2360D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2486D 05	-0.2036D 05	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.2145D 05	-0.2015D 05	-0.1405D 04	0.1256D 04	0.2661D 04
0.2360D 00	-0.3848D 04	-0.1992D 05	-0.3661D 04	0.1256D 04	0.4917D 04
0.3540D 00	-0.2066D 02	-0.1032D 05	-0.1732D 03	0.1256D 04	0.1429D 04
0.4720D 00	-0.3172D 01	-0.7064D 04	-0.4763D 02	0.1256D 04	0.1304D 04

TOTAL FORCE AT JOINT 2 X = 0.4720D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2450D 05	-0.1647D 05	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.2094D 05	-0.1635D 05	-0.2610D 04	0.1256D 04	0.3866D 04
0.2360D 00	-0.5289D 04	-0.1732D 05	-0.4786D 04	0.1256D 04	0.6042D 04
0.3540D 00	-0.1486D 03	-0.1083D 05	-0.6342D 03	0.1256D 04	0.1890D 04
0.4720D 00	-0.2460D 02	-0.7380D 04	-0.1853D 03	0.1256D 04	0.1441D 04

TOTAL FORCE AT JOINT 2 X = -0.1180D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2235D 05	-0.8536D 04	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.1861D 05	-0.9311D 04	-0.4392D 04	0.1256D 04	0.5648D 04
0.2360D 00	-0.7573D 04	-0.1194D 05	-0.5913D 04	0.1256D 04	0.7168D 04
0.3540D 00	-0.1329D 04	-0.1058D 05	-0.2484D 04	0.1256D 04	0.3740D 04
0.4720D 00	-0.3150D 03	-0.7842D 04	-0.9688D 03	0.1256D 04	0.2225D 04

TOTAL FORCE AT JOINT 2 X = 0.1841D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1970D 05	-0.4656D 04	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.1647D 05	-0.5860D 04	-0.4393D 04	0.1256D 04	0.5649D 04
0.2360D 00	-0.8497D 04	-0.8577D 04	-0.5807D 04	0.1256D 04	0.7063D 04
0.3540D 00	-0.2763D 04	-0.9072D 04	-0.3622D 04	0.1256D 04	0.4878D 04
0.4720D 00	-0.9000D 03	-0.7589D 04	-0.1824D 04	0.1256D 04	0.3080D 04

TOTAL FORCE AT JOINT 2

X = 0.2360D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1767D 05	-0.3031D 04	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.1502D 05	-0.4179D 04	-0.3988D 04	0.1256D 04	0.5244D 04
0.2360D 00	-0.8784D 04	-0.6658D 04	-0.5429D 04	0.1256D 04	0.6685D 04
0.3540D 00	-0.3707D 04	-0.7745D 04	-0.4029D 04	0.1256D 04	0.5285D 04
0.4720D 00	-0.1466D 04	-0.7075D 04	-0.2373D 04	0.1256D 04	0.3629D 04

TOTAL FORCE AT JOINT 2

X = 0.2832D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1600D 05	-0.2097D 04	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.1384D 05	-0.3124D 04	-0.3543D 04	0.1256D 04	0.4799D 04
0.2360D 00	-0.8830D 04	-0.5317D 04	-0.5000D 04	0.1256D 04	0.6255D 04
0.3540D 00	-0.4368D 04	-0.6624D 04	-0.4143D 04	0.1256D 04	0.5399D 04
0.4720D 00	-0.1984D 04	-0.6487D 04	-0.2731D 04	0.1256D 04	0.3987D 04

TOTAL FORCE AT JOINT 2

X = 0.3540D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1386D 05	-0.1271D 04	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.1231D 05	-0.2077D 04	-0.2906D 04	0.1256D 04	0.4162D 04
0.2360D 00	-0.8655D 04	-0.3838D 04	-0.4328D 04	0.1256D 04	0.5584D 04
0.3540D 00	-0.5037D 04	-0.5192D 04	-0.4041D 04	0.1256D 04	0.5296D 04
0.4720D 00	-0.2679D 04	-0.5546D 04	-0.3034D 04	0.1256D 04	0.4290D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.122624D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.240213D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.360383D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.484682D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.623809D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.900511D 01	0.250000D 01

X = 0.2360D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.120951D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.232582D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.349967D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.478545D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.602647D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.608546D 01	0.168945D 01

X = 0.4720D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.120936D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.229416D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.345982D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.479039D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.593559D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.513363D 01	0.142520D 01

X = 0.1180D 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.317729D 05		0.127164D 01		0.907797D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.583593D 05		0.233570D 01		0.975907D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.883176D 05		0.353471C 01		0.100020D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.125605D 06		0.502707D 01		0.100484D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.150338D 06		0.601692D 01		0.100225D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.103655D 06		0.415654D 01		0.115394D 01	
X = 0.1841D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.146613D 01		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.262351D 01		0.109616D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.396121D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.570107D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167833D 06		0.671713D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.421369D 01		0.116980D 01	
X = 0.2360D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.162530D 01		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.287033D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.433108D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.627557D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.732945D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.440800D 01		0.122375D 01	
X = 0.2832D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.177844D 01		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.311670D 01		0.130223D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.117497D 06		0.470255D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.684474D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.198583D 06		0.794782D 01		0.132389D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116616D 06		0.466729D 01		0.129573D 01	
X = 0.3540D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.206042D 01		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.358917D 01		0.149964D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.541199D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.197278D 06		0.789559D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.914009D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.528725D 01		0.146785D 01	

STRESS ANALYSIS

PMAX = 0.249846D 05 B = 0.235978D 00 P = 0.138917D 05

TOTAL FORCE AT JOINT 3 X = 0.0

SIGMA X

0.0
0.11800 00
0.23600 00
0.35400 00
0.47200 00

0.24980 05
0.18740 05
-0.0

TOTAL FORCE AT JOINT 3

X = 0.23600-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.24860 05	-0.20360 05	0.0	0.12560 04	0.12560 04
0.11800 00	-0.21450 05	-0.20150 05	-0.14050 04	0.12560 04	0.26610 04
0.23600 00	-0.38480 04	-0.19920 05	-0.36610 04	0.12560 04	0.45160 04
0.35400 00	-0.20660 02	-0.10320 05	-0.17320 03	0.12560 04	0.14290 04
0.47200 00	-0.31720 01	-0.70640 04	-0.47630 02	0.12560 04	0.13030 04

TOTAL FORCE AT JOINT 3

X = 0.47200-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.24500 05	-0.16470 05	0.0	0.12560 04	0.12560 04
0.11800 00	-0.20940 05	-0.16350 05	-0.26100 04	0.12560 04	0.38650 04
0.23600 00	-0.52880 04	-0.17320 05	-0.47860 04	0.12560 04	0.60420 04
0.35400 00	-0.14860 03	-0.10830 05	-0.63410 03	0.12560 04	0.18900 04
0.47200 00	-0.24600 02	-0.73800 04	-0.18530 03	0.12560 04	0.14410 04

TOTAL FORCE AT JOINT 3

X = 0.11800 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.22350 05	-0.85360 04	0.0	0.12560 04	0.12560 04
0.11800 00	-0.18600 05	-0.93110 04	-0.43920 04	0.12560 04	0.56480 04
0.23600 00	-0.75720 04	-0.11940 05	-0.59120 04	0.12560 04	0.71680 04
0.35400 00	-0.13290 04	-0.10580 05	-0.24840 04	0.12560 04	0.37400 04
0.47200 00	-0.31500 03	-0.78410 04	-0.96870 03	0.12560 04	0.22250 04

TOTAL FORCE AT JOINT 3

X = 0.18410 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.19780 05	-0.46560 04	0.0	0.12560 04	0.12560 04
0.11800 00	-0.16470 05	-0.58600 04	-0.43930 04	0.12560 04	0.56490 04
0.23600 00	-0.84970 04	-0.85760 04	-0.58070 04	0.12560 04	0.70620 04
0.35400 00	-0.27620 04	-0.90720 04	-0.36220 04	0.12560 04	0.48780 04
0.47200 00	-0.89990 03	-0.75890 04	-0.18240 04	0.12560 04	0.30800 04

TOTAL FORCE AT JOINT 3

X = 0.23600 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.17670 05	-0.30310 04	0.0	0.12560 04	0.12560 04
0.11800 00	-0.15020 05	-0.41790 04	-0.39870 04	0.12560 04	0.52430 04
0.23600 00	-0.87840 04	-0.66570 04	-0.54290 04	0.12560 04	0.66850 04
0.35400 00	-0.37070 04	-0.77440 04	-0.40290 04	0.12560 04	0.52850 04
0.47200 00	-0.14660 04	-0.70750 04	-0.23720 04	0.12560 04	0.36280 04

TOTAL FORCE AT JOINT 3

X = 0.28320 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.15990 05	-0.20970 04	0.0	0.12560 04	0.12560 04
0.11800 00	-0.13840 05	-0.31240 04	-0.35430 04	0.12560 04	0.47990 04
0.23600 00	-0.88300 04	-0.53160 04	-0.49990 04	0.12560 04	0.62550 04
0.35400 00	-0.43680 04	-0.66240 04	-0.41430 04	0.12560 04	0.53990 04
0.47200 00	-0.19840 04	-0.64870 04	-0.27310 04	0.12560 04	0.39870 04

TOTAL FORCE AT JOINT 3

X = 0.3540D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1386D 05	-0.1270D 04	0.0	0.1256D 04	0.1256D 04
0.1180D 00	-0.1231D 05	-0.2076D 04	-0.2906D 04	0.1256D 04	0.4162D 04
0.2360D 00	-0.8655D 04	-0.3837D 04	-0.4327D 04	0.1256D 04	0.5583D 04
0.3540D 00	-0.5037D 04	-0.5192D 04	-0.4040D 04	0.1256D 04	0.5296D 04
0.4720D 00	-0.2679D 04	-0.5546D 04	-0.3034D 04	0.1256D 04	0.4290D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.122630D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.240225D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.360401D 01	0.1C1976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.484707D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.623840D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.900556D 01	0.250000D 01

X = 0.2360D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.120957D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.232594D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.349984D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.478565D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.602677D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.608577D 01	0.168945D 01

X = 0.4720D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.120942D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.229428D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.345999D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.479063D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.593589D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.513388D 01	0.142520D 01

X = 0.1180D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.127170D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.233581D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.353489D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.502732D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.601722D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.415675D 01	0.115394D 01

X = 0.1841D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.146620D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.262364D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.396140D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.570136D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.671747D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.421390D 01	0.116980D 01

X = 0.2360D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.162538D 01		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.287047D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.433130D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.627589D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.732982D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.440822D 01		0.122375D 01	
X = 0.2832D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.177853D 01		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.311685D 01		0.130223D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.117457D 06		0.470279D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.684509D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.198583D 06		0.794822D 01		0.132389D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116616D 06		0.466752D 01		0.129573D 01	
X = 0.2540D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.206052D 01		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.358935D 01		0.149964D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.541226D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.197278D 06		0.789599D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.914055D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.528751D 01		0.146785D 01	

STRESS ANALYSIS
 P_{MAX} = 0.234973D 05 B = 0.511617D 00 P = 0.283252D 05

TOTAL FORCE AT B1		X = 0.0	
Y	SIGMA X		
0.0	0.2350D 05		
0.2558D 00	0.1762D 05		
0.5116D 00	-0.0		
TOTAL FORCE AT B1		X = 0.5116D-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2338D 05	-0.1915D 05	0.0
0.2558D 00	-0.2017D 05	-0.1895D 05	-0.1321D 04
0.5116D 00	-0.3519D 04	-0.1873D 05	-0.3443D 04
0.7674D 00	-0.1943D 02	-0.9701D 04	-0.1629D 03
0.1023D 01	-0.2983D 01	-0.6543D 04	-0.4480D 02
TOTAL FORCE AT B1		X = 0.1023D 00	

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2304D 05	-0.1549D 05	0.0
0.2558D 00	-0.1965D 05	-0.1538D 05	-0.2454D 04
0.5116D 00	-0.4974D 04	-0.1629D 05	-0.4501D 04
0.7674D 00	-0.1397D 03	-0.1018D 05	-0.5964D 03
0.1023D 01	-0.2314D 02	-0.6940D 04	-0.1743D 03

TOTAL FORCE AT B1

X = 0.2558D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2102D 05	-0.8028D 04	0.0
0.2558D 00	-0.1750D 05	-0.8757D 04	-0.4131D 04
0.5116D 00	-0.7121D 04	-0.1122D 05	-0.5560D 04
0.7674D 00	-0.1250D 04	-0.9953D 04	-0.2336D 04
0.1023D 01	-0.2963D 03	-0.7374D 04	-0.9111D 03

TOTAL FORCE AT B1

X = 0.3991D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1853D 05	-0.4416D 04	0.0
0.2558D 00	-0.1549D 05	-0.5511D 04	-0.4131D 04
0.5116D 00	-0.7991D 04	-0.8066D 04	-0.5461D 04
0.7674D 00	-0.2598D 04	-0.8532D 04	-0.3406D 04
0.1023D 01	-0.8464D 03	-0.7137D 04	-0.1715D 04

TOTAL FORCE AT B1

X = 0.5116D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1662D 05	-0.2851D 04	0.0
0.2558D 00	-0.1412D 05	-0.3930D 04	-0.3750D 04
0.5116D 00	-0.8261D 04	-0.6261D 04	-0.5106D 04
0.7674D 00	-0.3486D 04	-0.7283D 04	-0.3789D 04
0.1023D 01	-0.1379D 04	-0.6654D 04	-0.2231D 04

TOTAL FORCE AT B1

X = 0.6139D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1504D 05	-0.1972D 04	0.0
0.2558D 00	-0.1302D 05	-0.2938D 04	-0.3332D 04
0.5116D 00	-0.8304D 04	-0.5000D 04	-0.4702D 04
0.7674D 00	-0.4108D 04	-0.6229D 04	-0.3897D 04
0.1023D 01	-0.1866D 04	-0.6100D 04	-0.2569D 04

TOTAL FORCE AT B1

X = 0.7674D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1303D 05	-0.1195D 04	0.0
0.2558D 00	-0.1158D 05	-0.1953D 04	-0.2733D 04
0.5116D 00	-0.8140D 04	-0.3609D 04	-0.4070D 04
0.7674D 00	-0.4737D 04	-0.4883D 04	-0.3800D 04
0.1023D 01	-0.2519D 04	-0.5216D 04	-0.2854D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.1303920 01	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.2554310 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.3832130 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.5153870 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.6633270 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.9575580 01	0.2500000 01
X = 0.51160-01 A = 0.23650 01 B = 0.54000 00 C = 0.21300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.1286130 01	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.2473160 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.3721370 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.5088610 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.6408240 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.6470980 01	0.1689450 01
X = 0.10230 00 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.1285980 01	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.2439500 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.3679000 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.5093860 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.6311610 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.5458840 01	0.1425200 01
X = 0.25580 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.1352200 01	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.2483660 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.3758630 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.5345530 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.6398090 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.4419860 01	0.1153940 01
X = 0.39910 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.1559000 01	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.2789710 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.4212150 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.6062240 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.7142660 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.4480620 01	0.1169800 01
X = 0.51160 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1728260 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.3052160 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.4605450 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.6673130 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.7793770 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.4687240 01	0.1223750 01
X = 0.61390 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01					

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1891110 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.3314140 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.5000460 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.7278350 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.8451310 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.4962960 01	0.1295730 01

X = 0.76740 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.2190950 01	0.1470890 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.3816540 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.5754840 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.8395780 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.9719110 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.5622190 01	0.1467850 01

STRESS ANALYSIS

PMAX = 0.1700920 05 B = 0.3703480 00 P = 0.1484240 05

TOTAL FORCE AT B2

X = 0.0

Y	SIGMA X
0.0	0.17010 05
0.18520 00	0.12760 05
0.37030 00	-0.0

TOTAL FORCE AT B2

X = 0.37030-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.16920 05	-0.13860 05	0.0
0.18520 00	-0.14600 05	-0.13720 05	-0.95660 03
0.37030 00	-0.26200 04	-0.13560 05	-0.24920 04
0.55550 00	-0.14060 02	-0.70220 04	-0.11790 03
0.74070 00	-0.21590 01	-0.48090 04	-0.32430 02

TOTAL FORCE AT B2

X = 0.74070-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.16680 05	-0.11210 05	0.0
0.18520 00	-0.14260 05	-0.11130 05	-0.17770 04
0.37030 00	-0.36000 04	-0.11750 05	-0.32580 04
0.55550 00	-0.10120 03	-0.73720 04	-0.43170 03
0.74070 00	-0.16750 02	-0.50240 04	-0.12620 03

TOTAL FORCE AT B2

X = 0.18520 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.15210 05	-0.58110 04	0.0
0.18520 00	-0.12670 05	-0.63390 04	-0.29900 04
0.37030 00	-0.51550 04	-0.31250 04	-0.40250 04
0.55550 00	-0.90490 03	-0.72050 04	-0.16910 04
0.74070 00	-0.21450 03	-0.53380 04	-0.65950 03

TOTAL FORCE AT B2 X = 0.2889D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1341D 05	-0.3197D 04	0.0
0.1852D 00	-0.1121D 05	-0.3989D 04	-0.2991D 04
0.3703D 00	-0.5785D 04	-0.5839D 04	-0.3953D 04
0.5555D 00	-0.1881D 04	-0.6176D 04	-0.2466D 04
0.7407D 00	-0.6127D 03	-0.5166D 04	-0.1242D 04

TOTAL FORCE AT B2 X = 0.3703D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1203D 05	-0.2064D 04	0.0
0.1852D 00	-0.1022D 05	-0.2845D 04	-0.2715D 04
0.3703D 00	-0.5980D 04	-0.4532D 04	-0.3696D 04
0.5555D 00	-0.2524D 04	-0.5272D 04	-0.2743D 04
0.7407D 00	-0.9982D 03	-0.4817D 04	-0.1615D 04

TOTAL FORCE AT B2 X = 0.4444D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1089D 05	-0.1427D 04	0.0
0.1852D 00	-0.9422D 04	-0.2127D 04	-0.2412D 04
0.3703D 00	-0.6011D 04	-0.3619D 04	-0.3403D 04
0.5555D 00	-0.2973D 04	-0.4509D 04	-0.2821D 04
0.7407D 00	-0.1351D 04	-0.4416D 04	-0.1859D 04

TOTAL FORCE AT B2 X = 0.5555D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.9435D 04	-0.8649D 03	0.0
0.1852D 00	-0.8380D 04	-0.1414D 04	-0.1978D 04
0.3703D 00	-0.5892D 04	-0.2612D 04	-0.2946D 04
0.5555D 00	-0.3429D 04	-0.3535D 04	-0.2751D 04
0.7407D 00	-0.1824D 04	-0.3776D 04	-0.2066D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.180130D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.352865D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.529389D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.711981D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.916352D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.132282D 02	0.250000D 01

X = 0.3703D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.177672D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.341654D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.974420D 05	0.514088D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.702965D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.885266D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.893932D 01	0.168945D 01

X = 0.7407D-01	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05
0.883000D 05	0.5410C0D 05	0.422000D 05	0.864463D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06
0.900000D 05	0.4500C0D 05	0.344520D 05	0.128268D 06
MARGIN OF SAFETY	K		
0.177651D 01	0.863341D 00		
0.337004D 01	0.958554D 00		
0.508234D 01	0.975007D 00		
0.703691D 01	0.957534D 00		
0.871916D 01	0.988703D 00		
0.754111D 01	0.142520D 01		

X = 0.1852D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500C0D 05	0.242000D 05	0.157000D 05	0.317729D 05
0.5980C0D 05	0.370000D 05	0.270000D 05	0.583593D 05
0.8830C0D 05	0.5410C0D 05	0.422000D 05	0.883176D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06
MARGIN OF SAFETY	K		
0.186799C 01	0.907797D 00		
0.343105C 01	0.975907D 00		
0.519236D 01	0.100020C 01		
0.738458D 01	0.100484D 01		
0.883863D 01	0.100225D 01		
0.610580D 01	0.115394D 01		

X = 0.2889D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500C0D 05	0.2420C0D 05	0.157000D 05	0.366324D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.555505D 05
0.883000D 05	0.5410C0D 05	0.422000D 05	0.989740D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06
0.150000D 06	0.9090C0D 05	0.700000D 05	0.167833D 06
0.900000D 05	0.4500C0D 05	0.344520D 05	0.105282D 06
MARGIN OF SAFETY	K		
0.215369D 01	0.104664D 01		
0.385384D 01	0.109616D 01		
0.581887D 01	0.112088D 01		
0.837467D 01	0.113957D 01		
0.936722D 01	0.111889D 01		
0.618975D 01	0.116980D 01		

X = 0.3703D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.3500C0D 05	0.2420C0D 05	0.157000D 05	0.406093D 05
0.5980C0D 05	0.370000D 05	0.270000D 05	0.717175D 05
0.883000D 05	0.5410C0D 05	0.422000D 05	0.108216D 06
0.1250C0D 06	0.792000D 05	0.675000D 05	0.156800D 06
0.1500C0D 06	0.909000D 05	0.7000C0D 05	0.183132D 06
0.900000D 05	0.4500C0D 05	0.34452C0 05	0.110137D 06
MARGIN OF SAFETY	K		
0.238750D 01	0.116027D 01		
0.421641D 01	0.119929D 01		
0.636220D 01	0.122554D 01		
0.921850D 01	0.125440D 01		
0.107667D 02	0.122088D 01		
0.647518D 01	0.122375D 01		

X = 0.4444D 00	A = 0.5242D 00	B = 0.5380D-01	C = 0.4200D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05
0.883000D 05	0.5410C0D 05	0.422000D 05	0.117497D 06
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06
MARGIN OF SAFETY	K		
0.261247D 01	0.126960D 01		
0.457831D 01	0.130223D 01		
0.690788D 01	0.133066D 01		
0.100547D 02	0.136817D 01		
0.116751D 02	0.132389D 01		
0.685607D 01	0.129573D 01		

X = 0.5555D 00	A = 0.3670D 00	B = 0.2980D-01	C = 0.3170D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05
0.883000C 05	0.5410C0D 05	0.422000D 05	0.135223D 06
0.125000C 06	0.792000D 05	0.675000D 05	0.197278D 06
0.1500C0D 06	0.9090C0D 05	0.700000D 05	0.228373D 06
0.9000C0D 05	0.450000D 05	0.344520D 05	0.132106D 06
MARGIN OF SAFETY	K		
0.302668D 01	0.147089D 01		
0.527236D 01	0.149964D 01		
0.795001D 01	0.153140D 01		
0.115983D 02	0.157822D 01		
0.134265D 02	0.152248D 01		
0.776677D 01	0.146785D 01		

TIME = 1.0000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.341207D 02	0.594128D 02	0.225242D 01	0.621468D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.269576D 00	0.266323D 00	0.963884D 00	0.149754D 05	0.105975D 02	0.982239D 00
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.103394D 00	0.308545D 03	0.423577D 01	0.478896D 03	0.138127D 04	-0.165694D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.920424D-01	0.621468D 04	0.268480D 04	0.518151D 02	0.165511D 04	-0.837570D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.223687D 02	0.125047D 04	-0.152647D 04	0.102978D 08	0.358829D 08	0.276618D 00
RDPRIME	SDPRIME	SFUNG	RFUNG	ADPRIME	BDPRIME
0.580338D 01	-0.124257D 01	0.457960D 03	0.414947D 03	-0.475944D 03	0.915920D 03
BETAD PRIME	F	E	COS(B)-COS(B0)	FDIFF	GAMMA
0.368550D-01	0.150000D 01	0.116982D 01	0.184004D 00	0.276006D 00	0.279636D 00
COS(GAMMA)	1 - FDIFF**2	SFDF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.961156D 00	0.923821D 00	0.961156D 00	0.114971D 00	0.276006D 00	0.126624D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.329115D 00	0.158519D 00	0.620249D 00	0.776962D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.629548D 00	0.608178D 00	0.126010D 00	0.155517D 00	0.749054D-01	0.606934D-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3K(T)
0.200916D 00	0.216210D 00	0.295151D 00	0.330357D 00	0.355505D 00	0.595986D 00
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.248284D 00	0.394729D 00	0.384558D 00	0.923101D 00	0.368970D-01	0.219901D-01
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.916093D-02	-0.132461D-01	-0.110289D-01	0.124051D 03	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTAP)	FITY	AARN	BARN	DARN
0.999488D 00	0.151081D 05	0.201096D 00	0.100986D 05	0.949343D 04	0.108223D 04
TAN(LAMBDA)					
0.317646D 01					

INITIAL VALUE OF LAMBDA = 0.126580D 01

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FINAL VALUE OF LAMBDA = 0.112612D 01

BQUAC = 0.301701D 04 CQUAD = 0.227239D 07 TEST = 0.782876D-01

FA	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	FB2X
0.156509D 04	0.673249D 03	0.141289D 04	0.158685D 05	0.158670D 05	0.172048D 05

F81X
0.325920D 05

PMAX = 0.385509D 05 STRESS ANALYSIS B = 0.183577D 00 P = 0.156509D 04

L EQUIVALENT = 0.1408D 00 TOTAL FORCE AT JOINT A X = 0.0
Y SIGMA X
0.0 0.3855D 05
0.9179D-01 0.2891D 05
0.1836D 00 -0.0

L EQUIVALENT = 0.1408D 00 TOTAL FORCE AT JOINT A X = 0.1836D-01
Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
0.0 -0.3836D 05 -0.3142D 05 0.0 0.1938D 04 0.1938D 04
0.9179D-01 -0.3310D 05 -0.3109D 05 -0.2168D 04 0.1938D 04 0.4106D 04
0.1836D 00 -0.5938D 04 -0.3073D 05 -0.5648D 04 0.1938D 04 0.7586D 04
0.2754D 00 -0.3187D 02 -0.1592D 05 -0.2673D 03 0.1938D 04 0.2205D 04
0.3672D 00 -0.4894D 01 -0.1090D 05 -0.7350D 02 0.1938D 04 0.2011D 04

L EQUIVALENT = 0.1408D 00 TOTAL FORCE AT JOINT A X = 0.3672D-01
Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
0.0 -0.3780D 05 -0.2541D 05 0.0 0.1938D 04 0.1938D 04
0.9179D-01 -0.3231D 05 -0.2523D 05 -0.4026D 04 0.1938D 04 0.5964D 04
0.1836D 00 -0.8160D 04 -0.2673D 05 -0.7385D 04 0.1938D 04 0.9322D 04
0.2754D 00 -0.2293D 03 -0.1671D 05 -0.9735D 03 0.1938D 04 0.2916D 04
0.3672D 00 -0.3796D 02 -0.1139D 05 -0.2859D 03 0.1938D 04 0.2224D 04

L EQUIVALENT = 0.1408D 00 TOTAL FORCE AT JOINT A X = 0.5179D-01
Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
0.0 -0.3448D 05 -0.1317D 05 0.0 0.1938D 04 0.1938D 04
0.9179D-01 -0.2871D 05 -0.1437D 05 -0.6777D 04 0.1938D 04 0.8715D 04
0.1836D 00 -0.1168D 05 -0.1842D 05 -0.9123D 04 0.1938D 04 0.1106D 05
0.2754D 00 -0.2051D 04 -0.1633D 05 -0.3832D 04 0.1938D 04 0.5770D 04
0.3672D 00 -0.4861D 03 -0.1210D 05 -0.1495D 04 0.1938D 04 0.3433D 04

L EQUIVALENT = 0.1408D 00 TOTAL FORCE AT JOINT A X = 0.1432D 00
Y SIGMA X SIGMA Y TAU XY SHEARING STRESS TAU + SHEAR
0.0 -0.3040D 05 -0.1246D 04 0.0 0.1938D 04 0.1938D 04
0.9179D-01 -0.2542D 05 -0.5042D 04 -0.6778D 04 0.1938D 04 0.8716D 04
0.1836D 00 -0.1311D 05 -0.1322D 05 -0.8959D 04 0.1938D 04 0.1090D 05
0.2754D 00 -0.4262D 04 -0.1400D 05 -0.5588D 04 0.1938D 04 0.7526D 04
0.3672D 00 -0.1385D 04 -0.1171D 05 -0.2814D 04 0.1938D 04 0.4752D 04

L EQUIVALENT = 0.1408D 00 TOTAL FORCE AT JOINT A X = 0.1836D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.27260 05	-0.46770 04	0.0	0.19380 04	0.19380 04
0.91790-01	-0.23170 05	-0.64480 04	-0.61530 04	0.19380 04	0.80900 04
0.18360 00	-0.13550 05	-0.10270 05	-0.83770 04	0.19380 04	0.10310 05
0.27540 00	-0.57200 04	-0.11950 05	-0.62160 04	0.19380 04	0.81540 04
0.36720 00	-0.22620 04	-0.10920 05	-0.36610 04	0.19380 04	0.55980 04

L EQUIVALENT = 0.14080 00 TOTAL FORCE AT JOINT A X = 0.22030 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.24680 05	-0.32350 04	0.0	0.19380 04	0.19380 04
0.91790-01	-0.21360 05	-0.48200 04	-0.54670 04	0.19380 04	0.74050 04
0.18360 00	-0.13620 05	-0.82030 04	-0.77140 04	0.19380 04	0.96520 04
0.27540 00	-0.67390 04	-0.10220 05	-0.63930 04	0.19380 04	0.83310 04
0.36720 00	-0.30620 04	-0.10010 05	-0.42140 04	0.19380 04	0.61520 04

L EQUIVALENT = 0.14080 00 TOTAL FORCE AT JOINT A X = 0.27540 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.21380 05	-0.19600 04	0.0	0.19380 04	0.19380 04
0.91790-01	-0.18990 05	-0.32040 04	-0.44830 04	0.19380 04	0.64210 04
0.18360 00	-0.13350 05	-0.59210 04	-0.66770 04	0.19380 04	0.86150 04
0.27540 00	-0.77720 04	-0.80110 04	-0.62340 04	0.19380 04	0.81720 04
0.36720 00	-0.41330 04	-0.85570 04	-0.46820 04	0.19380 04	0.66200 04

X = 0.0 A = 0.25600 01 B = 0.60000 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.7947580 00	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1556890 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.2335730 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.3141350 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.4043070 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.5836450 01	0.2500000 01

X = 0.18360-01 A = 0.23650 01 B = 0.54000 00 C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.7839120 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1507420 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.2268230 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.3101570 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.3905910 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.3944150 01	0.1689450 01

X = 0.36720-01 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.7838200 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1486910 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.2242400 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.3104780 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.3847010 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.3327240 01	0.1425200 01

X = 0.91790-01 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.8241810 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1513830 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2290940 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.3258170 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3899720 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2693960 01	0.1153940 01

X = 0.14320 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.9502350 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1700370 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2567360 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3695010 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.4353550 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2731000 01	0.1169800 01

X = 0.18360 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1053400 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1860340 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2807090 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.4067360 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4750410 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2856940 01	0.1223750 01

X = 0.22030 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1152660 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.2020010 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.3047850 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.4436260 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.5151190 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.3024990 01	0.1295730 01

X = 0.27540 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1335410 01	0.1470890 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.2326230 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.3507650 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.5117340 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.5923930 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.3426800 01	0.1467850 01

STRESS ANALYSIS
PMAX = 0.2670310 05 B = 0.2522100 00 P = 0.1586850 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.26700 05
0.12610 00	0.20030 05
0.25220 00	-0.0

TOTAL FORCE AT JOINT 2			X = 0.2522D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2657D 05	-0.2176D 05	-0.3940D-04	0.1342D 04	0.1342D 04
0.1261D 00	-0.2293D 05	-0.2154D 05	-0.1502D 04	0.1342D 04	0.2844D 04
0.2522D 00	-0.4113D 04	-0.2129D 05	-0.3912D 04	0.1342D 04	0.5255D 04
0.3783D 00	-0.2208D 02	-0.1102D 05	-0.1852D 03	0.1342D 04	0.1527D 04
0.5044D 00	-0.3390D 01	-0.7549D 04	-0.5091D 02	0.1342D 04	0.1393D 04

TOTAL FORCE AT JOINT 2			X = 0.5044D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2618D 05	-0.1760D 05	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.2238D 05	-0.1748D 05	-0.2789D 04	0.1342D 04	0.4131D 04
0.2522D 00	-0.5652D 04	-0.1851D 05	-0.5115D 04	0.1342D 04	0.6457D 04
0.3783D 00	-0.1588D 03	-0.1157D 05	-0.6778D 03	0.1342D 04	0.2020D 04
0.5044D 00	-0.2629D 02	-0.7887D 04	-0.1981D 03	0.1342D 04	0.1540D 04

TOTAL FORCE AT JOINT 2			X = 0.1261D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2388D 05	-0.9123D 04	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.1988D 05	-0.9951D 04	-0.4694D 04	0.1342D 04	0.6036D 04
0.2522D 00	-0.8093D 04	-0.1276D 05	-0.6319D 04	0.1342D 04	0.7661D 04
0.3783D 00	-0.1421D 04	-0.1131D 05	-0.2655D 04	0.1342D 04	0.3997D 04
0.5044D 00	-0.3367D 03	-0.8380D 04	-0.1035D 04	0.1342D 04	0.2378D 04

TOTAL FORCE AT JOINT 2			X = 0.1957D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2106D 05	-0.5019D 04	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.1761D 05	-0.6263D 04	-0.4695D 04	0.1342D 04	0.6037D 04
0.2522D 00	-0.9082D 04	-0.9166D 04	-0.6206D 04	0.1342D 04	0.7548D 04
0.3783D 00	-0.2952D 04	-0.9696D 04	-0.3871D 04	0.1342D 04	0.5213D 04
0.5044D 00	-0.9618D 03	-0.8111D 04	-0.1949D 04	0.1342D 04	0.3291D 04

TOTAL FORCE AT JOINT 2			X = 0.2522D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1888D 05	-0.3240D 04	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.1605D 05	-0.4466D 04	-0.4262D 04	0.1342D 04	0.5604D 04
0.2522D 00	-0.9388D 04	-0.7115D 04	-0.5802D 04	0.1342D 04	0.7144D 04
0.3783D 00	-0.3962D 04	-0.8277D 04	-0.4306D 04	0.1342D 04	0.5648D 04
0.5044D 00	-0.1567D 04	-0.7562D 04	-0.2536D 04	0.1342D 04	0.3878D 04

TOTAL FORCE AT JOINT 2			X = 0.3027D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1709D 05	-0.2241D 04	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.1479D 05	-0.3339D 04	-0.3787D 04	0.1342D 04	0.5129D 04
0.2522D 00	-0.9437D 04	-0.5682D 04	-0.5343D 04	0.1342D 04	0.6685D 04
0.3783D 00	-0.4668D 04	-0.7079D 04	-0.4428D 04	0.1342D 04	0.5771D 04
0.5044D 00	-0.2121D 04	-0.6933D 04	-0.2919D 04	0.1342D 04	0.4261D 04

TOTAL FORCE AT JOINT 2 X = 0.3783D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1481D 05	-0.1358D 04	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.1316D 05	-0.2219D 04	-0.3106D 04	0.1342D 04	0.4448D 04
0.2522D 00	-0.9250D 04	-0.4101D 04	-0.4625D 04	0.1342D 04	0.5967D 04
0.3783D 00	-0.5383D 04	-0.5549D 04	-0.4318D 04	0.1342D 04	0.5661D 04
0.5044D 00	-0.2863D 04	-0.5928D 04	-0.3243D 04	0.1342D 04	0.4585D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.114736D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.224765D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.337206D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.453512D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.583691D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.842598D 01	0.250000D 01

X = 0.2522D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.113172D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.217624D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.327460D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.447769D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.563889D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.569410D 01	0.168945D 01

X = 0.5044D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.113159D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.214662D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.323731D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.448231D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.555386D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.480347D 01	0.142520D 01

X = 0.1261D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.118986D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.218548D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.983176D 05	0.330739D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.470377D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.562996D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.388923D 01	0.115394D 01

X = 0.1967D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.137184D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.245479D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.370645D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.533443D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.628514D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.394270D 01	0.116980D 01

X = 0.2522D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.152077D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.268573D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.405254D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.587198D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.685808D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.412451D 01	0.122375D 01

X = 0.3027D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.166407D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.291626D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.440012D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.640455D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.743668D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.436713D 01	0.129573D 01

X = 0.3783D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.192791D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.335835D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.506394D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.738782D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.855227D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.494721D 01	0.146785D 01

STRESS ANALYSIS

P MAX = 0.267019D 05

B = 0.252198D 00

P = 0.158670D 05

TOTAL FORCE AT JOINT 3

X = 0.0

Y	SIGMA X
0.0	0.2670D 05
0.1261D 00	0.2003D 05
0.2522D 00	-0.0

TOTAL FORCE AT JOINT 3

X = 0.2522D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2657D 05	-0.2176D 05	-0.3939D-04	0.1342D 04	0.1342D 04
0.1261D 00	-0.2292D 05	-0.2154D 05	-0.1502D 04	0.1342D 04	0.2844D 04
0.2522D 00	-0.4113D 04	-0.2129D 05	-0.3912D 04	0.1342D 04	0.5254D 04
0.3783D 00	-0.2208D 02	-0.1102D 05	-0.1851D 03	0.1342D 04	0.1527D 04
0.5044D 00	-0.3390D 01	-0.7549D 04	-0.5091D 02	0.1342D 04	0.1393D 04

TOTAL FORCE AT JOINT 3

X = 0.5044D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2618D 05	-0.1760D 05	0.0	0.1342D 04	0.1342D 04
0.1261D 00	-0.2238D 05	-0.1748D 05	-0.2789D 04	0.1342D 04	0.4131D 04
0.2522D 00	-0.5652D 04	-0.1851D 05	-0.5115D 04	0.1342D 04	0.6457D 04
0.3783D 00	-0.1588D 03	-0.1157D 05	-0.6777D 03	0.1342D 04	0.2020D 04
0.5044D 00	-0.2629D 02	-0.7887D 04	-0.1980D 03	0.1342D 04	0.1540D 04

TOTAL FORCE AT JOINT 3

X = 0.12610 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.23880 05	-0.91220 04	-0.15920-03	0.13420 04	0.13420 04
0.12610 00	-0.19880 05	-0.99510 04	-0.46940 04	0.13420 04	0.60360 04
0.25220 00	-0.80930 04	-0.12760 05	-0.63190 04	0.13420 04	0.76610 04
0.37830 00	-0.14210 04	-0.11310 05	-0.26540 04	0.13420 04	0.39570 04
0.50440 00	-0.33670 03	-0.83800 04	-0.10350 04	0.13420 04	0.23780 04

TOTAL FORCE AT JOINT 3

X = 0.19670 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.21050 05	-0.50190 04	0.0	0.13420 04	0.13420 04
0.12610 00	-0.17600 05	-0.62630 04	-0.46950 04	0.13420 04	0.60370 04
0.25220 00	-0.90810 04	-0.91660 04	-0.62060 04	0.13420 04	0.75480 04
0.37830 00	-0.29520 04	-0.96950 04	-0.38710 04	0.13420 04	0.52130 04
0.50440 00	-0.96180 03	-0.81110 04	-0.19490 04	0.13420 04	0.32910 04

TOTAL FORCE AT JOINT 3

X = 0.25220 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.18880 05	-0.32390 04	0.0	0.13420 04	0.13420 04
0.12610 00	-0.16050 05	-0.44660 04	-0.42620 04	0.13420 04	0.56040 04
0.25220 00	-0.93880 04	-0.71150 04	-0.58020 04	0.13420 04	0.71440 04
0.37830 00	-0.39620 04	-0.82770 04	-0.43060 04	0.13420 04	0.56480 04
0.50440 00	-0.15670 04	-0.75610 04	-0.25360 04	0.13420 04	0.38780 04

TOTAL FORCE AT JOINT 3

X = 0.30260 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.17090 05	-0.22410 04	0.0	0.13420 04	0.13420 04
0.12610 00	-0.14790 05	-0.33380 04	-0.37870 04	0.13420 04	0.51290 04
0.25220 00	-0.94370 04	-0.56820 04	-0.53430 04	0.13420 04	0.66850 04
0.37830 00	-0.46680 04	-0.70790 04	-0.44280 04	0.13420 04	0.57700 04
0.50440 00	-0.21210 04	-0.69320 04	-0.29190 04	0.13420 04	0.42610 04

TOTAL FORCE AT JOINT 3

X = 0.37830 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.14810 05	-0.13580 04	0.0	0.13420 04	0.13420 04
0.12610 00	-0.13150 05	-0.22190 04	-0.31050 04	0.13420 04	0.44480 04
0.25220 00	-0.92500 04	-0.41010 04	-0.46250 04	0.13420 04	0.59670 04
0.37830 00	-0.53830 04	-0.55490 04	-0.43180 04	0.13420 04	0.56600 04
0.50440 00	-0.28630 04	-0.59270 04	-0.32430 04	0.13420 04	0.45850 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.1147430 01	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.2247760 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.3372220 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.4535330 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.5837190 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.8426380 01	0.2500000 01

X = 0.2522E-01	A = 0.2365D 01	B = 0.5400D 00	C = 0.2130D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06
MARGIN OF SAFETY	K		
0.113177D 01	0.863442D 00		
0.217634D 01	0.971780D 00		
0.327475D 01	0.990283D 00		
0.447790D 01	0.956547D 00		
0.563916D 01	0.100384D 01		
0.569437D 01	0.168945D 01		
X = 0.5044D-01	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06
MARGIN OF SAFETY	K		
0.113164D 01	0.863341D 00		
0.214672D 01	0.958554D 00		
0.323746D 01	0.975007D 00		
0.448253D 01	0.957534D 00		
0.555412D 01	0.988703D 00		
0.480370D 01	0.142520D 01		
X = 0.1261D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.103655D 06
MARGIN OF SAFETY	K		
0.118991D 01	0.907797D 00		
0.218559D 01	0.975907D 00		
0.330754D 01	0.100020D 01		
0.470399D 01	0.100484D 01		
0.563023D 01	0.100225D 01		
0.388941D 01	0.115394D 01		
X = 0.1967D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06
MARGIN OF SAFETY	K		
0.137190D 01	0.104664D 01		
0.245491D 01	0.109616D 01		
0.370663D 01	0.112088D 01		
0.533468D 01	0.113957D 01		
0.628544D 01	0.111889D 01		
0.394289D 01	0.116980D 01		
X = 0.2522D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06
MARGIN OF SAFETY	K		
0.152084D 01	0.116027D 01		
0.268586D 01	0.119929D 01		
0.405274D 01	0.122554D 01		
0.587226D 01	0.125440D 01		
0.685841D 01	0.122088D 01		
0.412471D 01	0.122375D 01		
X = 0.3026D 00	A = 0.5242D 00	B = 0.5380D-01	C = 0.4200D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06
MARGIN OF SAFETY	K		
0.166415D 01	0.126960D 01		
0.291640D 01	0.130223D 01		
0.440033D 01	0.133066D 01		
0.640485D 01	0.136817D 01		
0.743704D 01	0.132389D 01		
0.436733D 01	0.129573D 01		

X = 0.3783D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.192800D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.335850D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.506418D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.738817D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.855268D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.494745D 01	0.146785D 01

STRESS ANALYSIS

P MAX = 0.252050D 05

B = 0.548800D 00

P = 0.325920D 05

TOTAL FORCE AT B1

X = 0.0

Y	SIGMA X
0.0	0.2520D 05
0.2744D 00	0.1890D 05
0.5488D 00	-0.0

TOTAL FORCE AT E1

X = 0.5488D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2508D 05	-0.2054D 05	0.0
0.2744D 00	-0.2164D 05	-0.2033D 05	-0.1418D 04
0.5488D 00	-0.3882D 04	-0.2009D 05	-0.3693D 04
0.8232D 00	-0.2084D 02	-0.1041D 05	-0.1743D 03
0.1098D 01	-0.3200D 01	-0.7126D 04	-0.4805D 02

TOTAL FORCE AT B1

X = 0.1098D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2472D 05	-0.1661D 05	0.0
0.2744D 00	-0.2113D 05	-0.1650D 05	-0.2633D 04
0.5488D 00	-0.5335D 04	-0.1748D 05	-0.4828D 04
0.8232D 00	-0.1499D 03	-0.1092D 05	-0.6397D 03
0.1098D 01	-0.2482D 02	-0.7445D 04	-0.1869D 03

TOTAL FORCE AT B1

X = 0.2744D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2254D 05	-0.8611D 04	0.0
0.2744D 00	-0.1877D 05	-0.9393D 04	-0.4431D 04
0.5488D 00	-0.7639D 04	-0.1204D 05	-0.5964D 04
0.8232D 00	-0.1341D 04	-0.1068D 05	-0.2506D 04
0.1098D 01	-0.3178D 03	-0.7910D 04	-0.9773D 03

TOTAL FORCE AT B1

X = 0.4281D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1987D 05	-0.4737D 04	0.0
0.2744D 00	-0.1662D 05	-0.5912D 04	-0.4432D 04
0.5488D 00	-0.8572D 04	-0.8652D 04	-0.5858D 04
0.8232D 00	-0.2787D 04	-0.9152D 04	-0.3654D 04
0.1098D 01	-0.9079D 03	-0.7656D 04	-0.1840D 04

TOTAL FORCE AT B1

X = 0.5488D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1782D 05	-0.3058D 04	0.0
0.2744D 00	-0.1515D 05	-0.4216D 04	-0.4023D 04
0.5488D 00	-0.8862D 04	-0.6716D 04	-0.5477D 04
0.8232D 00	-0.3740D 04	-0.7813D 04	-0.4064D 04
0.1098D 01	-0.1479D 04	-0.7137D 04	-0.2393D 04

TOTAL FORCE AT B1

X = 0.6586D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1614D 05	-0.2115D 04	0.0
0.2744D 00	-0.1396D 05	-0.3151D 04	-0.3575D 04
0.5488D 00	-0.8908D 04	-0.5363D 04	-0.5043D 04
0.8232D 00	-0.4406D 04	-0.6682D 04	-0.4180D 04
0.1098D 01	-0.2002D 04	-0.6544D 04	-0.2755D 04

TOTAL FORCE AT B1

X = 0.8232D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1398D 05	-0.1282D 04	0.0
0.2744D 00	-0.1242D 05	-0.2095D 04	-0.2931D 04
0.5488D 00	-0.8731D 04	-0.3871D 04	-0.4366D 04
0.8232D 00	-0.5081D 04	-0.5238D 04	-0.4076D 04
0.1098D 01	-0.2702D 04	-0.5595D 04	-0.3061D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.121558D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.238125D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.357249D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.480468D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.618385D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.892680D 01	0.250000D 01

X = 0.5488D 01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D 01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.119899D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.230559D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.346924D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.474384D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.597406D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.603255D 01	0.168945D 01

X = 0.1098D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D 01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.119885D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.227421D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.342973D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.474873D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.588357D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.508899D 01	0.142520D 01

X = 0.2744D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.126058D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.231539D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.350397D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.498335D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.596460D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.412040D 01	0.115394D 01

X = 0.4281D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.145338D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.260070D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.392676D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.565150D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.665872D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.417705D 01	0.116980D 01

X = 0.5488D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.161116D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.284537D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.429342D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.622100D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.726572D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.436967D 01	0.122375D 01

X = 0.6586D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.176298D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.308960D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.466166D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.678522D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.787871D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.462670D 01	0.129573D 01

X = 0.8232D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.204250D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.355796D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.536493D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.782694D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.906061D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.524127D 01	0.146785D 01

STRESS ANALYSIS

P_{MAX} = 0.183128D 05

B = 0.358734D 00

P = 0.172048D 05

TOTAL FORCE AT B2		X = 0.0	
Y	SIGMA X		
0.0	0.1831D 05		
0.1994D 00	0.1373D 05		
0.3987D 00	-0.0		

TOTAL FORCE AT B2		X = 0.3987D-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1822D 05	-0.1492D 05	0.0
0.1994D 00	-0.1572D 05	-0.1477D 05	-0.1030D 04
0.3987D 00	-0.2821D 04	-0.1460D 05	-0.2683D 04
0.5981D 00	-0.1514D 02	-0.7561D 04	-0.1270D 03
0.7975D 00	-0.2325D 01	-0.5177D 04	-0.3491D 02

TOTAL FORCE AT B2		X = 0.7975D-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1796D 05	-0.1207D 05	0.0
0.1994D 00	-0.1535D 05	-0.1199D 05	-0.1913D 04
0.3987D 00	-0.3876D 04	-0.1270D 05	-0.3508D 04
0.5981D 00	-0.1089D 03	-0.7937D 04	-0.4648D 03
0.7975D 00	-0.1803D 02	-0.5409D 04	-0.1358D 03

TOTAL FORCE AT B2		X = 0.1994D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1638D 05	-0.6256D 04	0.0
0.1994D 00	-0.1364D 05	-0.6824D 04	-0.3219D 04
0.3987D 00	-0.5550D 04	-0.8748D 04	-0.4333D 04
0.5981D 00	-0.9743D 03	-0.7757D 04	-0.1820D 04
0.7975D 00	-0.2309D 03	-0.5747D 04	-0.7101D 03

TOTAL FORCE AT B2		X = 0.3110D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1444D 05	-0.3442D 04	0.0
0.1994D 00	-0.1207D 05	-0.4295D 04	-0.3220D 04
0.3987D 00	-0.6228D 04	-0.6286D 04	-0.4256D 04
0.5981D 00	-0.2025D 04	-0.6649D 04	-0.2655D 04
0.7975D 00	-0.6596D 03	-0.5562D 04	-0.1337D 04

TOTAL FORCE AT B2		X = 0.3987D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1295D 05	-0.2222D 04	0.0
0.1994D 00	-0.1101D 05	-0.3063D 04	-0.2923D 04
0.3987D 00	-0.6438D 04	-0.4880D 04	-0.3979D 04
0.5981D 00	-0.2717D 04	-0.5676D 04	-0.2953D 04
0.7975D 00	-0.1075D 04	-0.5186D 04	-0.1739D 04

TOTAL FORCE AT B2		X = 0.4785D 00	
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Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.11720 05	-0.15370 04	0.0
0.19940 00	-0.10140 05	-0.22900 04	-0.25970 04
0.39870 00	-0.64720 04	-0.38970 04	-0.36640 04
0.59810 00	-0.32010 04	-0.48550 04	-0.30370 04
0.79750 00	-0.14540 04	-0.47540 04	-0.20020 04

TOTAL FORCE AT B2

X = 0.59810 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.10160 05	-0.93120 03	0.0
0.19940 00	-0.90220 04	-0.15220 04	-0.21300 04
0.39870 00	-0.63440 04	-0.28130 04	-0.31720 04
0.59810 00	-0.36920 04	-0.38060 04	-0.29610 04
0.79750 00	-0.19630 04	-0.40650 04	-0.22240 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.1673070 01	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.3277440 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.4917020 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.6612950 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.8511130 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.1228650 02	0.2500000 01

X = 0.39870-01

A = 0.23650 01

B = 0.54000 00

C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.1650240 01	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.3173320 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.4774910 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.6529210 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.8222440 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.8302940 01	0.1689450 01

X = 0.79750-01

A = 0.21610 01

B = 0.48200 00

C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.1650040 01	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.3130130 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.4720530 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.6535950 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.8098450 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.7004260 01	0.1425200 01

X = 0.19940 00

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.1735610 01	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.3186800 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.4822710 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.6858870 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.8209410 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.5671140 01	0.1153940 01

X = 0.31100 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.200037D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.357949D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.540462D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.777848D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.916477D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.574911D 01	0.116980D 01

X = 0.3987D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.221753D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.391624D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.590928D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.856232D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.100002D 02	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.601422D 01	0.122375D 01

X = 0.4785D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.242649D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.425239D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.641611D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.933889D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198533D 06	0.108439D 02	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.636759D 01	0.129573D 01

X = 0.5981D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.281121D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.489702D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.738406D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.107727D 02	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.124706D 02	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.721386D 01	0.146785D 01

TIME = 1.1000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.318871D 02	0.586038D 02	0.208697D 01	0.606724D 04
BETA	SIN(BETA)	CGS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.297381D 00	0.293017D 00	0.956107D 00	0.196544D 05	0.107629D 02	0.992828D 00
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.104508D 00	0.298617D 03	0.475458D 01	0.537552D 03	0.179867D 04	-0.164706D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
0.212393D 00	0.606724D 04	0.263284D 04	0.513112D 02	0.177781D 04	-0.778073D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.222353D 02	0.120072D 04	-0.141804D 04	0.980603D 07	0.336509D 08	0.278615D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.463425D 01	0.286730D 01	0.585838D 03	0.332124D 03	-0.344107D 03	0.117168D 04

BETAC PRIME 0.355227D-01	F 0.150000D 01	E 0.116982D 01	COS(B)-COS(B0) 0.176227D 00	FDIFF 0.264341D 00	GAMMA 0.267520D 00
CGS(GAMMA) 0.964429D 00	1 - FDIFF**2 0.930124D 00	{F01F1 0.964429D 00	GAMMA PRIME 0.126975D 00	SIN(GAMMA) 0.264341D 00	GAMMAD PRIME 0.127204D 00
G**2 + H**2 0.185000D 02	GH212 0.430116D 01	AN2 0.353883D 00	AT2 0.152789D 00	DEL 0.620249D 00	SIN(BETA+DEL) 0.794164D 00
COS(BETA+DEL) 0.607704D 00	W2/386.4 0.608179D 00	FI2XN(T) 0.123400D 00	FI2YN(T) 0.161263D 00	FI2XT(T) 0.737961D-01	FI2YT(T) 0.564697D-01
FI2X(T) 0.197196D 00	FI2Y(T) 0.217733D 00	FI2T 0.253758D 00	A2X(T) 0.324241D 00	A2Y(T) 0.358008D 00	A3X(T) 0.590681D 00
A3Y(T) 0.247365D 00	THETA 0.396590D 00	SIN(THETA) 0.386276D 00	COS(THETA) 0.922383D 00	W3/386.4 0.368970D-01	FI3X(T) 0.217944D-01
FI3Y(T) 0.912705D-02	FI4T 0.305661D-01	FI5T 0.254498D-01	FR(T) 0.192635D 03	PHI 0.319891D-01	SIN(PHI) 0.319836D-01
COS(PHI) 0.999488D 00	F(DELTAP) 0.182847D 05	FITY 0.282876D 00	AARN 0.101272D 05	BARN 0.122305D 05	CARN 0.107373D 04
TAN(LAMBDA) -0.311371D 01					

INITIAL VALLE CF LAMBDA = -0.126004D 01

CASE 2

FINAL VALUE OF LAMBDA = -0.138924D 01

BQUAD = 0.335410D 04 CQUAD = 0.280737D 07 TEST = 0.426000D 00

FA 0.174867D 04	FA*COS(LAMBDA) 0.315732D 03	FA*SIN(LAMBDA) -0.171993D 04	F43 0.186583D 05	F32 0.186594D 05	FB2X -0.174172D 05
FB1X -0.328322D 05					

STRESS ANALYSIS
PMAX = 0.400028D 05 B = 0.190491D 00 P = 0.174867D 04

L EQUIVALENT = 0.1461D 00	TOTAL FORCE AT JOINT A	X = 0.0
Y	SIGMA X	
0.0	0.40000D 05	
0.95250D-01	0.30000D 05	
0.1905D 00	-0.0	
L EQUIVALENT = 0.1461D 00	TOTAL FORCE AT JOINT A	X = 0.1905D-01

	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.39800 05	-0.32600 05	0.0	0.20110 04	0.20110 04
0.95250-01	-0.34340 05	-0.32260 05	-0.22500 04	0.20110 04	0.42600 04
0.19050 00	-0.61610 04	-0.31890 05	-0.58610 04	0.20110 04	0.78720 04
0.28570 00	-0.33080 02	-0.16520 05	-0.27740 03	0.20110 04	0.22880 04
0.38100 00	-0.50790 01	-0.11310 05	-0.76260 02	0.20110 04	0.20870 04
L EQUIVALENT = 0.14610 00	TOTAL FORCE AT JOINT A		X = 0.38100-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.39230 05	-0.26360 05	0.0	0.20110 04	0.20110 04
0.95250-01	-0.33530 05	-0.26180 05	-0.41780 04	0.20110 04	0.61890 04
0.19050 00	-0.84670 04	-0.27730 05	-0.76630 04	0.20110 04	0.56730 04
0.28570 00	-0.23790 03	-0.17340 05	-0.10150 04	0.20110 04	0.30260 04
0.38100 00	-0.39390 02	-0.11820 05	-0.29670 03	0.20110 04	0.23070 04
L EQUIVALENT = 0.14610 00	TOTAL FORCE AT JOINT A		X = 0.95250-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.35780 05	-0.13670 05	0.0	0.20110 04	0.20110 04
0.95250-01	-0.29790 05	-0.14910 05	-0.70320 04	0.20110 04	0.90430 04
0.19050 00	-0.12120 05	-0.19110 05	-0.94660 04	0.20110 04	0.11480 05
0.23570 00	-0.21280 04	-0.16940 05	-0.39770 04	0.20110 04	0.59870 04
0.33100 00	-0.50440 03	-0.12550 05	-0.15510 04	0.20110 04	0.35620 04
L EQUIVALENT = 0.14610 00	TOTAL FORCE AT JOINT A		X = 0.14860 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.31540 05	-0.75190 04	0.0	0.20110 04	0.20110 04
0.95250-01	-0.26370 05	-0.93820 04	-0.70340 04	0.20110 04	0.90440 04
0.19050 00	-0.13600 05	-0.13730 05	-0.92970 04	0.20110 04	0.11310 05
0.23570 00	-0.44230 04	-0.14520 05	-0.57990 04	0.20110 04	0.78100 04
0.33100 00	-0.14410 04	-0.12150 05	-0.29200 04	0.20110 04	0.49310 04
L EQUIVALENT = 0.14610 00	TOTAL FORCE AT JOINT A		X = 0.19050 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.28290 05	-0.48530 04	0.0	0.20110 04	0.20110 04
0.95250-01	-0.24040 05	-0.66910 04	-0.63840 04	0.20110 04	0.83950 04
0.19050 00	-0.14060 05	-0.10660 05	-0.86920 04	0.20110 04	0.10700 05
0.23570 00	-0.59350 04	-0.12400 05	-0.64510 04	0.20110 04	0.84610 04
0.33100 00	-0.23480 04	-0.11330 05	-0.37990 04	0.20110 04	0.58090 04
L EQUIVALENT = 0.14610 00	TOTAL FORCE AT JOINT A		X = 0.22860 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.25610 05	-0.33570 04	0.0	0.20110 04	0.20110 04
0.95250-01	-0.22160 05	-0.50010 04	-0.56730 04	0.20110 04	0.76840 04
0.19050 00	-0.14140 05	-0.85120 04	-0.80040 04	0.20110 04	0.10020 05
0.28570 00	-0.69930 04	-0.10600 05	-0.66340 04	0.20110 04	0.86450 04
0.38100 00	-0.31770 04	-0.10390 05	-0.43730 04	0.20110 04	0.63840 04
L EQUIVALENT = 0.14610 00	TOTAL FORCE AT JOINT A		X = 0.28570 00		

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2219D 05	-0.2034D 04	0.0	0.2011D 04	0.2011D 04
0.9525D-01	-0.1971D 05	-0.3325D 04	-0.4652D 04	0.2011D 04	0.6663D 04
0.1905D 00	-0.1386D 05	-0.6144D 04	-0.6929D 04	0.2011D 04	0.8539D 04
0.2857D 00	-0.8064D 04	-0.8313D 04	-0.6469D 04	0.2011D 04	0.8480D 04
0.3810D 00	-0.4289D 04	-0.8880D 04	-0.4858D 04	0.2011D 04	0.6869D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.765912D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.150038D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.225096D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.302734D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.389632D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.562461D 01	0.250000D 01

X = 0.1905D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.755460D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.145271D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.218590D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.298900D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.376414D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.380099D 01	0.168945D 01

X = 0.3810D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.755371D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.143294D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.216101D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.259209D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.370738D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.320647D 01	0.142520D 01

X = 0.9525D-01 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.794268D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.145888D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.220779D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.313992D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.375818D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.259618D 01	0.115394D 01

X = 0.1486D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.915746D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.163865D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.247418D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.356090D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.419553D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.263188D 01	0.116980D 01

X = 0.1905D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1015160 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1792810 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2705200 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3919740 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4577990 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2753240 01	0.1223750 01

X = 0.22860 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1110820 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1946700 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2937220 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.4275240 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.4964230 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2915200 01	0.1295730 01

X = 0.28570 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1286540 01	0.1470850 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.2241800 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.3380340 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.4931610 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.5708920 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.3302430 01	0.1467850 01

STRESS ANALYSIS
PMAX = 0.2895550 05 B = 0.2734840 00 P = 0.1865830 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.28960 05
0.13670 00	0.21720 05
0.27350 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.27350-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.28810 05	-0.23600 05	0.0	0.14550 04	0.14550 04
0.13670 00	-0.24860 05	-0.23350 05	-0.16280 04	0.14550 04	0.30840 04
0.27350 00	-0.44600 04	-0.23080 05	-0.42420 04	0.14550 04	0.56980 04
0.41020 00	-0.23940 02	-0.11950 05	-0.20080 03	0.14550 04	0.16560 04
0.54700 00	-0.36760 01	-0.81860 04	-0.55200 02	0.14550 04	0.15110 04

TOTAL FORCE AT JOINT 2 X = 0.54700-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.28390 05	-0.19080 05	0.0	0.14550 04	0.14550 04
0.13670 00	-0.24270 05	-0.18950 05	-0.30240 04	0.14550 04	0.44800 04
0.27350 00	-0.61290 04	-0.20080 05	-0.55470 04	0.14550 04	0.70020 04
0.41020 00	-0.17220 03	-0.12550 05	-0.73490 03	0.14550 04	0.21900 04
0.54700 00	-0.28510 02	-0.85530 04	-0.21480 03	0.14550 04	0.16700 04

TOTAL FORCE AT JOINT 2			X = 0.1367D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2590D 05	-0.9892D 04	0.0	0.1455D 04	0.1455D 04
0.1367D 00	-0.2156D 05	-0.1079D 05	-0.5090D 04	0.1455D 04	0.6546D 04
0.2735D 00	-0.8776D 04	-0.1383D 05	-0.6852D 04	0.1455D 04	0.8307D 04
0.4102D 00	-0.1541D 04	-0.1227D 05	-0.2878D 04	0.1455D 04	0.4334D 04
0.5470D 00	-0.3651D 03	-0.9087D 04	-0.1123D 04	0.1455D 04	0.2578D 04

TOTAL FORCE AT JOINT 2			X = 0.2133D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2283D 05	-0.5442D 04	0.0	0.1455D 04	0.1455D 04
0.1367D 00	-0.1909D 05	-0.6791D 04	-0.5091D 04	0.1455D 04	0.6547D 04
0.2735D 00	-0.9848D 04	-0.9939D 04	-0.6729D 04	0.1455D 04	0.8185D 04
0.4102D 00	-0.3201D 04	-0.1051D 05	-0.4197D 04	0.1455D 04	0.5653D 04
0.5470D 00	-0.1043D 04	-0.8795D 04	-0.2114D 04	0.1455D 04	0.3569D 04

TOTAL FORCE AT JOINT 2			X = 0.2735D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2047D 05	-0.3513D 04	0.0	0.1455D 04	0.1455D 04
0.1367D 00	-0.1740D 05	-0.4843D 04	-0.4621D 04	0.1455D 04	0.6077D 04
0.2735D 00	-0.1018D 05	-0.7715D 04	-0.6292D 04	0.1455D 04	0.7747D 04
0.4102D 00	-0.4296D 04	-0.8975D 04	-0.4669D 04	0.1455D 04	0.6125D 04
0.5470D 00	-0.1699D 04	-0.8199D 04	-0.2750D 04	0.1455D 04	0.4205D 04

TOTAL FORCE AT JOINT 2			X = 0.3282D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1854D 05	-0.2430D 04	0.0	0.1455D 04	0.1455D 04
0.1367D 00	-0.1604D 05	-0.3620D 04	-0.4106D 04	0.1455D 04	0.5562D 04
0.2735D 00	-0.1023D 05	-0.6161D 04	-0.5794D 04	0.1455D 04	0.7249D 04
0.4102D 00	-0.5062D 04	-0.7676D 04	-0.4802D 04	0.1455D 04	0.6257D 04
0.5470D 00	-0.2300D 04	-0.7518D 04	-0.3165D 04	0.1455D 04	0.4621D 04

TOTAL FORCE AT JOINT 2			X = 0.4102D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1606D 05	-0.1472D 04	0.0	0.1455D 04	0.1455D 04
0.1367D 00	-0.1426D 05	-0.2406D 04	-0.3367D 04	0.1455D 04	0.4823D 04
0.2735D 00	-0.1003D 05	-0.4447D 04	-0.5015D 04	0.1455D 04	0.6471D 04
0.4102D 00	-0.5837D 04	-0.6017D 04	-0.4683D 04	0.1455D 04	0.6138D 04
0.5470D 00	-0.3104D 04	-0.6428D 04	-0.3516D 04	0.1455D 04	0.4972D 04

X = 0.0		A = 0.2560D 01		B = 0.6000D 00		C = 0.0					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
350000D 05		0.242000D 05		0.157000D 05		0.306386D 05		0.105813D 01		0.875385D 00	
598000D 05		0.370000D 05		0.270000D 05		0.600193D 05		0.207281D 01		0.100367D 01	
883000D 05		0.541000D 05		0.422000D 05		0.900445D 05		0.310976D 01		0.101976D 01	
125000D 06		0.792000D 05		0.675000D 05		0.121102D 06		0.418234D 01		0.968815D 00	
150000D 06		0.909000D 05		0.700000D 05		0.155864D 06		0.538287D 01		0.103909D 01	
900000D 05		0.450000D 05		0.344520D 05		0.225000D 06		0.777054D 01		0.250000D 01	

X = 0.2735D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.302205 05	0.104369 01	0.863442 00
0.598000 05	0.370000 05	0.270000 05	0.581125 05	0.200696 01	0.971780 00
0.883000 05	0.541000 05	0.422000 05	0.874420 05	0.301988 01	0.990283 00
0.125000 06	0.792000 05	0.675000 05	0.119568 06	0.412938 01	0.956547 00
0.150000 06	0.909000 05	0.700000 05	0.150576 06	0.520026 01	0.100384 01
0.900000 05	0.450000 05	0.344520 05	0.152050 06	0.525117 01	0.168945 01
X = 0.54700-01 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.302169 05	0.104356 01	0.863341 00
0.598000 05	0.370000 05	0.270000 05	0.573215 05	0.197964 01	0.958554 00
0.883000 05	0.541000 05	0.422000 05	0.864463 05	0.298549 01	0.975007 00
0.125000 06	0.792000 05	0.675000 05	0.119692 06	0.413365 01	0.957534 00
0.150000 06	0.909000 05	0.700000 05	0.148305 06	0.512184 01	0.988703 00
0.900000 05	0.450000 05	0.344520 05	0.128268 06	0.442983 01	0.142520 01
X = 0.13670 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.317729 05	0.109730 01	0.907797 00
0.598000 05	0.370000 05	0.270000 05	0.583593 05	0.201548 01	0.975907 00
0.883000 05	0.541000 05	0.422000 05	0.883176 05	0.305011 01	0.100020 01
0.125000 06	0.792000 05	0.675000 05	0.125605 06	0.433788 01	0.100484 01
0.150000 06	0.909000 05	0.700000 05	0.150338 06	0.519202 01	0.100225 01
0.900000 05	0.450000 05	0.344520 05	0.103855 06	0.358670 01	0.115394 01
X = 0.21330 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.366324 05	0.126513 01	0.104664 01
0.598000 05	0.370000 05	0.270000 05	0.655505 05	0.226384 01	0.109616 01
0.883000 05	0.541000 05	0.422000 05	0.989740 05	0.341814 01	0.112088 01
0.125000 06	0.792000 05	0.675000 05	0.142446 06	0.491948 01	0.113957 01
0.150000 06	0.909000 05	0.700000 05	0.167833 06	0.575624 01	0.111889 01
0.900000 05	0.450000 05	0.344520 05	0.105282 06	0.363601 01	0.116980 01
X = 0.27350 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.140247 01	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.247682 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.373731 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.541522 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.632461 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.380368 01	0.122375 01
X = 0.32820 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.153463 01	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.268941 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.405785 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.590635 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.685821 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.402742 01	0.129573 01
X = 0.41020 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01					

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.177794 01	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.309711 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.467003 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.681314 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.788702 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.456239 01	0.146785 01

STRESS ANALYSIS
 PMAX = 0.289564 05 B = 0.273492 00 P = 0.186594 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.28960 05
0.13670 00	0.21720 05
0.27350 00	-0.0

TOTAL FORCE AT JOINT 3 X = 0.27350-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.28810 05	-0.23600 05	0.0	0.14560 04	0.14560 04
0.13670 00	-0.24860 05	-0.23350 05	-0.16280 04	0.14560 04	0.30840 04
0.27350 00	-0.44600 04	-0.23080 05	-0.42420 04	0.14560 04	0.56580 04
0.41020 00	-0.23940 02	-0.11950 05	-0.20080 03	0.14560 04	0.16560 04
0.54700 00	-0.35760 01	-0.81860 04	-0.55200 02	0.14560 04	0.15110 04

TOTAL FORCE AT JOINT 3 X = 0.54700-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.29390 05	-0.19080 05	0.0	0.14560 04	0.14560 04
0.13670 00	-0.24270 05	-0.18950 05	-0.30240 04	0.14560 04	0.44800 04
0.27350 00	-0.61290 04	-0.20080 05	-0.55470 04	0.14560 04	0.70020 04
0.41020 00	-0.17220 03	-0.12550 05	-0.73500 03	0.14560 04	0.21900 04
0.54700 00	-0.29510 02	-0.85530 04	-0.21480 03	0.14560 04	0.16700 04

TOTAL FORCE AT JOINT 3 X = 0.13670 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.25900 05	-0.98930 04	0.0	0.14560 04	0.14560 04
0.13670 00	-0.21560 05	-0.10790 05	-0.50900 04	0.14560 04	0.65460 04
0.27350 00	-0.87760 04	-0.13830 05	-0.68520 04	0.14560 04	0.83080 04
0.41020 00	-0.15410 04	-0.12270 05	-0.28790 04	0.14560 04	0.43340 04
0.54700 00	-0.36510 03	-0.90880 04	-0.11230 04	0.14560 04	0.25780 04

TOTAL FORCE AT JOINT 3 X = 0.21330 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.22830 05	-0.54420 04	0.0	0.14560 04	0.14560 04
0.13670 00	-0.19090 05	-0.67910 04	-0.50910 04	0.14560 04	0.65470 04
0.27350 00	-0.98480 04	-0.99400 04	-0.67300 04	0.14560 04	0.81850 04
0.41020 00	-0.32020 04	-0.10510 05	-0.41970 04	0.14560 04	0.56530 04
0.54700 00	-0.10430 04	-0.87950 04	-0.21140 04	0.14560 04	0.35690 04

TOTAL FORCE AT JOINT 3

X = 0.2735D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2048D 05	-0.3513D 04	0.0	0.1456D 04	0.1456D 04
0.1367D 00	-0.1740D 05	-0.4843D 04	-0.4621D 04	0.1456D 04	0.6077D 04
0.2735D 00	-0.1018D 05	-0.7716D 04	-0.6292D 04	0.1456D 04	0.7747D 04
0.4102D 00	-0.4296D 04	-0.8975D 04	-0.4669D 04	0.1456D 04	0.6125D 04
0.5470D 00	-0.1699D 04	-0.8200D 04	-0.2750D 04	0.1456D 04	0.4205D 04

TOTAL FORCE AT JOINT 3

X = 0.3282D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1854D 05	-0.2430D 04	0.0	0.1456D 04	0.1456D 04
0.1367D 00	-0.1604D 05	-0.3620D 04	-0.4107D 04	0.1456D 04	0.5562D 04
0.2735D 00	-0.1023D 05	-0.6161D 04	-0.5794D 04	0.1456D 04	0.7250D 04
0.4102D 00	-0.5062D 04	-0.7676D 04	-0.4802D 04	0.1456D 04	0.6257D 04
0.5470D 00	-0.2300D 04	-0.7518D 04	-0.3166D 04	0.1456D 04	0.4621D 04

TOTAL FORCE AT JOINT 3

X = 0.4102D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1606D 05	-0.1472D 04	0.0	0.1456D 04	0.1456D 04
0.1367D 00	-0.1427D 05	-0.2406D 04	-0.3368D 04	0.1456D 04	0.4823D 04
0.2735D 00	-0.1003D 05	-0.4447D 04	-0.5015D 04	0.1456D 04	0.6471D 04
0.4102D 00	-0.5837D 04	-0.6018D 04	-0.4683D 04	0.1456D 04	0.6138D 04
0.5470D 00	-0.3104D 04	-0.6428D 04	-0.3517D 04	0.1456D 04	0.4972D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.105810D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.207275D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.310966D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.418222D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.538271D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.777031D 01	0.250000D 01

X = 0.2735D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.104366D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.200690D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.301979D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.412926D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.520011D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.525101D 01	0.168945D 01

X = 0.5470D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.104353D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.197958D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.258540D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.413352D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.512169D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.442970D 01	0.142520D 01

X = 0.1367D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.1097270 01	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.2015420 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.3050020 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.4337750 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.5191870 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.3586590 01	0.1153940 01

X = 0.21330 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.1265090 01	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.2263770 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.3418040 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.4919330 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.5796070 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.3635900 01	0.1169800 01

X = 0.27350 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1402430 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.2476740 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.3737200 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.5415060 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.6324420 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.3803560 01	0.1223750 01

X = 0.32820 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1534580 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.2689330 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.4057730 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.5906180 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.6858000 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.4027300 01	0.1295730 01

X = 0.41020 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1777890 01	0.1470890 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.3097020 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.4669890 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.6312940 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.7886780 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.4562250 01	0.1467850 01

STRESS ANALYSIS

PMAX = 0.2529770 05 B = 0.5508190 00 P = 0.3283220 05

TOTAL FORCE AT B1

X = 0.0

Y	SIGMA X
0.0	0.25300 05
0.27540 00	0.18970 05
0.55080 00	-0.0

TOTAL FORCE AT B1				X = 0.5508D-01
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.2517D 05	-0.2062D 05	0.0	
0.2754D 00	-0.2172D 05	-0.2040D 05	-0.1423D 04	
0.5508D 00	-0.3896D 04	-0.2017D 05	-0.3706D 04	
0.8262D 00	-0.2092D 02	-0.1044D 05	-0.1754D 03	
0.1102D 01	-0.3212D 01	-0.7152D 04	-0.4823D 02	

TOTAL FORCE AT B1				X = 0.1102D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.2481D 05	-0.1667D 05	0.0	
0.2754D 00	-0.2120D 05	-0.1656D 05	-0.2642D 04	
0.5508D 00	-0.5355D 04	-0.1754D 05	-0.4846D 04	
0.8262D 00	-0.1505D 03	-0.1096D 05	-0.6421D 03	
0.1102D 01	-0.2491D 02	-0.7472D 04	-0.1876D 03	

TOTAL FORCE AT B1				X = 0.2754D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.2263D 05	-0.8643D 04	0.0	
0.2754D 00	-0.1884D 05	-0.9427D 04	-0.4447D 04	
0.5508D 00	-0.7667D 04	-0.1208D 05	-0.5986D 04	
0.8262D 00	-0.1346D 04	-0.1072D 05	-0.2515D 04	
0.1102D 01	-0.3190D 03	-0.7939D 04	-0.9809D 03	

TOTAL FORCE AT B1				X = 0.4296D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.1995D 05	-0.4755D 04	0.0	
0.2754D 00	-0.1668D 05	-0.5933D 04	-0.4448D 04	
0.5508D 00	-0.8604D 04	-0.8684D 04	-0.5879D 04	
0.8262D 00	-0.2797D 04	-0.9185D 04	-0.3667D 04	
0.1102D 01	-0.9112D 03	-0.7684D 04	-0.1847D 04	

TOTAL FORCE AT B1				X = 0.5508D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.1789D 05	-0.3069D 04	0.0	
0.2754D 00	-0.1520D 05	-0.4231D 04	-0.4037D 04	
0.5508D 00	-0.8894D 04	-0.6741D 04	-0.5497D 04	
0.8262D 00	-0.3754D 04	-0.7841D 04	-0.4079D 04	
0.1102D 01	-0.1485D 04	-0.7164D 04	-0.2402D 04	

TOTAL FORCE AT B1				X = 0.6610D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.1620D 05	-0.2123D 04	0.0	
0.2754D 00	-0.1401D 05	-0.3163D 04	-0.3588D 04	
0.5508D 00	-0.8940D 04	-0.5383D 04	-0.5062D 04	
0.8262D 00	-0.4422D 04	-0.6707D 04	-0.4195D 04	
0.1102D 01	-0.2009D 04	-0.6568D 04	-0.2766D 04	

TOTAL FORCE AT B1

X = 0.8262D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1403D 05	-0.1286D 04	0.0
0.2754D 00	-0.1246D 05	-0.2102D 04	-0.2942D 04
0.5508D 00	-0.8763D 04	-0.3885D 04	-0.4382D 04
0.8262D 00	-0.5100D 04	-0.5257D 04	-0.4091D 04
0.1102D 01	-0.2712D 04	-0.5616D 04	-0.3072D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.121112D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.237252D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.355940D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.478707D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.616119D 01	0.103509D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.889469D 01	0.250000D 01

X = 0.5508D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.119459D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.229715D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.345652D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.472645D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.595217D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.601044D 01	0.168945D 01

X = 0.1102D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.119445D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.226588D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.341716D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.473133D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.586241D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.507034D 01	0.142520D 01

X = 0.2754D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.125596D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.230690D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.349113D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.496509D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.594274D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.410530D 01	0.115394D 01

X = 0.4256D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.144805D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.259117D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.391237D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.563079D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.663432D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.416174D 01	0.116580D 01

X = 0.55080 00

A = 0.68560 00

B = 0.85500-01

C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.160526 01	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.283494 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.427769 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.619821 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.723909 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.435365 01	0.122375 01

X = 0.66100 00

A = 0.52420 00

B = 0.53800-01

C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.175652 01	0.126560 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.307827 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.464458 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.676036 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.784984 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.460975 01	0.129573 01

X = 0.82620 00

A = 0.36700 00

B = 0.29800-01

C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.203502 01	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.354492 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.534527 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.779826 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.902741 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.522206 01	0.146785 01

STRESS ANALYSIS

P MAX = 0.184256 05

B = 0.401188 00

P = 0.174172 05

TOTAL FORCE AT B2

X = 0.0

Y	SIGMA X
0.0	0.18430 05
0.20060 00	0.13820 05
0.40120 00	-0.0

TOTAL FORCE AT B2

X = 0.40120-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.18330 05	-0.15020 05	0.0
0.20060 00	-0.15820 05	-0.14860 05	-0.10360 04
0.40120 00	-0.28380 04	-0.14690 05	-0.27000 04
0.60180 00	-0.15230 02	-0.76070 04	-0.12780 03
0.80240 00	-0.23390 01	-0.52090 04	-0.35130 02

TOTAL FORCE AT B2

X = 0.80240-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1807D 05	-0.1214D 05	0.0
0.2006D 00	-0.1544D 05	-0.1206D 05	-0.1924D 04
0.4012D 00	-0.3900D 04	-0.1277D 05	-0.3329D 04
0.6018D 00	-0.1056D 03	-0.7986D 04	-0.4677D 03
0.8024D 00	-0.1814D 02	-0.5442D 04	-0.1367D 03

TOTAL FORCE AT B2 X = 0.2006D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1648D 05	-0.6295D 04	0.0
0.2006D 00	-0.1272D 05	-0.6867D 04	-0.3239D 04
0.4012D 00	-0.5584D 04	-0.8802D 04	-0.4360D 04
0.6018D 00	-0.9803D 03	-0.7805D 04	-0.1332D 04
0.8024D 00	-0.2323D 03	-0.5783D 04	-0.7144D 03

TOTAL FORCE AT B2 X = 0.3129D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1453D 05	-0.3463D 04	0.0
0.2006D 00	-0.1215D 05	-0.4322D 04	-0.3240D 04
0.4012D 00	-0.6266D 04	-0.6325D 04	-0.4282D 04
0.6018D 00	-0.2037D 04	-0.6690D 04	-0.2571D 04
0.8024D 00	-0.6637D 03	-0.5597D 04	-0.1345D 04

TOTAL FORCE AT B2 X = 0.4012D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1303D 05	-0.2235D 04	0.0
0.2006D 00	-0.1107D 05	-0.3082D 04	-0.2541D 04
0.4012D 00	-0.6478D 04	-0.4910D 04	-0.4004D 04
0.6018D 00	-0.2734D 04	-0.5711D 04	-0.2571D 04
0.8024D 00	-0.1081D 04	-0.5218D 04	-0.1750D 04

TOTAL FORCE AT B2 X = 0.4814D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1180D 05	-0.1546D 04	0.0
0.2006D 00	-0.1021D 05	-0.2304D 04	-0.2613D 04
0.4012D 00	-0.6512D 04	-0.3921D 04	-0.3687D 04
0.6018D 00	-0.3221D 04	-0.4885D 04	-0.3056D 04
0.8024D 00	-0.1463D 04	-0.4784D 04	-0.2014D 04

TOTAL FORCE AT B2 X = 0.5018D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1022D 05	-0.9370D 03	0.0
0.2006D 00	-0.9077D 04	-0.1531D 04	-0.2143D 04
0.4012D 00	-0.6283D 04	-0.2830D 04	-0.3191D 04
0.6018D 00	-0.3715D 04	-0.3829D 04	-0.2980D 04
0.8024D 00	-0.1575D 04	-0.4090D 04	-0.2238D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.166283D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.325739D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.488654D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.657250D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.845911D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.122113D 02	0.250000D 01

X = 0.4012D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.164014D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.315391D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.474569D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.648927D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.817214D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.825214D 01	0.168945D 01

X = 0.8024D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.163995D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.311098D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.469166D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.649597D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.143050D 06	0.804890D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.696141D 01	0.142520D 01

X = 0.2006D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.172439D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.316730D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.479321D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.681691D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.815919D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.563644D 01	0.115394D 01

X = 0.3129D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.198813D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.355759D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.537156D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.773089D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.910871D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.571393D 01	0.116980D 01

X = 0.4012D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.220397D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.389229D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.587313D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.850994D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.993904D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.597743D 01	0.122375D 01

X = 0.4814D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.241164D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.422637D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.637686D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.928175D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.107776D 02	0.132385D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.632904D 01	0.129573D 01

X = 0.6018D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.279401D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.486706D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.733889D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.107068D 02	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.123943D 02	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.716972D 01	0.146785D 01

TIME = 1.2000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.296767D 02	0.578571D 02	0.192323D 01	0.593116D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.325259D 00	0.319554D 00	0.947568D 00	0.252413D 05	0.109267D 02	0.100331D 01
D(T)	FS(T)	P(T)	FP(T)	E(T)	ZPRIME
0.105611D 00	0.289793D 03	0.506340D 01	0.572467D 03	0.222992D 04	-0.163060D 01
ZDPRIME	E(T)	E(T)-R(T)**2	SQRT(E(T)-R(T)**2)	A(T)-2	RPRIME
0.345053D-01	0.593116D 04	0.258372D 04	0.508303D 02	0.189532D 04	-0.716901D 01
SPRIME	APRIME	BPRIME	AANDR	B(T)**2-A(T)**2	BETA PRIME
-0.220131D 02	0.115292D 04	-0.130655D 04	0.931450D 07	0.315864D 08	0.275428D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.517786D 01	0.465822D 00	0.498402D 03	0.350971D 03	-0.320892D 03	0.996803D 03
BETAD PRIME	F	E	COS(B)-COS(B0)	FDIFF	GAMMA
0.356665D-01	0.150000D 01	0.116982D 01	0.167688D 00	0.251532D 00	0.254263D 00
COS(GAMMA)	1 - FDIFF**2	SFJIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.967849D 00	0.936732D 00	0.967849D 00	0.138388D 00	0.251532D 00	0.127352D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.335834D 00	0.153407D 00	0.620249D 00	0.810794D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.585331D 00	0.606178D 00	0.119552D 00	0.165602D 00	0.756464D-01	0.546108D-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.195199D 00	0.220213D 00	0.294273D 00	0.320956D 00	0.362087D 00	0.587448D 00
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.248307D 00	0.399911D 00	0.389336D 00	0.921096D 00	0.368970D-01	0.216751D-01
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.916180D-02	0.496577D-02	0.413457D-02	0.237374D 03	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTA)	FITY	AARN	BARN	CARN
0.999488D 00	0.217534D 05	0.238475D 00	0.948963D 04	0.150038D 05	0.995616D 03
TAN(LAMBDA)					
-0.121742D 01					

INITIAL VALUE OF LAMBDA = -0.883136D 00

CASE 2

FINAL VALUE OF LAMBDA = -0.954287D 00

BQUAD = 0.472106D 04 CQUAD = 0.555721D 07 TEST = 0.789357D-02

FA 0.248254D 04 FA*COS(LAMBDA) 0.143538D 04 FA*SIN(LAMBDA) -0.202551D 04 F43 0.232566D 05 F32 0.232577D 05 FB2X -0.213090D 05
FB1X
-0.398866D 05

STRESS ANALYSIS

PMAX = 0.449593D 05 R = 0.214094D 00 P = 0.248254D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.0

Y SIGMA X
0.0 0.4496D 05
0.1070D 00 0.3372D 05
0.2141D 00 -0.0

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.2141D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4474D 05	-0.3664D 05	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.3860D 05	-0.3626D 05	-0.2528D 04	0.2260D 04	0.4788D 04
0.2141D 00	-0.6925D 04	-0.3584D 05	-0.6587D 04	0.2260D 04	0.8847D 04
0.3211D 00	-0.3717D 02	-0.1856D 05	-0.3117D 03	0.2260D 04	0.2572D 04
0.4282D 00	-0.5708D 01	-0.1271D 05	-0.8571D 02	0.2260D 04	0.2346D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.4282D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4409D 05	-0.2963D 05	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.3768D 05	-0.2943D 05	-0.4696D 04	0.2260D 04	0.6956D 04
0.2141D 00	-0.9516D 04	-0.3117D 05	-0.8612D 04	0.2260D 04	0.1087D 05
0.3211D 00	-0.2674D 03	-0.1949D 05	-0.1141D 04	0.2260D 04	0.3401D 04
0.4282D 00	-0.4427D 02	-0.1328D 05	-0.3335D 03	0.2260D 04	0.2593D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.1070D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4021D 05	-0.1536D 05	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.3348D 05	-0.1675D 05	-0.7903D 04	0.2260D 04	0.1016D 05
0.2141D 00	-0.1363D 05	-0.2148D 05	-0.1064D 05	0.2260D 04	0.1250D 05
0.3211D 00	-0.2392D 04	-0.1904D 05	-0.4469D 04	0.2260D 04	0.6729D 04
0.4282D 00	-0.5669D 03	-0.1411D 05	-0.1743D 04	0.2260D 04	0.4003D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.1670D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3545D 05	-0.8450D 04	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.2964D 05	-0.1054D 05	-0.7905D 04	0.2260D 04	0.1016D 05
0.2141D 00	-0.1529D 05	-0.1543D 05	-0.1045D 05	0.2260D 04	0.1271D 05
0.3211D 00	-0.4971D 04	-0.1632D 05	-0.6517D 04	0.2260D 04	0.8777D 04
0.4282D 00	-0.1619D 04	-0.1366D 05	-0.3282D 04	0.2260D 04	0.5542D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.2141D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3179D 05	-0.5454D 04	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.2702D 05	-0.7520D 04	-0.7175D 04	0.2260D 04	0.9435D 04
0.2141D 00	-0.1581D 05	-0.1198D 05	-0.9769D 04	0.2260D 04	0.1203D 05
0.3211D 00	-0.6671D 04	-0.1394D 05	-0.7250D 04	0.2260D 04	0.9510D 04
0.4282D 00	-0.2639D 04	-0.1273D 05	-0.4269D 04	0.2260D 04	0.6529D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.2569D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2378D 05	-0.3773D 04	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.2490D 05	-0.5621D 04	-0.6376D 04	0.2260D 04	0.8636D 04
0.2141D 00	-0.1589D 05	-0.9567D 04	-0.8996D 04	0.2260D 04	0.1126D 05
0.3211D 00	-0.7860D 04	-0.1192D 05	-0.7456D 04	0.2260D 04	0.9716D 04
0.4282D 00	-0.3571D 04	-0.1167D 05	-0.4915D 04	0.2260D 04	0.7175D 04

L EQUIVALENT = 0.1642D 00 TOTAL FORCE AT JOINT A X = 0.3211D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2494D 05	-0.2285D 04	0.0	0.2260D 04	0.2260D 04
0.1070D 00	-0.2215D 05	-0.3736D 04	-0.5229D 04	0.2260D 04	0.7489D 04
0.2141D 00	-0.1557D 05	-0.6905D 04	-0.7787D 04	0.2260D 04	0.1005D 05
0.3211D 00	-0.9064D 04	-0.9343D 04	-0.7271D 04	0.2260D 04	0.9530D 04
0.4282D 00	-0.4820D 04	-0.9980D 04	-0.5460D 04	0.2260D 04	0.7720D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.681474D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.133497D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.200280D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.269359D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.346677D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.560453D 01	0.250000D 01

X = 0.2141D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.672174D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.129256D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.194491D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.265948D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.334917D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.338195D 01	0.168945D 01

X = 0.42320-01		A = 0.21510 01		B = 0.48200 00		C = 0.38000-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3021690 05		0.6720950 00		0.3633410 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.5732150 05		0.1274960 01		0.9585540 00	
0.8830000 05		0.5410000 05		0.4220000 05		0.8644630 05		0.1522770 01		0.9790070 00	
0.1250000 06		0.7920000 05		0.6750000 05		0.1196920 06		0.2662230 01		0.9575340 00	
0.1500000 06		0.9090000 05		0.7000000 05		0.1483050 06		0.3298660 01		0.9887030 00	
0.9000000 05		0.4500000 05		0.3445200 05		0.1282680 06		0.2852980 01		0.1425200 01	
X = 0.10700 00		A = 0.15280 01		B = 0.30600 00		C = 0.65500-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3177290 05		0.7067040 00		0.9077970 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.5835930 05		0.1298050 01		0.9759070 00	
0.8830000 05		0.5410000 05		0.4220000 05		0.8831760 05		0.1964390 01		0.1000200 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1256050 06		0.2793760 01		0.1004840 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1503380 06		0.3343860 01		0.1002250 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1038550 06		0.2309970 01		0.1153940 01	
X = 0.16700 00		A = 0.95300 00		B = 0.14820 00		C = 0.54300-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3663240 05		0.8147890 00		0.1046640 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.6555050 05		0.1458000 01		0.1096160 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.9897400 05		0.2201410 01		0.1120880 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1424460 06		0.3168330 01		0.1139570 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1678330 06		0.3733000 01		0.1118890 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1052820 06		0.2341730 01		0.1169800 01	
X = 0.21410 00		A = 0.68560 00		B = 0.85500-01		C = 0.47500-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.4060930 05		0.9032460 00		0.1160270 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.7171750 05		0.1595170 01		0.1199290 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1082160 06		0.2406970 01		0.1225540 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1568000 06		0.3487600 01		0.1254400 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1831320 06		0.4073290 01		0.1220880 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1101370 06		0.2449710 01		0.1223750 01	
X = 0.25690 00		A = 0.52420 00		B = 0.53800-01		C = 0.42000-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.4443590 05		0.9883580 00		0.1269600 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.7787320 05		0.1732080 01		0.1302230 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1174970 06		0.2613410 01		0.1330660 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1710210 06		0.3803920 01		0.1368170 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1985830 06		0.4416950 01		0.1323890 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1166160 06		0.2593810 01		0.1295730 01	
X = 0.32110 00		A = 0.36700 00		B = 0.29800-01		C = 0.31700-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.5148130 05		0.1145060 01		0.1470890 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.8967830 05		0.1994660 01		0.1499640 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1352230 06		0.3007670 01		0.1531400 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1972780 06		0.4387920 01		0.1578220 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.2283730 06		0.5079540 01		0.1522480 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1321060 06		0.2938350 01		0.1467850 01	

STRESS ANALYSIS
P MAX = 0.323272D 05 B = 0.305329D 00 P = 0.232566D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.3233D 05
0.1527D 00	0.2425D 05
0.3053D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.3053D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3217D 05	-0.2634D 05	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2775D 05	-0.2607D 05	-0.1618D 04	0.1625D 04	0.3443D 04
0.3053D 00	-0.4979D 04	-0.2577D 05	-0.4136D 04	0.1625D 04	0.6361D 04
0.4580D 00	-0.2673D 02	-0.1335D 05	-0.2410D 03	0.1625D 04	0.1849D 04
0.6107D 00	-0.4104D 01	-0.9139D 04	-0.6163D 02	0.1625D 04	0.1687D 04

TOTAL FORCE AT JOINT 2 X = 0.6107D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3170D 05	-0.2130D 05	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2709D 05	-0.2116D 05	-0.3376D 04	0.1625D 04	0.5001D 04
0.3053D 00	-0.6842D 04	-0.2241D 05	-0.6192D 04	0.1625D 04	0.7817D 04
0.4580D 00	-0.1923D 03	-0.1401D 05	-0.8205D 03	0.1625D 04	0.2445D 04
0.6107D 00	-0.3183D 02	-0.9549D 04	-0.2398D 03	0.1625D 04	0.1865D 04

TOTAL FORCE AT JOINT 2 X = 0.1527D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2891D 05	-0.1104D 05	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2407D 05	-0.1205D 05	-0.5083D 04	0.1625D 04	0.7308D 04
0.3053D 00	-0.9798D 04	-0.1544D 05	-0.7050D 04	0.1625D 04	0.9275D 04
0.4580D 00	-0.1720D 04	-0.1369D 05	-0.3214D 04	0.1625D 04	0.4839D 04
0.6107D 00	-0.4076D 03	-0.1015D 05	-0.1253D 04	0.1625D 04	0.2878D 04

TOTAL FORCE AT JOINT 2 X = 0.2382D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2549D 05	-0.6076D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2131D 05	-0.7582D 04	-0.5584D 04	0.1625D 04	0.7309D 04
0.3053D 00	-0.1099D 05	-0.1110D 05	-0.7313D 04	0.1625D 04	0.9138D 04
0.4580D 00	-0.3574D 04	-0.1174D 05	-0.4386D 04	0.1625D 04	0.6311D 04
0.6107D 00	-0.1164D 04	-0.9819D 04	-0.2360D 04	0.1625D 04	0.3585D 04

TOTAL FORCE AT JOINT 2 X = 0.3053D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2286D 05	-0.3922D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.1943D 05	-0.5407D 04	-0.5159D 04	0.1625D 04	0.6784D 04
0.3053D 00	-0.1137D 05	-0.8614D 04	-0.7224D 04	0.1625D 04	0.8649D 04
0.4580D 00	-0.4767D 04	-0.1002D 05	-0.5213D 04	0.1625D 04	0.6838D 04
0.6107D 00	-0.1897D 04	-0.9154D 04	-0.3370D 04	0.1625D 04	0.4695D 04

TOTAL FORCE AT JOINT 2

X = 0.3664D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2076D 05	-0.2713D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.1791D 05	-0.4042D 04	-0.4585D 04	0.1625D 04	0.6210D 04
0.3053D 00	-0.1142D 05	-0.6879D 04	-0.6468D 04	0.1625D 04	0.8093D 04
0.4580D 00	-0.5651D 04	-0.8570D 04	-0.5361D 04	0.1625D 04	0.6586D 04
0.6107D 00	-0.2567D 04	-0.8393D 04	-0.3534D 04	0.1625D 04	0.5159D 04

TOTAL FORCE AT JOINT 2

X = 0.4580D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1793D 05	-0.1644D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.1593D 05	-0.2687D 04	-0.3760D 04	0.1625D 04	0.5385D 04
0.3053D 00	-0.1120D 05	-0.4965D 04	-0.5599D 04	0.1625D 04	0.7224D 04
0.4580D 00	-0.6517D 04	-0.6718D 04	-0.5228D 04	0.1625D 04	0.6853D 04
0.6107D 00	-0.3466D 04	-0.7176D 04	-0.3926D 04	0.1625D 04	0.5551D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.947766D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.185662D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.278541D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.374613D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.482145D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.696009D 01	0.250000D 01

X = 0.3053D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.934832D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.179764D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.270491D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.369870D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.465788D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.470348D 01	0.168945D 01

X = 0.6107D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.934722D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.177317D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.267411D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.370251D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.458764D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.396780D 01	0.142520D 01

X = 0.1527D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.982854D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.180527D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.273199D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.388544D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.465050D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.321261D 01	0.115394D 01

X = 0.2382D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.113318D 01		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.202772D 01		0.109616D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.306163D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.440639D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167833D 06		0.519170D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.325678D 01		0.116980D 01	
X = 0.3053D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.125620D 01		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.221849D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.334751D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.485042D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.566497D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.340696D 01		0.122375D 01	
X = 0.3664D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.137457D 01		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.240891D 01		0.130223D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.117497D 06		0.363462D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.529033D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.198583D 06		0.614291D 01		0.132389D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116616D 06		0.360737D 01		0.129573D 01	
X = 0.4580D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.159251D 01		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.277409D 01		0.149964D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.418255D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.157278D 06		0.610254D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.706442D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.408654D 01		0.146785D 01	

STRESS ANALYSIS

PMAX = 0.323279D 05 B = 0.305336D 00 P = 0.232577D 05

TOTAL FORCE AT JOINT 3

X = 0.0

Y	SIGMA X
0.0	0.3233D 05
0.1527D 00	0.2425D 05
0.3053D 00	-0.0

TOTAL FORCE AT JOINT 3

X = 0.3053D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3217D 05	-0.2635D 05	-0.4770D-04	0.1625D 04	0.1625D 04
0.1527D 00	-0.2775D 05	-0.2607D 05	-0.1818D 04	0.1625D 04	0.3443D 04
0.3053D 00	-0.4979D 04	-0.2577D 05	-0.4736D 04	0.1625D 04	0.6361D 04
0.4580D 00	-0.2673D 02	-0.1335D 05	-0.2242D 03	0.1625D 04	0.1849D 04
0.6107D 00	-0.4104D 01	-0.9140D 04	-0.6163D 02	0.1625D 04	0.1687D 04

TOTAL FORCE AT JOINT 3 X = 0.6107D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3170D 05	-0.2130D 05	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2710D 05	-0.2116D 05	-0.3377D 04	0.1625D 04	0.5001D 04
0.3053D 00	-0.6843D 04	-0.2241D 05	-0.6192D 04	0.1625D 04	0.7817D 04
0.4580D 00	-0.1923D 03	-0.1401D 05	-0.8205D 03	0.1625D 04	0.2446D 04
0.6107D 00	-0.3183D 02	-0.9549D 04	-0.2398D 03	0.1625D 04	0.1865D 04

TOTAL FORCE AT JOINT 3 X = 0.1527D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2891D 05	-0.1104D 05	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2407D 05	-0.1205D 05	-0.5683D 04	0.1625D 04	0.7308D 04
0.3053D 00	-0.9758D 04	-0.1544D 05	-0.7650D 04	0.1625D 04	0.9275D 04
0.4580D 00	-0.1720D 04	-0.1369D 05	-0.3214D 04	0.1625D 04	0.4839D 04
0.6107D 00	-0.4076D 03	-0.1015D 05	-0.1253D 04	0.1625D 04	0.2878D 04

TOTAL FORCE AT JOINT 3 X = 0.2382D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2549D 05	-0.6076D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.2131D 05	-0.7582D 04	-0.5684D 04	0.1625D 04	0.7309D 04
0.3053D 00	-0.1059D 05	-0.1110D 05	-0.7513D 04	0.1625D 04	0.9138D 04
0.4580D 00	-0.3574D 04	-0.1174D 05	-0.4686D 04	0.1625D 04	0.6311D 04
0.6107D 00	-0.1164D 04	-0.9819D 04	-0.2360D 04	0.1625D 04	0.3985D 04

TOTAL FORCE AT JOINT 3 X = 0.3053D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2286D 05	-0.3922D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.1943D 05	-0.5407D 04	-0.5159D 04	0.1625D 04	0.6784D 04
0.3053D 00	-0.1137D 05	-0.8614D 04	-0.7024D 04	0.1625D 04	0.8649D 04
0.4580D 00	-0.4797D 04	-0.1002D 05	-0.5213D 04	0.1625D 04	0.6838D 04
0.6107D 00	-0.1897D 04	-0.9154D 04	-0.3070D 04	0.1625D 04	0.4695D 04

TOTAL FORCE AT JOINT 3 X = 0.3664D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2070D 05	-0.2713D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.1791D 05	-0.4042D 04	-0.4585D 04	0.1625D 04	0.6210D 04
0.3053D 00	-0.1142D 05	-0.6879D 04	-0.6469D 04	0.1625D 04	0.8094D 04
0.4580D 00	-0.5651D 04	-0.8570D 04	-0.5361D 04	0.1625D 04	0.6586D 04
0.6107D 00	-0.2567D 04	-0.8393D 04	-0.3534D 04	0.1625D 04	0.5159D 04

TOTAL FORCE AT JOINT 3 X = 0.4580D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1793D 05	-0.1644D 04	0.0	0.1625D 04	0.1625D 04
0.1527D 00	-0.1593D 05	-0.2687D 04	-0.3760D 04	0.1625D 04	0.5385D 04
0.3053D 00	-0.1120D 05	-0.4965D 04	-0.5599D 04	0.1625D 04	0.7224D 04
0.4580D 00	-0.6517D 04	-0.6718D 04	-0.5228D 04	0.1625D 04	0.6853D 04
0.6107D 00	-0.3466D 04	-0.7176D 04	-0.3926D 04	0.1625D 04	0.5551D 04

X = 0.0	A = 0.2560D 01	B = 0.6000D 00	C = 0.0
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06

MARGIN OF SAFETY	K
0.947745D 00	0.875385D 00
0.185658D 01	0.100367D 01
0.278535D 01	0.101976D 01
0.374605D 01	0.968815D 00
0.482134D 01	0.103909D 01
0.695993D 01	0.250000D 01

X = 0.3053D-01	A = 0.2365D 01	B = 0.5400D 00	C = 0.2130D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119566D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06

MARGIN OF SAFETY	K
0.934811D 00	0.863442D 00
0.179759D 01	0.971780D 00
0.270485D 01	0.990283D 00
0.365861D 01	0.956547D 00
0.465778D 01	0.100384D 01
0.470337D 01	0.168945D 01

X = 0.6107D-01	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06

MARGIN OF SAFETY	K
0.934761D 00	0.863341D 00
0.177313D 01	0.958554D 00
0.267405D 01	0.979007D 00
0.370243D 01	0.957534D 00
0.458754D 01	0.988703D 00
0.396771D 01	0.142520D 01

X = 0.1527D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06

MARGIN OF SAFETY	K
0.982832D 00	0.907797D 00
0.180523D 01	0.975907D 00
0.273193D 01	0.100020D 01
0.388535D 01	0.100484D 01
0.465040D 01	0.100225D 01
0.321254D 01	0.115394D 01

X = 0.2382D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06

MARGIN OF SAFETY	K
0.113315D 01	0.104664D 01
0.202768D 01	0.109616D 01
0.306156D 01	0.112088D 01
0.440628D 01	0.113957D 01
0.519158D 01	0.111889D 01
0.325670D 01	0.116980D 01

X = 0.3053D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01
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SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406053D 05	0.125617C 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.221844D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.334744C 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.485031D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.566484D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.340688C 01	0.122375D 01

X = 0.3664D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.137454D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.240885D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.363454C 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.529021D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.614277D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.360729D 01	0.129573D 01

X = 0.4580D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.159247D 01	0.147689D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.277402D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.418285C 01	0.153140C 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.610240D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.706425C 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.408644D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.278833D 05

B = 0.607116D 00

P = 0.398866D 05

TOTAL FORCE AT B1

X = 0.0

Y	SIGMA X
0.0	0.2788D 05
0.3036D 00	0.2091D 05
0.6071D 00	-0.0

TOTAL FORCE AT B1

X = 0.6071D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2774D 05	-0.2272D 05	0.0
0.3036D 00	-0.2394D 05	-0.2249D 05	-0.1568D 04
0.6071D 00	-0.4295D 04	-0.2223D 05	-0.4085D 04
0.9107D 00	-0.2305D 02	-0.1151D 05	-0.1933D 03
0.1214D 01	-0.3540D 01	-0.7883D 04	-0.5316D 02

TOTAL FORCE AT B1

X = 0.1214D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2734D 05	-0.1838D 05	0.0
0.3036D 00	-0.2337D 05	-0.1825D 05	-0.2912D 04
0.6071D 00	-0.5902D 04	-0.1933D 05	-0.5341D 04
0.9107D 00	-0.1658D 03	-0.1208D 05	-0.7077D 03
0.1214D 01	-0.2745D 02	-0.8236D 04	-0.2068D 03

TOTAL FORCE AT B1

X = 0.3036D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2494D 05	-0.9526D 04	0.0
0.3036D 00	-0.2076D 05	-0.1039D 05	-0.4902D 04
0.6071D 00	-0.8451D 04	-0.1332D 05	-0.6598D 04
0.9107D 00	-0.1483D 04	-0.1181D 05	-0.2772D 04
0.1214D 01	-0.3516D 03	-0.8751D 04	-0.1081D 04

TOTAL FORCE AT B1

X = 0.4736D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2199D 05	-0.5241D 04	0.0
0.3036D 00	-0.1838D 05	-0.6540D 04	-0.4903D 04
0.6071D 00	-0.9483D 04	-0.9571D 04	-0.6480D 04
0.9107D 00	-0.3083D 04	-0.1012D 05	-0.4042D 04
0.1214D 01	-0.1004D 04	-0.8469D 04	-0.2035D 04

TOTAL FORCE AT B1

X = 0.6071D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1972D 05	-0.3383D 04	0.0
0.3036D 00	-0.1676D 05	-0.4664D 04	-0.4450D 04
0.6071D 00	-0.9803D 04	-0.7430D 04	-0.6059D 04
0.9107D 00	-0.4137D 04	-0.8643D 04	-0.4496D 04
0.1214D 01	-0.1636D 04	-0.7896D 04	-0.2648D 04

TOTAL FORCE AT B1

X = 0.7285D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1785D 05	-0.2340D 04	0.0
0.3036D 00	-0.1545D 05	-0.3486D 04	-0.3954D 04
0.6071D 00	-0.9854D 04	-0.5933D 04	-0.5579D 04
0.9107D 00	-0.4874D 04	-0.7392D 04	-0.4624D 04
0.1214D 01	-0.2215D 04	-0.7239D 04	-0.3048D 04

TOTAL FORCE AT B1

X = 0.9107D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1547D 05	-0.1418D 04	-0.1918D-03
0.3036D 00	-0.1374D 05	-0.2317D 04	-0.3243D 04
0.6071D 00	-0.9659D 04	-0.4283D 04	-0.4830D 04
0.9107D 00	-0.5621D 04	-0.5795D 04	-0.4509D 04
0.1214D 01	-0.2989D 04	-0.6190D 04	-0.3386D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.305386D 05	0.109882D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.170000D 05	0.600193D 05	0.215252D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.322934D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.434317D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.558986D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.806935D 01	0.250000D 01

X = 0.6071D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.108382D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.208413D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.313600D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.428817D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.540023D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.545309D 01	0.168945D 01

X = 0.1214D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.108369D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.205576D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.310029D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.429260D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.531879D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.460017D 01	0.142520D 01

X = 0.3036D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.113950D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.209298D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.316740D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.450468D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.539167D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.372462D 01	0.115394D 01

X = 0.4736D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.131377D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.235089D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.354958D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.510865D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.601912D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.377582D 01	0.116980D 01

X = 0.6071D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.145640D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.257206D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.388102D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.562345D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.656781D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.394994D 01	0.122375D 01

X = 0.7285D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.159364D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.279283D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.421389D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.613347D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.712193D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.418229D 01	0.129573D 01

X = 0.9107D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

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SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.184631D 01	0.147089D 01
0.596000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.321620D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.484960D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.707513D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.730000D 05	0.228373D 06	0.819030D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.473782D 01	0.146785D 01

STRESS ANALYSIS
 P_{MAX} = 0.203804D 05 S = 0.443751D 00 P = 0.213090D 05

TOTAL FORCE AT B2 X = 0.0

Y	SIGMA X
0.0	0.20380 05
0.2219D 00	0.1529D 05
0.4438D 00	-0.0

TOTAL FORCE AT B2 X = 0.4438D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2028D 05	-0.1661D 05	0.0
0.2219D 00	-0.1750D 05	-0.1644D 05	-0.1146D 04
0.4438D 00	-0.3139D 04	-0.1625D 05	-0.2986D 04
0.6556D 00	-0.1685D 02	-0.8414D 04	-0.1413D 03
0.8875D 00	-0.2587D 01	-0.5762D 04	-0.3885D 02

TOTAL FORCE AT B2 X = 0.8875D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1998D 05	-0.1343D 05	0.0
0.2219D 00	-0.1708D 05	-0.1334D 05	-0.2129D 04
0.4438D 00	-0.4314D 04	-0.1413D 05	-0.3904D 04
0.6556D 00	-0.1212D 03	-0.8833D 04	-0.5173D 03
0.8875D 00	-0.2007D 02	-0.6020D 04	-0.1512D 03

TOTAL FORCE AT B2 X = 0.2219D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1823D 05	-0.6963D 04	0.0
0.2219D 00	-0.1518D 05	-0.7595D 04	-0.3583D 04
0.4438D 00	-0.6177D 04	-0.9736D 04	-0.4823D 04
0.6556D 00	-0.1084D 04	-0.8633D 04	-0.2026D 04
0.8875D 00	-0.2570D 03	-0.6396D 04	-0.7902D 03

TOTAL FORCE AT B2 X = 0.3461D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1607D 05	-0.3831D 04	0.0
0.2219D 00	-0.1344D 05	-0.4780D 04	-0.3583D 04
0.4438D 00	-0.6931D 04	-0.6996D 04	-0.4737D 04
0.6556D 00	-0.2253D 04	-0.7400D 04	-0.2954D 04
0.8875D 00	-0.7341D 03	-0.6190D 04	-0.1488D 04

TOTAL FORCE AT B2

X = 0.4438D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1441D 05	-0.2473D 04	0.0
0.2219D 00	-0.1225D 05	-0.3409D 04	-0.3253D 04
0.4438D 00	-0.7165D 04	-0.5430D 04	-0.4428D 04
0.6656D 00	-0.3024D 04	-0.6317D 04	-0.3286D 04
0.8875D 00	-0.1196D 04	-0.5771D 04	-0.1935D 04

TOTAL FORCE AT B2

X = 0.5325D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1305D 05	-0.1710D 04	0.0
0.2219D 00	-0.1129D 05	-0.2548D 04	-0.2890D 04
0.4438D 00	-0.7203D 04	-0.4337D 04	-0.4078D 04
0.6656D 00	-0.3563D 04	-0.5403D 04	-0.3380D 04
0.8875D 00	-0.1619D 04	-0.5291D 04	-0.2228D 04

TOTAL FORCE AT B2

X = 0.6656D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1130D 05	-0.1036D 04	0.0
0.2219D 00	-0.1004D 05	-0.1694D 04	-0.2370D 04
0.4438D 00	-0.7060D 04	-0.3130D 04	-0.3530D 04
0.6656D 00	-0.4105D 04	-0.4235D 04	-0.3296D 04
0.8875D 00	-0.2185D 04	-0.4524D 04	-0.2475D 04

X = 0.0

A = C.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.150334D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.294496D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.441820D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.594209D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.764774D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.110400D 02	0.250000D 01

X = 0.4438D-01

A = C.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.148282D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.285140D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.429050D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.586684D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.738830D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.746063D 01	0.168945D 01

X = 0.8875D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.148265D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.281258D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.424165D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.587290D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.727688D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.629370D 01	0.142520D 01

X = 0.2219D 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.155900D 01	0.907797D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.286350D 01	0.975907D 00		
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.433346D 01	0.100020D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.616306D 01	0.100484D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.737659D 01	0.100225D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.509581D 01	0.115394D 01		
X = 0.3461D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.179743D 01	0.104664D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.321636D 01	0.109616D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.485634D 01	0.112088D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.698937D 01	0.113957D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.823503D 01	0.111889D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.516587D 01	0.116980D 01		
X = 0.4438D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.199257D 01	0.116027D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.351895D 01	0.119929D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.530980D 01	0.122554D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.769369D 01	0.125440D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.898572D 01	0.122088D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.540409D 01	0.122375D 01		
X = 0.5325D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.218033D 01	0.126960D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.382099D 01	0.130223D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.576521D 01	0.133066D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.839148D 01	0.136817D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.974383D 01	0.132389D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.572198D 01	0.129573D 01		
X = 0.6656D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.252602D 01	0.147089D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.440023D 01	0.149964D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.663496D 01	0.153140D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.967980D 01	0.157822D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.112055D 02	0.152248D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.648203D 01	0.146785D 01		

TIME = 1.3000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.274655D 02	0.571638D 02	0.175944D 01	0.580481D 04
BETA	SIN(BETA)	CGS(BETA)	A(T)	EBAR(T)	MU*2EBAR*L
0.353508D 00	0.346191D 00	0.938164D 00	0.318545D 05	0.110905D 02	0.101379D 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.106715D 00	0.278966D 03	0.515608D 01	0.582946D 03	0.267731D 04	-0.165622D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.623271D 00	0.580481D 04	0.253711D 04	0.503697D 02	0.200957D 04	-0.673907D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.223589D 02	0.114030D 04	-0.122820D 04	0.908739D 07	0.296574D 08	0.287465D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.821662D 01	-0.841416D 01	0.268822D 03	0.515109D 03	-0.422659D 03	0.537643D 03
BETAD PRIME	F	E	COS(B)-COS(BO)	FDIFF	GAMMA
0.403496D-01	0.150000D 01	0.116982D 01	0.158284D 00	0.237426D 00	0.239716D 00
COS(GAMMA)	1 - FDIFF**2	SFDFI1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.971406D 00	0.943629D 00	0.971406D 00	0.153671D 00	0.237426D 00	0.135510D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.355431D 00	0.173550D 00	0.620249D 00	0.827004D 00
COS(BETA+DEL)	W2/386.4	FI2XNIT)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.562196D 00	0.608178D 00	0.121527D 00	0.173769D 00	0.872898D-01	0.593395D-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.208817D 00	0.238109D 00	0.316703D 00	0.343349D 00	0.391512D 00	0.626913D 00
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.267507D 00	0.403315D 00	0.392469D 00	0.919765D 00	0.368970D-01	0.231312D-01
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.987023D-02	-0.896968D-01	-0.746828D-01	0.257681D 03	0.319891D-01	0.319836D-01
COS(PHI)	FIDELTAP)	FITY	AARN	BARN	DARN
0.999488D 00	0.255306D 05	0.835996D-01	0.804171D 04	0.178264D 05	0.834982D 03
TAN(LAMBDA)					
-0.798226D 00					

INITIAL VALUE OF LAMBDA = -0.673659D 00

CASE 2

FINAL VALUE OF LAMBDA = -0.710335D 00

BQUAD = 0.668188D 04 CQUAD = 0.111090D 08 TEST = 0.210663D 00

FA	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	F82X
0.357085D 04	0.270722D 04	-0.232851D 04	0.283141D 05	0.283151D 05	-0.249363D 05
FB1X					
-0.463576D 05					

STRESS ANALYSIS

PMAX = 0.507510D 05 B = 0.241674D 00 P = 0.357085D 04

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.0

Y	SIGMA X
0.0	0.5075D 05
0.1208D 00	0.3806D 05
0.2417D 00	-0.0

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.2417D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5050D 05	-0.4136D 05	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.4357D 05	-0.4093D 05	-0.2854D 04	0.2551D 04	0.5405D 04
0.2417D 00	-0.7817D 04	-0.4046D 05	-0.7436D 04	0.2551D 04	0.9987D 04
0.3625D 00	-0.4196D 02	-0.2095D 05	-0.3519D 03	0.2551D 04	0.2903D 04
0.4833D 00	-0.6443D 01	-0.1435D 05	-0.9676D 02	0.2551D 04	0.2648D 04

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.4833D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4977D 05	-0.3345D 05	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.4254D 05	-0.3322D 05	-0.5301D 04	0.2551D 04	0.7852D 04
0.2417D 00	-0.1074D 05	-0.3519D 05	-0.9721D 04	0.2551D 04	0.1227D 05
0.3625D 00	-0.3018D 03	-0.2200D 05	-0.1288D 04	0.2551D 04	0.3839D 04
0.4833D 00	-0.4997D 02	-0.1499D 05	-0.3764D 03	0.2551D 04	0.2927D 04

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.1208D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4539D 05	-0.1734D 05	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.3779D 05	-0.1891D 05	-0.8921D 04	0.2551D 04	0.1147D 05
0.2417D 00	-0.1538D 05	-0.2424D 05	-0.1231D 05	0.2551D 04	0.1456D 05
0.3625D 00	-0.2700D 04	-0.2150D 05	-0.5045D 04	0.2551D 04	0.7596D 04
0.4833D 00	-0.6399D 03	-0.1593D 05	-0.1968D 04	0.2551D 04	0.4519D 04

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.1885D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4002D 05	-0.9539D 04	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.3346D 05	-0.1190D 05	-0.8923D 04	0.2551D 04	0.1147D 05
0.2417D 00	-0.1726D 05	-0.1742D 05	-0.1179D 05	0.2551D 04	0.1435D 05
0.3625D 00	-0.5611D 04	-0.1843D 05	-0.7357D 04	0.2551D 04	0.9908D 04
0.4833D 00	-0.1828D 04	-0.1542D 05	-0.3705D 04	0.2551D 04	0.6256D 04

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.2417D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3589D 05	-0.4157D 04	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.3050D 05	-0.8488D 04	-0.8100D 04	0.2551D 04	0.1065D 05
0.2417D 00	-0.1784D 05	-0.1352D 05	-0.1103D 05	0.2551D 04	0.1358D 05
0.3625D 00	-0.7530D 04	-0.1573D 05	-0.8184D 04	0.2551D 04	0.1073D 05
0.4833D 00	-0.2978D 04	-0.1437D 05	-0.4819D 04	0.2551D 04	0.7370D 04

L EQUIVALENT = 0.1853D 00

TOTAL FORCE AT JOINT A

X = 0.2900D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3249D 05	-0.4259D 04	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.2811D 05	-0.6345D 04	-0.7197D 04	0.2551D 04	0.9748D C4
0.2417D 00	-0.1754D 05	-0.1080D 05	-0.1015D 05	0.2551D 04	0.1271D 05
0.3625D 00	-0.8812D 04	-0.1345D 05	-0.8416D 04	0.2551D 04	0.1057D 05
0.4833D 00	-0.4021D 04	-0.1318D 05	-0.5548D 04	0.2551D 04	0.8059D C4

L EQUIVALENT = 0.1853D 00 TOTAL FORCE AT JOINT A X = 0.3625D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2815D 05	-0.2581D 04	0.0	0.2551D 04	0.2551D 04
0.1208D 00	-0.25C0D 05	-0.4218D 04	-0.5902D 04	0.2551D 04	0.8453D C4
0.2417D 00	-0.1758D 05	-0.7795D 04	-0.8790D 04	0.2551D 04	0.1134D 05
0.3625D 00	-0.1023D 05	-0.1055D 05	-0.8207D 04	0.2551D 04	0.1076D C5
0.4833D 00	-0.5441D 04	-0.1127D 05	-0.6163D 04	0.2551D 04	0.8714D C4

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.603704D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.118262D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.177424D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.238620D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.307115D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.443341D 01	0.250000D 01

X = 0.2417D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.595466D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.114505D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.172296D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.235598D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.296696D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.259600D 01	0.168945D 01

X = 0.4833D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.595396D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.112947D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.170334D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.235841D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.292222D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.252739D 01	0.142520D 01

X = 0.1208D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.626055D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.114991D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.174021D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.247493D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.296226D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.204635D 01	0.115394D 01

X = 0.1885D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.721805D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.129161D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.195019D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.280676D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.330699D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.207449D 01	0.116980D 01

X = 0.2417D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.800168D 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.141312D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.213228D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.308960D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.360845D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.217015D 01	0.122375D 01

X = 0.2900D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.875566D 00	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.153442D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.231517D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.336981D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.391288D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.229781D 01	0.129573D 01

X = 0.3625D 00 A = 0.367CD 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.101439D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.176703D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.266444D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.388717D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.449986D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.260302D 01	0.146785D 01

STRESS ANALYSIS
PMAX = 0.356654D 05 B = 0.336896D 00 P = 0.283141D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.3557D 05
0.1684D 00	0.2675D 05
0.3369D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.3369D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3549D 05	-0.2907D 05	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.3062D 05	-0.2877D 05	-0.2006D 04	0.1793D 04	0.3799D 04
0.3369D 00	-0.5494D 04	-0.2644D 05	-0.5226D 04	0.1793D 04	0.7019D 04
0.5053D 00	-0.2949D 02	-0.1473D 05	-0.2473D 03	0.1793D 04	0.2040D 04
0.6733D 00	-0.4529D 01	-0.1008D 05	-0.6800D 02	0.1793D 04	0.1861D 04

TOTAL FORCE AT JOINT 2			X = 0.67380-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3498D 05	-0.2351D 05	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.2990D 05	-0.2335D 05	-0.3726D 04	0.1793D 04	0.5518D 04
0.3369D 00	-0.7550D 04	-0.2473D 05	-0.6833D 04	0.1793D 04	0.8626D 04
0.5053D 00	-0.2121D 03	-0.1546D 05	-0.9053D 03	0.1793D 04	0.2698D 04
0.6738D 00	-0.3512D 02	-0.1054D 05	-0.2646D 03	0.1793D 04	0.2057D 04

TOTAL FORCE AT JOINT 2			X = 0.1684D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3190D 05	-0.1219D 05	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.2656D 05	-0.1329D 05	-0.6270D 04	0.1793D 04	0.8063D 04
0.3369D 00	-0.1081D 05	-0.1704D 05	-0.8441D 04	0.1793D 04	0.1023D 05
0.5053D 00	-0.1898D 04	-0.1511D 05	-0.3546D 04	0.1793D 04	0.5339D 04
0.6738D 00	-0.4497D 03	-0.1119D 05	-0.1383D 04	0.1793D 04	0.3176D 04

TOTAL FORCE AT JOINT 2			X = 0.2628D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2813D 05	-0.6704D 04	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.2352D 05	-0.8366D 04	-0.6272D 04	0.1793D 04	0.8065D 04
0.3369D 00	-0.1213D 05	-0.1224D 05	-0.8290D 04	0.1793D 04	0.1008D 05
0.5053D 00	-0.3944D 04	-0.1295D 05	-0.5171D 04	0.1793D 04	0.6964D 04
0.6738D 00	-0.1285D 04	-0.1083D 05	-0.2604D 04	0.1793D 04	0.4397D 04

TOTAL FORCE AT JOINT 2			X = 0.3369D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2522D 05	-0.4327D 04	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.2144D 05	-0.5966D 04	-0.5693D 04	0.1793D 04	0.7486D 04
0.3369D 00	-0.1254D 05	-0.9504D 04	-0.7750D 04	0.1793D 04	0.9543D 04
0.5053D 00	-0.5292D 04	-0.1106D 05	-0.5752D 04	0.1793D 04	0.7545D 04
0.6738D 00	-0.2093D 04	-0.1010D 05	-0.3387D 04	0.1793D 04	0.5180D 04

TOTAL FORCE AT JOINT 2			X = 0.4043D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2284D 05	-0.2993D 04	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.1976D 05	-0.4460D 04	-0.5059D 04	0.1793D 04	0.6852D 04
0.3369D 00	-0.1261D 05	-0.7590D 04	-0.7137D 04	0.1793D 04	0.8930D 04
0.5053D 00	-0.6236D 04	-0.9456D 04	-0.5915D 04	0.1793D 04	0.7708D 04
0.6738D 00	-0.2833D 04	-0.9261D 04	-0.3899D 04	0.1793D 04	0.5692D 04

TOTAL FORCE AT JOINT 2			X = 0.5053D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1979D 05	-0.1814D 04	0.0	0.1793D 04	0.1793D 04
0.1684D 00	-0.1757D 05	-0.2964D 04	-0.4148D 04	0.1793D 04	0.5941D 04
0.3369D 00	-0.1236D 05	-0.5478D 04	-0.6178D 04	0.1793D 04	0.7571D 04
0.5053D 00	-0.7191D 04	-0.7413D 04	-0.5768D 04	0.1793D 04	0.7561D 04
0.6738D 00	-0.3824D 04	-0.7918D 04	-0.4332D 04	0.1793D 04	0.6125D 04

X = 0.0	A = 0.2560D 01	B = 0.6000D 00	C = 0.0
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06
MARGIN OF SAFETY	K		
0.858960D 00	0.875385D 00		
0.168265D 01	0.100367D 01		
0.252442D 01	0.101976D 01		
0.339512D 01	0.968815D 00		
0.436967D 01	0.103909D 01		
0.630792D 01	0.250000D 01		
X = 0.3369D-01	A = 0.2365D 01	B = 0.5400D 00	C = 0.2130D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06
MARGIN OF SAFETY	K		
0.847238D 00	0.863442D 00		
0.162920D 01	0.971780D 00		
0.245146D 01	0.990283D 00		
0.335213D 01	0.956547D 00		
0.422144D 01	0.100384D 01		
0.426276D 01	0.168945D 01		
X = 0.6738D-01	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06
MARGIN OF SAFETY	K		
0.847138D 00	0.863341D 00		
0.160702D 01	0.958554D 00		
0.242354D 01	0.979007D 00		
0.335559D 01	0.957534D 00		
0.415778D 01	0.988703D 00		
0.359602D 01	0.142520D 01		
X = 0.1684D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06
MARGIN OF SAFETY	K		
0.890760D 00	0.907797D 00		
0.163611D 01	0.975907D 00		
0.247600D 01	0.100020D 01		
0.352137D 01	0.100484D 01		
0.421475D 01	0.100225D 01		
0.291159D 01	0.115394D 01		
X = 0.2628D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06
MARGIN OF SAFETY	K		
0.102700D 01	0.104664D 01		
0.183772D 01	0.109616D 01		
0.277476D 01	0.112088D 01		
0.399350D 01	0.113957D 01		
0.470523D 01	0.111889D 01		
0.295162D 01	0.116980D 01		
X = 0.3369D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06
MARGIN OF SAFETY	K		
0.113849D 01	0.116027D 01		
0.201062D 01	0.119929D 01		
0.303385D 01	0.122554D 01		
0.439593D 01	0.125440D 01		
0.513415D 01	0.122088D 01		
0.308773D 01	0.122375D 01		

X = 0.4043D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.124577D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.779732D 05	0.218319D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.329406D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.479462D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.556731D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.326936D 01	0.129573D 01

X = 0.5053D 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.144329D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.251415D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.379100D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.553073D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.640247D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.370362D 01	0.146785D 01

STRESS ANALYSIS
 PMAX = 0.356701D 05 B = 0.336902D 00 P = 0.283151D 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.3567D 05
0.1685D 00	0.2675D 05
0.3369D 00	-0.0

TOTAL FORCE AT JOINT 3 X = 0.3369D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3549D 05	-0.2907D 05	0.0	0.1793D 04	0.1793D 04
0.1685D 00	-0.3062D 05	-0.2877D 05	-0.2006D 04	0.1793D 04	0.3799D 04
0.3369D 00	-0.5494D 04	-0.2844D 05	-0.5226D 04	0.1793D 04	0.7019D 04
0.5054D 00	-0.2949D 02	-0.1473D 05	-0.2473D 03	0.1793D 04	0.2040D 04
0.6738D 00	-0.4529D 01	-0.1008D 05	-0.6800D 02	0.1793D 04	0.1861D 04

TOTAL FORCE AT JOINT 3 X = 0.6738D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3498D 05	-0.2351D 05	0.0	0.1793D 04	0.1793D 04
0.1685D 00	-0.2990D 05	-0.2335D 05	-0.3726D 04	0.1793D 04	0.5519D 04
0.3369D 00	-0.7550D 04	-0.2473D 05	-0.6833D 04	0.1793D 04	0.8626D 04
0.5054D 00	-0.2121D 03	-0.1546D 05	-0.9054D 03	0.1793D 04	0.2698D 04
0.6738D 00	-0.3512D 02	-0.1054D 05	-0.2646D 03	0.1793D 04	0.2058D 04

TOTAL FORCE AT JOINT 3 X = 0.1685D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3190D 05	-0.1219D 05	0.0	0.1793D 04	0.1793D 04
0.1685D 00	-0.2656D 05	-0.1329D 05	-0.6270D 04	0.1793D 04	0.8063D 04
0.3369D 00	-0.1081D 05	-0.1704D 05	-0.8441D 04	0.1793D 04	0.1023D 05
0.5054D 00	-0.1858D 04	-0.1511D 05	-0.3546D 04	0.1793D 04	0.5339D 04
0.6738D 00	-0.4497D 03	-0.1119D 05	-0.1383D 04	0.1793D 04	0.3176D 04

TOTAL FORCE AT JOINT 3

X = 0.2628D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2813D 05	-0.6704D 04	0.0	0.1793C 04	0.1793D 04
0.1685D 00	-0.2352D 05	-0.8366D 04	-0.6272D 04	0.1793C 04	0.8065D 04
0.3369D 00	-0.1213D 05	-0.1224D 05	-0.8290D 04	0.1793C 04	0.1008D 05
0.5054D 00	-0.3944D 04	-0.1295D 05	-0.5171D 04	0.1793C 04	0.6964D 04
0.6738D 00	-0.1285D 04	-0.1083D 05	-0.2604D 04	0.1793D 04	0.4397D 04

TOTAL FORCE AT JOINT 3

X = 0.3369D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2522D 05	-0.4328D 04	0.0	0.1793D 04	0.1793D 04
0.1585D 00	-0.2144D 05	-0.5966D 04	-0.5693D 04	0.1793D 04	0.7486D 04
0.3369D 00	-0.1254D 05	-0.9505D 04	-0.7751D 04	0.1793D 04	0.9544D 04
0.5054D 00	-0.5293D 04	-0.1106D 05	-0.5752D 04	0.1793D 04	0.7545D 04
0.6738D 00	-0.2093D 04	-0.1010D 05	-0.3387D 04	0.1793D 04	0.5180D 04

TOTAL FORCE AT JOINT 3

X = 0.4043D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2284D 05	-0.2993D 04	0.0	0.1793D 04	0.1793D 04
0.1635D 00	-0.1976D 05	-0.4460D 04	-0.5059D 04	0.1793D 04	0.6852D 04
0.3369D 00	-0.1261D 05	-0.7590D 04	-0.7137D 04	0.1793D 04	0.8930D 04
0.5054D 00	-0.6236D 04	-0.9456D 04	-0.5915D 04	0.1793D 04	0.7708D 04
0.6738D 00	-0.2833D 04	-0.9261D 04	-0.3899D 04	0.1793D 04	0.5692D 04

TOTAL FORCE AT JOINT 3

X = 0.5054D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.1979D 05	-0.1814D 04	0.0	0.1793D 04	0.1793D 04
0.1685D 00	-0.1757D 05	-0.2964D 04	-0.4148D 04	0.1793D 04	0.5941D 04
0.3369D 00	-0.1236D 05	-0.5479D 04	-0.6178D 04	0.1793D 04	0.7971D 04
0.5054D 00	-0.7191D 04	-0.7413D 04	-0.5768D 04	0.1793D 04	0.7561D 04
0.6738D 00	-0.3824D 04	-0.7918D 04	-0.4332D 04	0.1793D 04	0.6125D 04

X = 0.0

A = 0.2560D 01

B = 0.6100D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.858944D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.300193D 05	0.168262D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.300445D 05	0.252437D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.339506D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.436963D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.630781D 01	0.250000D 01

X = 0.3369D-01

A = 0.2365D 01

B = 0.5100D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.847223D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.162917D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.374420D 05	0.245141D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.335206D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.422136D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.426269D 01	0.168945D 01

X = 0.67380-01		A = 0.21610 01		B = 0.48200 00		C = 0.38000-01	
SIGMA S		TAU S		TAU N		SIGMA G	
MARGIN OF SAFETY						K	
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.8471230 00	0.8633410 00		
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1606990 01	0.9585540 00		
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.2423500 01	0.9790070 00		
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.3355520 01	0.9575340 00		
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.4157700 01	0.9887030 00		
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.3595950 01	0.1425200 01		
X = 0.16850 00		A = 0.15280 01		B = 0.30600 00		C = 0.65500-01	
SIGMA S		TAU S		TAU N		SIGMA G	
MARGIN OF SAFETY						K	
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.8907440 00	0.9077970 00		
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1636080 01	0.9759070 00		
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2475960 01	0.1000200 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.3521310 01	0.1004840 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.4214670 01	0.1002250 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2911530 01	0.1153940 01		
X = 0.26280 00		A = 0.95300 00		B = 0.14820 00		C = 0.54300-01	
SIGMA S		TAU S		TAU N		SIGMA G	
MARGIN OF SAFETY						K	
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.1026980 01	0.1046640 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1837690 01	0.1096160 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2774710 01	0.1120880 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3993430 01	0.1139570 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.4705150 01	0.1118890 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2951560 01	0.1169800 01		
X = 0.33690 00		A = 0.68560 00		B = 0.85500-01		C = 0.47500-01	
SIGMA S		TAU S		TAU N		SIGMA G	
MARGIN OF SAFETY						K	
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1138470 01	0.1160270 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.2010580 01	0.1199290 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.3033790 01	0.1225540 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.4395850 01	0.1254400 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.5134060 01	0.1220880 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.3087670 01	0.1223750 01		
X = 0.40430 00		A = 0.52420 00		B = 0.53800-01		C = 0.42000-01	
SIGMA S		TAU S		TAU N		SIGMA G	
MARGIN OF SAFETY						K	
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1245750 01	0.1269600 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.2183150 01	0.1302230 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.3294000 01	0.1330660 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.4794540 01	0.1368170 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.5567210 01	0.1323890 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.3269300 01	0.1295730 01		
X = 0.50540 00		A = 0.36700 00		B = 0.29800-01		C = 0.31700-01	
SIGMA S		TAU S		TAU N		SIGMA G	
MARGIN OF SAFETY						K	
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1443260 01	0.1470890 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.2514110 01	0.1499640 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.3790940 01	0.1531400 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.5530630 01	0.1578220 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.6402360 01	0.1522480 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.3703560 01	0.1467850 01		

STRESS ANALYSIS

P_{MAX} = 0.300602D 05

B = 0.654514D 00

P = 0.463576D 05

TOTAL FORCE AT B1

X = 0.0

Y	SIGMA X
0.0	0.3006D 05
0.3273D 00	0.2255D 05
0.6545D 00	-0.0

TOTAL FORCE AT B1

X = 0.6545D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2991D 05	-0.2450D 05	0.0
0.3273D 00	-0.2581D 05	-0.2424D 05	-0.1691D 04
0.6545D 00	-0.4630D 04	-0.2396D 05	-0.4404D 04
0.9818D 00	-0.2485D 02	-0.1241D 05	-0.2084D 03
0.1309D 01	-0.3816D 01	-0.8498D 04	-0.5731D 02

TOTAL FORCE AT B1

X = 0.1309D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2948D 05	-0.1981D 05	0.0
0.3273D 00	-0.2519D 05	-0.1967D 05	-0.3140D 04
0.6545D 00	-0.6363D 04	-0.2084D 05	-0.5758D 04
0.9818D 00	-0.1788D 03	-0.1303D 05	-0.7630D 03
0.1309D 01	-0.2960D 02	-0.8879D 04	-0.2230D 03

TOTAL FORCE AT B1

X = 0.3273D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2689D 05	-0.1027D 05	0.0
0.3273D 00	-0.2238D 05	-0.1120D 05	-0.5284D 04
0.6545D 00	-0.9111D 04	-0.1436D 05	-0.7113D 04
0.9818D 00	-0.1599D 04	-0.1273D 05	-0.2988D 04
0.1309D 01	-0.3790D 03	-0.9434D 04	-0.1166D 04

TOTAL FORCE AT B1

X = 0.5105D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2370D 05	-0.5650D 04	0.0
0.3273D 00	-0.1982D 05	-0.7050D 04	-0.5285D 04
0.6545D 00	-0.1022D 05	-0.1032D 05	-0.6986D 04
0.9818D 00	-0.3324D 04	-0.1091D 05	-0.4358D 04
0.1309D 01	-0.1083D 04	-0.9131D 04	-0.2194D 04

TOTAL FORCE AT B1

X = 0.6545D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2126D 05	-0.3647D 04	0.0
0.3273D 00	-0.1807D 05	-0.5028D 04	-0.4798D 04
0.6545D 00	-0.1057D 05	-0.8010D 04	-0.6532D 04
0.9818D 00	-0.4460D 04	-0.9318D 04	-0.4847D 04
0.1309D 01	-0.1764D 04	-0.8512D 04	-0.2854D 04

TOTAL FORCE AT B1

X = 0.7854D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1924D 05	-0.2523D 04	-0.2203D-03
0.3273D 00	-0.1665D 05	-0.3758D 04	-0.4263D 04
0.6545D 00	-0.1062D 05	-0.6396D 04	-0.6015D 04
0.9818D 00	-0.5255D 04	-0.7969D 04	-0.4985D 04
0.1309D 01	-0.2387D 04	-0.7804D 04	-0.3286D 04

TOTAL FORCE AT B1

X = 0.9818D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1667D 05	-0.1529D 04	-0.2067D-03
0.3273D 00	-0.1481D 05	-0.2498D 04	-0.3496D 04
0.6545D 00	-0.1041D 05	-0.4617D 04	-0.5207D 04
0.9818D 00	-0.6060D 04	-0.6247D 04	-0.4861D 04
0.1309D 01	-0.3223D 04	-0.6673D 04	-0.3651D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.101924D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.199664D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.299548D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.402865D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.518506D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.748499D 01	0.250000D 01

X = 0.6545D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.100533D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.193321D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.290890D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.397763D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.500916D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.505820D 01	0.168945D 01

X = 0.1309D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.100521D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.190689D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.287578D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.398174D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.493362D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.426704D 01	0.142520D 01

X = 0.3273D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.105698D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.194141D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.293803D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.417847D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.500122D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.345489D 01	0.115394D 01

X = 0.5105D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.121863D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.218064D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.329253D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.473870D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.558323D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.350239D 01	0.116980D 01

X = 0.6545D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.135093D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.238580D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.359997D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.521621D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.609219D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.366390D 01	0.122375D 01

X = 0.7854D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.147823D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.259058D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.350873D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.568930D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.660618D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.387942D 01	0.129573D 01

X = 0.981ED 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.171261D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.298329D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.449841D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.656277D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.759718D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.439472D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.220469D 05 B = 0.480037D 00 P = 0.249363D 05

TOTAL FORCE AT B2 X = 0.0

Y	SIGMA X
0.0	0.2205D 05
0.2400D 00	0.1654D 05
0.4800D 00	-0.0

TOTAL FORCE AT B2		X = 0.48000-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2194D 05	-0.1797D 05	0.0
0.2400D 00	-0.1893D 05	-0.1778D 05	-0.1240D 04
0.4800D 00	-0.3396D 04	-0.1758D 05	-0.3230D 04
0.7201D 00	-0.1823D 02	-0.9102D 04	-0.1529D 03
0.9601D 00	-0.2799D 01	-0.6233D 04	-0.4203D 02

TOTAL FORCE AT B2		X = 0.9601D-01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2162D 05	-0.1453D 05	0.0
0.2400D 00	-0.1848D 05	-0.1443D 05	-0.2303D 04
0.4800D 00	-0.4667D 04	-0.1529D 05	-0.4223D 04
0.7201D 00	-0.1311D 03	-0.9555D 04	-0.5596D 03
0.9601D 00	-0.2171D 02	-0.6512D 04	-0.1635D 03

TOTAL FORCE AT B2		X = 0.2400D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1972D 05	-0.7532D 04	0.0
0.2400D 00	-0.1642D 05	-0.8216D 04	-0.3876D 04
0.4800D 00	-0.6682D 04	-0.1053D 05	-0.5217D 04
0.7201D 00	-0.1173D 04	-0.9339D 04	-0.2192D 04
0.9601D 00	-0.2780D 03	-0.6919D 04	-0.8548D 03

TOTAL FORCE AT B2		X = 0.3744D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1738D 05	-0.4144D 04	0.0
0.2400D 00	-0.1454D 05	-0.5171D 04	-0.3876D 04
0.4800D 00	-0.7498D 04	-0.7568D 04	-0.5124D 04
0.7201D 00	-0.2438D 04	-0.8005D 04	-0.3196D 04
0.9601D 00	-0.7941D 03	-0.6697D 04	-0.1609D 04

TOTAL FORCE AT B2		X = 0.4800D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1559D 05	-0.2675D 04	0.0
0.2400D 00	-0.1325D 05	-0.3687D 04	-0.3519D 04
0.4800D 00	-0.7751D 04	-0.5875D 04	-0.4790D 04
0.7201D 00	-0.3271D 04	-0.6834D 04	-0.3555D 04
0.9601D 00	-0.1294D 04	-0.6243D 04	-0.2094D 04

TOTAL FORCE AT B2		X = 0.5760D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1411D 05	-0.1850D 04	0.0
0.2400D 00	-0.1221D 05	-0.2756D 04	-0.3127D 04
0.4800D 00	-0.7791D 04	-0.4691D 04	-0.4411D 04
0.7201D 00	-0.3854D 04	-0.5845D 04	-0.3656D 04
0.9601D 00	-0.1751D 04	-0.5724D 04	-0.2410D 04

TOTAL FORCE AT B2

X = 0.7201D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1223D 05	-0.1121D 04	0.0
0.2400D 30	-0.1086D 05	-0.1832D 04	-0.2564D 04
0.4800D 30	-0.7657D 04	-0.3386D 04	-0.3819D 04
0.7201D 30	-0.4445D 04	-0.4582D 04	-0.3565D 04
0.9601D 30	-0.2364D 04	-0.4894D 04	-0.2677D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.138970D 01	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.272235D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.408423D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.549293D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.706966D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.102055D 02	0.250000D 01

X = 0.4800D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.137074D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.263536D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.396619D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.542337D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.682982D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.689668D 01	0.168945D 01

X = 0.9601D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.137058D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.259998D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.392103D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.542397D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.672683D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.581796D 01	0.142520D 01

X = 0.2400D 30

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.144115D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.264705D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.400500D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.569720D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.681900D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.471063D 01	0.115394D 01

X = 0.3744D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.166157D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.297324D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.448925D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.646105D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.761255D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.477539D 01	0.116980D 01

X = 0.4800D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.184195D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.325296D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.490843D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.711213D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.830650D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.459560D 01	0.122375D 01

X = 0.5760D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.201552D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.353217D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.532942D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.775718D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.900730D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.528946D 01	0.129573D 01

X = 0.7201D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.233508D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.406762D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.613343D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.894811D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.103585D 02	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.599206D 01	0.146785D 01

TIME = 1.4000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.251655D 02	0.564996D 02	0.158907D 01	0.568376D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.383272D 00	0.373957D 00	0.927446D 00	0.398005D 05	0.112608D 02	0.102469D 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.107862D 00	0.268743D 03	0.524642D 01	0.593160D 03	0.317674D 04	-0.176908D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.169393D 01	0.568376D 04	0.249155D 04	0.499154D 02	0.212548D 04	-0.659550D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.238825D 02	0.119019D 04	-0.120203D 04	0.931964D 07	0.277874D 08	0.311057D 00
RDPRIME	SDPRIME	SFJUNC	RFUNC	ADPRIME	BDPRIME
0.142575D 02	-0.228681D 02	-0.511075D 01	0.849044D 03	-0.627689D 03	-0.102215D 02
BETAD PRIME	F	E	COS(B)-COS(BO)	FDIFF	GAMMA
0.522311D-01	0.150000D 01	0.116982D 01	0.147566D 00	0.221349D 00	0.223198D 00
COS(GAMMA)	1 - FDIFF**2	SFDIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.975195D 00	0.951005D 00	0.975195D 00	0.178921D 00	0.221349D 00	0.160806D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.416165D 00	0.224655D 00	0.620249D 00	0.843368D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.537336D 00	0.608178D 00	0.136001D 00	0.213458D 00	0.115229D 00	0.734162D-01

FI2X(T) 0.2512300 00	FI2Y(T) 0.2868750 00	FI2T 0.3813320 00	A2X(T) 0.4130870 00	A2Y(T) 0.4716950 00	A3X(T) 0.7499810 00
A3Y(T) 0.3213660 00	THETA 0.4046310 00	SIN(THETA) 0.3938630 00	COS(THETA) 0.9191690 00	W3/386.4 0.3689700-01	FI3X(T) 0.2767200-01
FI3Y(T) 0.1185750-01	FI4T -0.2437790 00	FI5T -0.2029740 00	FR(T) 0.2781160 03	PHI 0.3198910-01	SIN(PHI) 0.3198360-01
COS(PHI) 0.9994880 00	F(DELTA) 0.2965970 05	FITY -0.1480210 00	AARN 0.5510260 04	BARN 0.2092510 05	DARN 0.5660490 03
TAN(LAMBDA) -0.5991060 00					

INITIAL VALUE OF LAMBDA = -0.5397620 00

CASE 2

FINAL VALUE OF LAMBDA = -0.5583420 00

BQUAD = 0.3985480 04 CQUAD = 0.1994400 08 TEST = -0.3772170 00

FA 0.5003340 04	FA*COS(LAMBDA) 0.4243510 04	FA*SIN(LAMBDA) -0.2650680 04	F43 0.3402790 05	F32 0.3402880 05	FB2X -0.2880850 05
FB1X -0.5318460 05					

STRESS ANALYSIS

PMAX = 0.5679030 05 B = 0.2704330 00 P = 0.5003340 04

L EQUIVALENT = 0.20740 00 TOTAL FORCE AT JOINT A X = 0.0

Y	SIGMA X
0.0	0.56790 05
0.13520 00	0.42590 05
0.27040 00	-0.0

L EQUIVALENT = 0.20740 00 TOTAL FORCE AT JOINT A X = 0.27040-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.56510 05	-0.46280 05	0.0	0.28550 04	0.28550 04
0.13520 00	-0.48760 05	-0.45800 05	-0.31940 04	0.28550 04	0.60480 04
0.27040 00	-0.87470 04	-0.45270 05	-0.83200 04	0.28550 04	0.11170 05
0.40560 00	-0.46960 02	-0.23450 05	-0.39380 03	0.28550 04	0.32480 04
0.54090 00	-0.72100 01	-0.16060 05	-0.10830 03	0.28550 04	0.29630 04

L EQUIVALENT = 0.20740 00 TOTAL FORCE AT JOINT A X = 0.54090-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5569D 05	-0.3743D 05	0.0	0.2855D 04	0.2855D 04
0.1352D 00	-0.4760D 05	-0.3717D 05	-0.5931D 04	0.2855D 04	0.8786D 04
0.2704D 00	-0.1202D 05	-0.3937D 05	-0.1088D 05	0.2855D 04	0.1373D 05
0.4056D 00	-0.3378D 03	-0.2461D 05	-0.1441D 04	0.2855D 04	0.4296D 04
0.5409D 00	-0.5592D 02	-0.1677D 05	-0.4212D 03	0.2855D 04	0.3276D 04

L EQUIVALENT = 0.2074D 00 TOTAL FORCE AT JOINT A X = 0.1352D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5075D 05	-0.1940D 05	0.0	0.2855D 04	0.2855D 04
0.1352D 00	-0.4229D 05	-0.2116D 05	-0.9983D 04	0.2855D 04	0.1284D 05
0.2704D 00	-0.1721D 05	-0.2713D 05	-0.1340D 05	0.2855D 04	0.1629D 05
0.4056D 00	-0.3021D 04	-0.2406D 05	-0.5646D 04	0.2855D 04	0.8500D 04
0.5409D 00	-0.7160D 03	-0.1782D 05	-0.2202D 04	0.2855D 04	0.5057D 04

L EQUIVALENT = 0.2074D 00 TOTAL FORCE AT JOINT A X = 0.2109D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4478D 05	-0.1067D 05	0.0	0.2855D 04	0.2855D 04
0.1352D 00	-0.3744D 05	-0.1332D 05	-0.9985D 04	0.2855D 04	0.1284D 05
0.2704D 00	-0.1931D 05	-0.1949D 05	-0.1320D 05	0.2855D 04	0.1605D 05
0.4056D 00	-0.6279D 04	-0.2062D 05	-0.8232D 04	0.2855D 04	0.1109D 05
0.5409D 00	-0.2046D 04	-0.1725D 05	-0.4145D 04	0.2855D 04	0.7000D 04

L EQUIVALENT = 0.2074D 00 TOTAL FORCE AT JOINT A X = 0.2704D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4016D 05	-0.6853D 04	0.0	0.2855D 04	0.2855D 04
0.1352D 00	-0.3413D 05	-0.9498D 04	-0.9064D 04	0.2855D 04	0.1192D 05
0.2704D 00	-0.1997D 05	-0.1513D 05	-0.1234D 05	0.2855D 04	0.1519D 05
0.4056D 00	-0.8426D 04	-0.1760D 05	-0.9158D 04	0.2855D 04	0.1201D 05
0.5409D 00	-0.3333D 04	-0.1608D 05	-0.5393D 04	0.2855D 04	0.8247D 04

L EQUIVALENT = 0.2074D 00 TOTAL FORCE AT JOINT A X = 0.3245D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3636D 05	-0.4766D 04	0.0	0.2855D 04	0.2855D 04
0.1352D 00	-0.3146D 05	-0.7100D 04	-0.8054D 04	0.2855D 04	0.1091D 05
0.2704D 00	-0.2007D 05	-0.1208D 05	-0.1136D 05	0.2855D 04	0.1422D 05
0.4056D 00	-0.9928D 04	-0.1506D 05	-0.9418D 04	0.2855D 04	0.1227D 05
0.5409D 00	-0.4510D 04	-0.1474D 05	-0.6208D 04	0.2855D 04	0.9063D 04

L EQUIVALENT = 0.2074D 00 TOTAL FORCE AT JOINT A X = 0.4056D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3150D 05	-0.2888D 04	0.0	0.2855D 04	0.2855D 04
0.1352D 00	-0.2798D 05	-0.4720D 04	-0.6605D 04	0.2855D 04	0.9459D 04
0.2704D 00	-0.1967D 05	-0.8722D 04	-0.9836D 04	0.2855D 04	0.1269D 05
0.4056D 00	-0.1145D 05	-0.1180D 05	-0.9184D 04	0.2855D 04	0.1204D 05
0.5409D 00	-0.6088D 04	-0.1261D 05	-0.6897D 04	0.2855D 04	0.9751D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.306386 05	0.539504 00	0.875385 00
0.598000 05	0.370000 05	0.270000 05	0.600193 05	0.105686 01	0.100367 01
0.883000 05	0.541000 05	0.422000 05	0.900445 05	0.158556 01	0.101976 01
0.125000 06	0.792000 05	0.675000 05	0.121102 06	0.213244 01	0.968815 00
0.150000 06	0.909000 05	0.700000 05	0.155854 06	0.274455 01	0.103909 01
0.900000 05	0.450000 05	0.344520 05	0.225000 06	0.346194 01	0.250000 01

X = 0.27040-01

A = 0.23650 01

B = 0.54000 00

C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.302205 05	0.532142 00	0.863442 00
0.598000 05	0.370000 05	0.270000 05	0.581125 05	0.102328 01	0.971780 00
0.883000 05	0.541000 05	0.422000 05	0.874420 05	0.153974 01	0.990283 00
0.125000 06	0.792000 05	0.675000 05	0.119568 06	0.210544 01	0.956547 00
0.150000 06	0.909000 05	0.700000 05	0.150576 06	0.265144 01	0.100384 01
0.900000 05	0.450000 05	0.344520 05	0.152050 06	0.267740 01	0.168945 01

X = 0.54090-01

A = 0.21610 01

B = 0.48200 00

C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.302169 05	0.532079 00	0.863341 00
0.598000 05	0.370000 05	0.270000 05	0.573215 05	0.100935 01	0.958554 00
0.883000 05	0.541000 05	0.422000 05	0.864463 05	0.152220 01	0.979007 00
0.125000 06	0.792000 05	0.675000 05	0.119692 06	0.210761 01	0.957534 00
0.150000 06	0.909000 05	0.700000 05	0.148305 06	0.261146 01	0.988763 00
0.900000 05	0.450000 05	0.344520 05	0.128268 06	0.225862 01	0.142520 01

X = 0.13520 03

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.317729 05	0.559478 00	0.907797 00
0.598000 05	0.370000 05	0.270000 05	0.583593 05	0.102763 01	0.975907 00
0.883000 05	0.541000 05	0.422000 05	0.883176 05	0.155515 01	0.100020 01
0.125000 06	0.792000 05	0.675000 05	0.125605 06	0.221174 01	0.100484 01
0.150000 06	0.909000 05	0.700000 05	0.150338 06	0.264724 01	0.100225 01
0.900000 05	0.450000 05	0.344520 05	0.103855 06	0.182874 01	0.115394 01

X = 0.21090 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.366324 05	0.645046 00	0.104664 01
0.598000 05	0.370000 05	0.270000 05	0.655503 05	0.115426 01	0.109616 01
0.883000 05	0.541000 05	0.422000 05	0.989740 05	0.174280 01	0.112088 01
0.125000 06	0.792000 05	0.675000 05	0.142446 06	0.250828 01	0.113957 01
0.150000 06	0.909000 05	0.700000 05	0.167833 06	0.295531 01	0.111889 01
0.900000 05	0.450000 05	0.344520 05	0.105282 06	0.185388 01	0.116980 01

X = 0.27040 00

A = 0.68560 00

B = 0.85500-01

C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.715075 00	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.126285 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.190553 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.276104 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.322471 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.193937 01	0.122375 01

X = 0.32450 00

A = 0.52420 00

B = 0.53800-01

C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.782455 00	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.137124 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.206896 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.301146 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.349677 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.205345 01	0.129573 01

X = 0.40560 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.906515 00	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.157911 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.238109 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.347379 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.402133 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.232621 01	0.146785 01

STRESS ANALYSIS
 PMAX = 0.391032 05 B = 0.369328 00 P = 0.340279 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.39100 05
0.18470 00	0.29330 05
0.36930 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.36930-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.38910 05	-0.31870 05	0.0	0.19660 04	0.19660 04
0.18470 00	-0.33570 05	-0.31540 05	-0.21990 04	0.19660 04	0.41650 04
0.36930 00	-0.60230 04	-0.31170 05	-0.57290 04	0.19660 04	0.76950 04
0.55400 00	-0.32330 02	-0.16140 05	-0.27110 03	0.19660 04	0.22370 04
0.73870 00	-0.49640 01	-0.11060 05	-0.74550 02	0.19660 04	0.20400 04

TOTAL FORCE AT JOINT 2 X = 0.73870-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.38340 05	-0.25770 05	0.0	0.19660 04	0.19660 04
0.18470 00	-0.32770 05	-0.25590 05	-0.40840 04	0.19660 04	0.60500 04
0.36930 00	-0.82770 04	-0.27110 05	-0.74900 04	0.19660 04	0.94560 04
0.55400 00	-0.23260 03	-0.16550 05	-0.95250 03	0.19660 04	0.25580 04
0.73870 00	-0.38500 02	-0.11550 05	-0.29000 03	0.19660 04	0.22560 04

TOTAL FORCE AT JOINT 2 X = 0.18470 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.34570 05	-0.13360 05	0.0	0.19660 04	0.19660 04
0.18470 00	-0.29120 05	-0.14570 05	-0.68740 04	0.19660 04	0.88390 04
0.36930 00	-0.11150 05	-0.18680 05	-0.92530 04	0.19660 04	0.11220 05
0.55400 00	-0.20800 04	-0.16560 05	-0.38870 04	0.19660 04	0.58530 04
0.73870 00	-0.49300 03	-0.12270 05	-0.15160 04	0.19660 04	0.34820 04

TOTAL FORCE AT JOINT 2 X = 0.28810 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3083D 05	-0.7350D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2578D 05	-0.9171D 04	-0.6875D 04	0.1966D 04	0.8841D 04
0.3693D 00	-0.1330D 05	-0.1342D 05	-0.9088D 04	0.1966D 04	0.1105D 05
0.5540D 00	-0.4323D 04	-0.1420D 05	-0.5668D 04	0.1966D 04	0.7634D 04
0.7387D 00	-0.1408D 04	-0.1188D 05	-0.2954D 04	0.1966D 04	0.4820D 04

TOTAL FORCE AT JCINT 2 X = 0.3693D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2765D 05	-0.4744D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2350D 05	-0.6543D 04	-0.6241D 04	0.1966D 04	0.8206D 04
0.3693D 00	-0.1375D 05	-0.1042D 05	-0.8457D 04	0.1966D 04	0.1046D 05
0.5540D 00	-0.5802D 04	-0.1212D 05	-0.63C6D 04	0.1966D 04	0.8271D 04
0.7387D 00	-0.2295D 04	-0.1107D 05	-0.3713D 04	0.1966D 04	0.5679D 04

TOTAL FORCE AT JCINT 2 X = 0.4432D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2503D 05	-0.3231D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2166D 05	-0.4833D 04	-0.5546D 04	0.1966D 04	0.7511D 04
0.3693D 00	-0.1382D 05	-0.8321D 04	-0.7824D 04	0.1966D 04	0.9750D 04
0.5540D 00	-0.6836D 04	-0.1037D 05	-0.6485D 04	0.1966D 04	0.8450D 04
0.7387D 00	-0.3106D 04	-0.1015D 05	-0.4275D 04	0.1966D 04	0.6240D 04

TOTAL FORCE AT JOINT 2 X = 0.5540D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2169D 05	-0.1983D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.1926D 05	-0.3250D 04	-0.4548D 04	0.1966D 04	0.6513D 04
0.3693D 00	-0.1355D 05	-0.6006D 04	-0.6773D 04	0.1966D 04	0.8738D 04
0.5540D 00	-0.7883D 04	-0.8120D 04	-0.6324D 04	0.1966D 04	0.8289D 04
0.7387D 00	-0.4192D 04	-0.8580D 04	-0.4749D 04	0.1966D 04	0.6714D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.783533D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.300193D 05	0.153490D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.230274D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.309698D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.398596D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.575401D 01	0.250000D 01

X = 0.3693D-01 A = 0.2365D 01 B = 0.5000D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.772840D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.148613D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.223619D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.305777D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.385074D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.388844D 01	0.168945D 01

X = 0.7387D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.7727490 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1465900 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.2210720 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.3060920 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.3792670 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.3280240 01	0.1425200 01

X = 0.18470 00

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.8125400 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1492440 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2258580 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.3212150 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3844640 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2655910 01	0.1153940 01

X = 0.28810 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.9368130 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1676350 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2531100 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3642830 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.4292060 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2692430 01	0.1169800 01

X = 0.36930 00

A = 0.68560 00

B = 0.85500-01

C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1038520 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1834060 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2767440 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.4009910 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4683310 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2816580 01	0.1223750 01

X = 0.44320 00

A = 0.52420 00

B = 0.53800-01

C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1136380 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1991480 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.3004800 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.4373600 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.5078430 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2982270 01	0.1295730 01

X = 0.55400 00

A = 0.36700 00

B = 0.29800-01

C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1316550 01	0.1470890 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.2293380 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.3458110 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.5045060 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.5840260 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.3378400 01	0.1467850 01

STRESS ANALYSIS

P_{MAX} = 0.3910370 05

B = 0.3693330 00

P = 0.3402880 05

TOTAL FORCE AT JOINT 3		X = 0.0
Y	SIGMA X	
0.0	0.3910D 05	
0.1847D 00	0.2933D 05	
0.3693D 00	-0.0	

TOTAL FORCE AT JOINT 3		X = 0.3693D-01			
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3891D 05	-0.3187D 05	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.3357D 05	-0.3154D 05	-0.2199D 04	0.1966D 04	0.4165D 04
0.3693D 00	-0.6023D 04	-0.3117D 05	-0.5729D 04	0.1966D 04	0.7695D 04
0.5540D 00	-0.3233D 02	-0.1614D 05	-0.1711D 03	0.1966D 04	0.2237D 04
0.7387D 00	-0.4965D 01	-0.1106D 05	-0.1455D 02	0.1966D 04	0.2040D 04

TOTAL FORCE AT JOINT 3		X = 0.7387D-01			
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3834D 05	-0.2577D 05	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.3277D 05	-0.2559D 05	-0.4084D 04	0.1966D 04	0.6050D 04
0.3693D 00	-0.8277D 04	-0.2711D 05	-0.1490D 04	0.1966D 04	0.9456D 04
0.5540D 00	-0.2326D 03	-0.1695D 05	-0.0925D 03	0.1966D 04	0.2558D 04
0.7387D 00	-0.3856D 02	-0.1155D 05	-0.0900D 03	0.1966D 04	0.2256D 04

TOTAL FORCE AT JOINT 3		X = 0.1847D 00			
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3458D 05	-0.1336D 05	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2912D 05	-0.1457D 05	-0.0874D 04	0.1966D 04	0.8840D 04
0.3693D 00	-0.1185D 05	-0.1868D 05	-0.0253D 04	0.1966D 04	0.1122D 05
0.5540D 00	-0.2080D 04	-0.1656D 05	-0.0388D 04	0.1966D 04	0.5853D 04
0.7387D 00	-0.4930D 03	-0.1227D 05	-0.0516D 04	0.1966D 04	0.3482D 04

TOTAL FORCE AT JOINT 3		X = 0.2881D 00			
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3083D 05	-0.7350D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2578D 05	-0.9171D 04	-0.0875D 04	0.1966D 04	0.8841D 04
0.3693D 00	-0.1330D 05	-0.1342D 05	-0.0088D 04	0.1966D 04	0.1105D 05
0.5540D 00	-0.4323D 04	-0.1420D 05	-0.5668D 04	0.1966D 04	0.7634D 04
0.7387D 00	-0.1468D 04	-0.1188D 05	-0.2854D 04	0.1966D 04	0.4820D 04

TOTAL FORCE AT JOINT 3		X = 0.3693D 00			
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2765D 05	-0.4744D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2350D 05	-0.6540D 04	-0.0241D 04	0.1966D 04	0.8206D 04
0.3693D 00	-0.1375D 05	-0.1042D 05	-0.3497D 04	0.1966D 04	0.1046D 05
0.5540D 00	-0.5802D 04	-0.1212D 05	-0.0306D 04	0.1966D 04	0.8271D 04
0.7387D 00	-0.2295D 04	-0.1107D 05	-0.3713D 04	0.1966D 04	0.5679D 04

TOTAL FORCE AT JOINT 3

X = 0.4432D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2503D 05	-0.3281D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.2166D 05	-0.4889D 04	-0.5546D 04	0.1966D 04	0.7511D 04
0.3693D 00	-0.1382D 05	-0.8321D 04	-0.7824D 04	0.1966D 04	0.9760D 04
0.5540D 00	-0.6836D 04	-0.1037D 05	-0.6485D 04	0.1966D 04	0.8450D 04
0.7387D 00	-0.3106D 04	-0.1015D 05	-0.4275D 04	0.1966D 04	0.6240D 04

TOTAL FORCE AT JOINT 3

X = 0.5540D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2169D 05	-0.1988D 04	0.0	0.1966D 04	0.1966D 04
0.1847D 00	-0.1926D 05	-0.3250D 04	-0.4548D 04	0.1966D 04	0.6513D 04
0.3693D 00	-0.1355D 05	-0.6006D 04	-0.6773D 04	0.1966D 04	0.8739D 04
0.5540D 00	-0.7883D 04	-0.8126D 04	-0.6324D 04	0.1966D 04	0.8289D 04
0.7387D 00	-0.4192D 04	-0.8680D 04	-0.4749D 04	0.1966D 04	0.6714D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.783521D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.153487D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.230271D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.309694D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.398591D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.575393D 01	0.250000D 01

X = 0.3693D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.772829D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.148611D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.223616D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.305772D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.385069D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.388838D 01	0.168945D 01

X = 0.7387D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.772738D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.146588D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.221069D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.306088D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.379262D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.328019D 01	0.142520D 01

X = 0.1847D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.812529D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.149242D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.225855D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.321211D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.384459D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.265587D 01	0.115394D 01

X = 0.2881D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.936800D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.167632D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.253106D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.364277D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.429199D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.269239D 01	0.116980D 01

X = 0.3693D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.103850D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.183403D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.276740D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.400986D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.468324D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.281654D 01	0.122375D 01

X = 0.4432D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.113636D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.199145D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.300475D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.437353D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.195583D 06	0.507836D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.298222D 01	0.129573D 01

X = 0.5540D 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.250000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.131653D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.229335D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.345806D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.504499D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.584017D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.337835D 01	0.146785D 01

STRESS ANALYSIS
P_{MAX} = 0.321576D 05 B = 0.701054D 00- P = 0.531846D 05

TOTAL FORCE AT B1 X = 0.0

Y	SIGMA X
0.0	0.3220D 05
0.3505D 00	0.2415D 05
0.7011D 00	-0.0

TOTAL FORCE AT B1 X = 0.7011D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3204D 05	-0.2624D 05	0.0
0.3505D 00	-0.2764D 05	-0.2597D 05	-0.1811D 04
0.7011D 00	-0.4959D 04	-0.2567D 05	-0.4717D 04
0.1052D 01	-0.2662D 02	-0.1329D 05	-0.2232D 03
0.1402D 01	-0.4088D 01	-0.9103D 04	-0.6138D 02

TOTAL FORCE AT B1		X = 0.1402D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3157D 05	-0.2122D 05	0.0
0.3505D 00	-0.2699D 05	-0.2107D 05	-0.3363D 04
0.7011D 00	-0.6815D 04	-0.2232D 05	-0.6168D 04
0.1052D 01	-0.1915D 03	-0.1395D 05	-0.8172D 03
0.1402D 01	-0.3170D 02	-0.9510D 04	-0.2388D 03

TOTAL FORCE AT B1		X = 0.3505D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2880D 05	-0.1100D 05	0.0
0.3505D 00	-0.2398D 05	-0.1200D 05	-0.5660D 04
0.7011D 00	-0.9758D 04	-0.1538D 05	-0.7619D 04
0.1052D 01	-0.1713D 04	-0.1364D 05	-0.3201D 04
0.1402D 01	-0.4060D 03	-0.1010D 05	-0.1248D 04

TOTAL FORCE AT B1		X = 0.5468D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2535D 05	-0.6052D 04	0.0
0.3505D 00	-0.2123D 05	-0.7552D 04	-0.5661D 04
0.7011D 00	-0.1095D 05	-0.1105D 05	-0.7483D 04
0.1052D 01	-0.3560D 04	-0.1169D 05	-0.4667D 04
0.1402D 01	-0.1160D 04	-0.9780D 04	-0.2350D 04

TOTAL FORCE AT B1		X = 0.7011D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2277D 05	-0.3906D 04	0.0
0.3505D 00	-0.1935D 05	-0.5385D 04	-0.5139D 04
0.7011D 00	-0.1132D 05	-0.8579D 04	-0.6996D 04
0.1052D 01	-0.4777D 04	-0.9980D 04	-0.5192D 04
0.1402D 01	-0.1890D 04	-0.9118D 04	-0.3057D 04

TOTAL FORCE AT B1		X = 0.8413D 00	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2061D 05	-0.2702D 04	0.0
0.3505D 00	-0.1784D 05	-0.4026D 04	-0.4566D 04
0.7011D 00	-0.1138D 05	-0.6851D 04	-0.6443D 04
0.1052D 01	-0.5629D 04	-0.8536D 04	-0.5339D 04
0.1402D 01	-0.2557D 04	-0.8359D 04	-0.3520D 04

TOTAL FORCE AT B1		X = 0.1052D 01	
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1786D 05	-0.1637D 04	-0.2214D 03
0.3505D 00	-0.1586D 05	-0.2676D 04	-0.3745D 04
0.7011D 00	-0.1115D 05	-0.1494D 04	-0.5577D 04
0.1052D 01	-0.6491D 04	-0.6691D 04	-0.5207D 04
0.1402D 01	-0.3452D 04	-0.7147D 04	-0.3910D 04

X = 0.0		A = 0.25600 01		B = 0.60000 00		C = 0.0					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3063860 05		0.9515800 00		0.8753850 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.6001930 05		0.1864090 01		0.1003670 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.9004450 05		0.2796620 01		0.1019760 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1211020 06		0.3761210 01		0.9688150 00	
0.1500000 06		0.9090000 05		0.7000000 05		0.1558640 06		0.4840850 01		0.1039090 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.2250000 06		0.6588100 01		0.2500000 01	
X = 0.70110-01		A = 0.23650 01		B = 0.54000 00		C = 0.21300-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3022050 05		0.9385940 00		0.8634420 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.5811250 05		0.1804870 01		0.9717800 00	
0.8830000 05		0.5410000 05		0.4220000 05		0.8744200 05		0.2715790 01		0.9902830 00	
0.1250000 06		0.7920000 05		0.6750000 05		0.1195680 06		0.3713580 01		0.9565470 00	
0.1500000 06		0.9090000 05		0.7000000 05		0.1505760 06		0.4676630 01		0.1003840 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1520500 06		0.4722410 01		0.1689450 01	
X = 0.14020 00		A = 0.21610 01		B = 0.48200 00		C = 0.33000-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3021690 05		0.9384840 00		0.8633410 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.5732150 05		0.1780300 01		0.9585540 00	
0.8830000 05		0.5410000 05		0.4220000 05		0.8644630 05		0.2684870 01		0.9750070 00	
0.1250000 06		0.7920000 05		0.6750000 05		0.1196920 06		0.3717410 01		0.9575340 00	
0.1500000 06		0.9090000 05		0.7000000 05		0.1483050 06		0.4606100 01		0.9887030 00	
0.9000000 05		0.4500000 05		0.3445200 05		0.1282680 06		0.3983770 01		0.1425200 01	
X = 0.35050 00		A = 0.15280 01		B = 0.30600 00		C = 0.65500-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3177290 05		0.9868090 00		0.9077970 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.5835930 05		0.1812530 01		0.9759070 00	
0.8830000 05		0.5410000 05		0.4220000 05		0.8831760 05		0.2742990 01		0.1000200 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1256050 06		0.3901080 01		0.1004840 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1503380 06		0.4669220 01		0.1002250 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1038550 06		0.3225540 01		0.1153940 01	
X = 0.54680 00		A = 0.95300 00		B = 0.14820 00		C = 0.54300-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3663240 05		0.1137740 01		0.1046640 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.6555050 05		0.2035880 01		0.1096160 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.9897400 05		0.3073950 01		0.1120880 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1424460 06		0.4424120 01		0.1139570 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1678330 06		0.5212590 01		0.1118890 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1052820 06		0.3269880 01		0.1169800 01	
X = 0.70110 00		A = 0.68560 00		B = 0.85500-01		C = 0.47500-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.4060930 05		0.1261250 01		0.1160270 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.7171750 05		0.2227420 01		0.1199290 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1082160 06		0.3360980 01		0.1225540 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1568000 06		0.4869540 01		0.1254400 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1831320 06		0.5687760 01		0.1220880 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1101370 06		0.3420670 01		0.1223750 01	

X = 0.8413D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.138010D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.241860D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.364925D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.531162D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.616763D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.362188D 01	0.129573D 01

X = 0.1052D 01 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.159892D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.278525D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.419978D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.612710D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.709284D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.410298D 01	0.146785D 01

STRESS ANALYSIS
 PMAX = 0.236969D 05 B = 0.515963D 00 P = 0.288085D 05

TOTAL FORCE AT B2 X = 0.0

Y	SIGMA X
0.0	-0.2370D 05
0.2580D 00	0.1777D 05
0.5160D 00	-0.0

TOTAL FORCE AT B2 X = 0.5160D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2358D 05	-0.1931D 05	0.0
0.2580D 00	-0.2034D 05	-0.1911D 05	-0.1333D 04
0.5160D 00	-0.3650D 04	-0.1889D 05	-0.3472D 04
0.7739D 00	-0.1959D 02	-0.9784D 04	-0.1643D 03
0.1032D 01	-0.3009D 01	-0.6699D 04	-0.4518D 02

TOTAL FORCE AT B2 X = 0.1032D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2324D 05	-0.1562D 05	0.0
0.2580D 00	-0.1986D 05	-0.1551D 05	-0.2475D 04
0.5160D 00	-0.5016D 04	-0.1643D 05	-0.4539D 04
0.7739D 00	-0.1409D 03	-0.1027D 05	-0.6015D 03
0.1032D 01	-0.2333D 02	-0.6999D 04	-0.1758D 03

TOTAL FORCE AT B2 X = 0.2580D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2120D 05	-0.8096D 04	0.0
0.2580D 00	-0.1765D 05	-0.8831D 04	-0.4166D 04
0.5160D 00	-0.7182D 04	-0.1132D 05	-0.5608D 04
0.7739D 00	-0.1261D 04	-0.1004D 05	-0.2356D 04
0.1032D 01	-0.2588D 03	-0.7437D 04	-0.9188D 03

TOTAL FORCE AT B2				X = 0.4025D 00	
Y	SIGMA X	SIGMA Y	TAU XY		
0.0	-0.1869D 05	-0.4454D 04	0.0		
0.2580D 00	-0.1562D 05	-0.5558D 04	-0.4167D 04		
0.5160D 00	-0.8059D 04	-0.8134D 04	-0.5507D 04		
0.7739D 00	-0.2620D 04	-0.8604D 04	-0.3435D 04		
0.1032D 01	-0.8535D 03	-0.7198D 04	-0.1730D 04		

TOTAL FORCE AT B2				X = 0.5160D 00	
Y	SIGMA X	SIGMA Y	TAU XY		
0.0	-0.1676D 05	-0.2875D 04	0.0		
0.2580D 00	-0.1424D 05	-0.3963D 04	-0.3782D 04		
0.5160D 00	-0.8331D 04	-0.6314D 04	-0.5149D 04		
0.7739D 00	-0.3516D 04	-0.7345D 04	-0.3821D 04		
0.1032D 01	-0.1397D 04	-0.6710D 04	-0.2250D 04		

TOTAL FORCE AT B2				X = 0.6192D 00	
Y	SIGMA X	SIGMA Y	TAU XY		
0.0	-0.1517D 05	-0.1989D 04	0.0		
0.2580D 00	-0.1313D 05	-0.2963D 04	-0.3361D 04		
0.5160D 00	-0.8375D 04	-0.5042D 04	-0.4742D 04		
0.7739D 00	-0.4143D 04	-0.6282D 04	-0.3930D 04		
0.1032D 01	-0.1882D 04	-0.6152D 04	-0.2591D 04		

TOTAL FORCE AT B2				X = 0.7739D 00	
Y	SIGMA X	SIGMA Y	TAU XY		
0.0	-0.1314D 05	-0.1205D 04	0.0		
0.2580D 00	-0.1167D 05	-0.1965D 04	-0.2756D 04		
0.5160D 00	-0.8209D 04	-0.5640D 04	-0.4104D 04		
0.7739D 00	-0.4777D 04	-0.4925D 04	-0.3832D 04		
0.1032D 01	-0.2541D 04	-0.5260D 04	-0.2878D 04		

X = 0.0		A = 0.2560D 01		B = 0.6000D 00		C = 0.0	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.306366D 05	0.129254D 01	0.875389D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.253279D 01	0.100367D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.375985D 01	0.101976D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.511046D 01	0.968815D 00		
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 05	0.657740D 01	0.103909D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 05	0.949492D 01	0.250000D 01		

X = 0.5160D-01		A = 0.2365D 01		B = 0.5400D 00		C = 0.2130D-01	
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SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.1275290 01	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.2452330 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.3690020 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.5045740 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.6354260 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.6416470 01	0.1689450 01

X = 0.10320 00

A = 0.21610 01

B = 0.48200 00

C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.1275140 01	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.2418950 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.3648010 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.5050950 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.6258440 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.5412860 01	0.1425200 01

X = 0.25800 00

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.1340810 01	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.2462740 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.3726970 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.5300500 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.6344190 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.4382630 01	0.1153940 01

X = 0.40250 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.1545870 01	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.2766210 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.4176670 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.6011170 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.7082490 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.4442880 01	0.1169800 01

X = 0.51600 00

A = 0.68560 00

B = 0.85500-01

C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.1713700 01	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.3026450 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.4566660 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.6616920 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.7728120 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.4647760 01	0.1223750 01

X = 0.61920 00

A = 0.52420 00

B = 0.53800-01

C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1875180 01	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.3286220 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.4958340 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.7217050 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.8380120 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.4921150 01	0.1295730 01

X = 0.77390 00

A = 0.36700 00

B = 0.29800-01

C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.217249D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.378439D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.570636D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.832506D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.963724D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.557483D 01	0.146785D 01

TIME = 1.5000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710656D 02	0.226336D 02	0.558356D 02	0.140152D 01	0.556273D 04
BETA	SIN(BETA)	CCS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.416477D 00	0.404541D 00	0.914520D 00	0.496764D 05	0.114484D 02	0.103670D 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.109126D 00	0.257491D 03	0.607294D 01	0.666506D 03	0.383446D 04	-0.200443D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.304591D 01	0.556273D 04	0.244512D 04	0.494482D 02	0.225036D 04	-0.672110D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.270598D 02	0.132214D 04	-0.122492D 04	0.101112D 08	0.258799D 08	0.357302D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.235599D 02	-0.411197D 02	-0.198452D 03	0.136065D 04	-0.874841D 03	-0.396903D 03
BETAD PRIME	F	E	CCS(B)-CCS(B0)	FDIFF	GAMMA
0.734233D-01	0.150000D 01	0.116982D 01	0.134640D 00	0.201960D 00	0.203358D 00
COS(GAMMA)	1 - FDIFF**2	SFDIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.979394D 00	0.959212D 00	0.979394D 00	0.221377D 00	0.201960D 00	0.214198D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.549106D 00	0.315806D 00	0.620249D 00	0.860743D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.509040D 00	0.608178D 00	0.169996D 00	0.287448D 00	0.165320D 00	0.977694D-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.335316D 00	0.385218D 00	0.510715D 00	0.551344D 00	0.633396D 00	0.100109D 01
A3Y(T)	THETA	SIN(T+ETA)	COS(THETA)	W3/386.4	FI3X(T)
0.428068D 00	0.404073D 00	0.393166D 00	0.919467D 00	0.368970D-01	0.369372D-01
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.157944D-01	-0.438346D 00	-0.364973D 00	0.382816D 03	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTA)	FITY	AARN	BARN	CARN
0.999488D 00	0.344236D 05	-0.402306D 00	0.136370D 04	0.249635D 05	0.138466D 03
TAN(LAMBDA)					
-0.476072D 00					

INITIAL VALUE OF LAMBDA = -0.444323D 00

CASE 2

FINAL VALUE OF LAMBDA = -0.452418D 00

BQUAD = 0.902708D 04 CQUAD = 0.140836D 08 TEST = 0.621926D-01

FA 0.702122D 04 FA*COS(LAMBDA) 0.631484D 04 FA*SIN(LAMBDA) -0.306927D 04 F43 0.408357D 05 F32 0.408366D 05 FB2X -0.347206D 05
FB1X
-0.636175D 05

STRESS ANALYSIS
P MAX = 0.635807D 05 B = 0.302768D 00 P = 0.702122D 04

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.0

Y	SIGMA X
0.0	0.6358D 05
0.1514D 00	0.4769D 05
0.3028D 00	-0.0

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.3028D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6327D 05	-0.5181D 05	-0.9380D-04	0.3196D 04	0.3196D 04
0.1514D 00	-0.5459D 05	-0.5128D 05	-0.3576D 04	0.3196D 04	0.6772D 04
0.3028D 00	-0.9793D 04	-0.5069D 05	-0.9315D 04	0.3196D 04	0.1251D 05
0.4542D 00	-0.5257D 02	-0.2625D 05	-0.4409D 03	0.3196D 04	0.3637D 04
0.6055D 00	-0.8072D 01	-0.1798D 05	-0.1212D 03	0.3196D 04	0.3317D 04

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.6055D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6235D 05	-0.4190D 05	0.0	0.3196D 04	0.3196D 04
0.1514D 00	-0.5329D 05	-0.4161D 05	-0.6641D 04	0.3196D 04	0.9837D 04
0.3028D 00	-0.1346D 05	-0.4408D 05	-0.1218D 05	0.3196D 04	0.1537D 05
0.4542D 00	-0.3781D 03	-0.2756D 05	-0.1614D 04	0.3196D 04	0.4810D 04
0.6055D 00	-0.6260D 02	-0.1878D 05	-0.4716D 03	0.3196D 04	0.3667D 04

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.1514D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5687D 05	-0.2172D 05	0.0	0.3196D 04	0.3196D 04
0.1514D 00	-0.4735D 05	-0.2369D 05	-0.1118D 05	0.3196D 04	0.1437D 05
0.3028D 00	-0.1927D 05	-0.3037D 05	-0.1505D 05	0.3196D 04	0.1824D 05
0.4542D 00	-0.3383D 04	-0.2693D 05	-0.6321D 04	0.3196D 04	0.9516D 04
0.6055D 00	-0.8017D 03	-0.1995D 05	-0.2465D 04	0.3196D 04	0.5661D 04

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.2362D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5013D 05	-0.1195D 05	0.0	0.3196D 04	0.3196D 04
0.1514D 00	-0.4192D 05	-0.1491D 05	-0.1118D 05	0.3196D 04	0.1438D 05
0.3028D 00	-0.2162D 05	-0.2183D 05	-0.1478D 05	0.3196D 04	0.1797D 05
0.4542D 00	-0.7030D 04	-0.2309D 05	-0.9217D 04	0.3196D 04	0.1241D 05
0.6055D 00	-0.2290D 04	-0.1931D 05	-0.4641D 04	0.3196D 04	0.7837D 04

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.3028D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4496D 05	-0.7714D 04	0.0	0.3196D 04	0.3196D 04
0.1514D 00	-0.3821D 05	-0.1063D 05	-0.1015D 05	0.3196D 04	0.1334D 05
0.3028D 00	-0.2235D 05	-0.1694D 05	-0.1382D 05	0.3196D 04	0.1701D 05
0.4542D 00	-0.9434D 04	-0.1971D 05	-0.1025D 05	0.3196D 04	0.1345D 05
0.6055D 00	-0.3731D 04	-0.1800D 05	-0.6037D 04	0.3196D 04	0.9233D 04

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.3633D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4070D 05	-0.5335D 04	0.0	0.3196D 04	0.3196D 04
0.1514D 00	-0.3522D 05	-0.7949D 04	-0.9017D 04	0.3196D 04	0.1221D 05
0.3028D 00	-0.2247D 05	-0.1353D 05	-0.1272D 05	0.3196D 04	0.1592D 05
0.4542D 00	-0.1111D 05	-0.1586D 05	-0.1054D 05	0.3196D 04	0.1374D 05
0.6055D 00	-0.5050D 04	-0.1551D 05	-0.6951D 04	0.3196D 04	0.1015D 05

L EQUIVALENT = 0.2322D 00 TOTAL FORCE AT JOINT A X = 0.4542D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3527D 05	-0.3233D 04	0.0	0.3196D 04	0.3196D 04
0.1514D 00	-0.3132D 05	-0.5284D 04	-0.7394D 04	0.3196D 04	0.1059D 05
0.3028D 00	-0.2202D 05	-0.9760D 04	-0.1101D 05	0.3196D 04	0.1421D 05
0.4542D 00	-0.1282D 05	-0.1321D 05	-0.1028D 05	0.3196D 04	0.1348D 05
0.6055D 00	-0.6816D 04	-0.1411D 05	-0.7722D 04	0.3196D 04	0.1092D 05

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.481886D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.620193D 05	0.943986D 00	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.141622D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.190470D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.245143D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.353881D 01	0.250000D 01

X = 0.3028D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.322205D 05	0.475305D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.531125D 05	0.913996D 00	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.137529D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.188058D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.236827D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132050D 06	0.239145D 01	0.168945D 01

X = 0.6055D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.475253D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.901555D 00	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.135943D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.188252D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.233256D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.201740D 01	0.142520D 01

X = 0.15140 00		A = 0.15280 01		B = 0.30600 00		C = 0.65500-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3177290 05		0.4997260 00		0.9077970 00	
0.5980000 05		0.3700000 05		0.2700000 05		0.5835930 05		0.9178770 00		0.9759070 00	
0.8830000 05		0.5410000 05		0.4220000 05		0.8831760 05		0.1389060 01		0.1000200 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1256050 06		0.1975530 01		0.1004840 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1503380 06		0.2364520 01		0.1002250 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1038550 06		0.1633430 01		0.1153940 01	
X = 0.23620 00		A = 0.95300 00		B = 0.14820 00		C = 0.54300-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.3663240 05		0.5761560 00		0.1046640 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.6555050 05		0.1030980 01		0.1096160 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.9897400 05		0.1556670 01		0.1120880 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1424460 06		0.2240400 01		0.1139570 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1678330 06		0.2639690 01		0.1118890 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1052820 06		0.1655890 01		0.1169800 01	
X = 0.30280 00		A = 0.68560 00		B = 0.85500-01		C = 0.47500-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.4060930 05		0.6387060 00		0.1160270 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.7171750 05		0.1127980 01		0.1199290 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1082160 06		0.1702020 01		0.1225540 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1568000 06		0.2466160 01		0.1254400 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1831320 06		0.2880310 01		0.1220880 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1101370 06		0.1732250 01		0.1223750 01	
X = 0.36330 00		A = 0.52420 00		B = 0.53800-01		C = 0.42000-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.4443590 05		0.6988900 00		0.1269600 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.7787320 05		0.1224790 01		0.1302230 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1174970 06		0.1848000 01		0.1330660 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1710210 06		0.2689830 01		0.1368170 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.1985830 06		0.3123320 01		0.1323890 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1166160 06		0.1834140 01		0.1295730 01	
X = 0.45420 00		A = 0.36700 00		B = 0.29800-01		C = 0.31700-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.3500000 05		0.2420000 05		0.1570000 05		0.5148130 05		0.8097000 00		0.1470890 01	
0.5980000 05		0.3700000 05		0.2700000 05		0.8967830 05		0.1410470 01		0.1499640 01	
0.8830000 05		0.5410000 05		0.4220000 05		0.1352230 06		0.2126790 01		0.1531400 01	
0.1250000 06		0.7920000 05		0.6750000 05		0.1972780 06		0.3102800 01		0.1578220 01	
0.1500000 06		0.9090000 05		0.7000000 05		0.2283730 06		0.3591850 01		0.1522480 01	
0.9000000 05		0.4500000 05		0.3445200 05		0.1321060 06		0.2077770 01		0.1467850 01	

STRESS ANALYSIS

P_{MAX} = 0.4283660 05

B = 0.4045900 00

P = 0.4083570 05

TOTAL FORCE AT JOINT 2

X = 0.0

Y	SIGMA X
0.0	0.4284D 05
0.2023D 00	0.3213D 05
0.4046D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.4046D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4262D 05	-0.3491D C5	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.3678D 05	-0.3455D C5	-0.2409D 04	0.2153D 04	0.4562D 04
0.4046D 00	-0.6598D 04	-0.3415D C5	-0.6276D 04	0.2153D 04	0.8429D 04
0.6069D 00	-0.3542D 02	-0.1769D C5	-0.2970D 03	0.2153D 04	0.2450D 04
0.8092D 00	-0.5438D C1	-0.1211D 05	-0.8167D 02	0.2153D 04	0.2235D 04

TOTAL FORCE AT JOINT 2 X = 0.8092D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4200D 05	-0.2823D 05	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.3590D 05	-0.2804D 05	-0.4474D 04	0.2153D 04	0.6627D 04
0.4046D 00	-0.9067D 04	-0.2970D 05	-0.8205D 04	0.2153D 04	0.1036D 05
0.6069D 00	-0.2548D 03	-0.1857D 05	-0.1087D 04	0.2153D 04	0.3240D 04
0.8092D 00	-0.4218D 02	-0.1265D 05	-0.3177D 03	0.2153D 04	0.2471D 04

TOTAL FORCE AT JOINT 2 X = 0.2023D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3831D C5	-0.1463D 05	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.3190D 05	-0.1596D 05	-0.7530D 04	0.2153D 04	0.9683D 04
0.4046D 00	-0.1298D 05	-0.2046D 05	-0.1C14D 05	0.2153D 04	0.1229D 05
0.6069D 00	-0.2279D 04	-0.1815D 05	-0.4258D 04	0.2153D 04	0.6412D 04
0.8092D 00	-0.5401D 03	-0.1344D 05	-0.1661D 04	0.2153D 04	0.3814D 04

TOTAL FORCE AT JOINT 2 X = 0.3156D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3378D C5	-0.8051D C4	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2824D C5	-0.1005D C5	-0.7532D 04	0.2153D 04	0.9685D 04
0.4046D 00	-0.1457D C5	-0.1470D C5	-0.9955D 04	0.2153D 04	0.1211D 05
0.6069D 00	-0.4736D C4	-0.1555D C5	-0.6210D 04	0.2153D 04	0.8363D 04
0.8092D 00	-0.1543D 04	-0.1301D C5	-0.3127D 04	0.2153D 04	0.5280D 04

TOTAL FORCE AT JOINT 2 X = 0.4046D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3029D 05	-0.5197D C4	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2574D 05	-0.7164D C4	-0.6837D 04	0.2153D 04	0.8990D 04
0.4046D 00	-0.1506D 05	-0.1141D C5	-0.9338D 04	0.2153D 04	0.1146D 05
0.6069D 00	-0.6356D C4	-0.1328D C5	-0.6908D 04	0.2153D 04	0.9061D 04
0.8092D 00	-0.2514D 04	-0.1213D C5	-0.4058D 04	0.2153D 04	0.6221D 04

TOTAL FORCE AT JOINT 2 X = 0.4855D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2742D 05	-0.3595D 04	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2373D 05	-0.5356D 04	-0.6075D 04	0.2153D 04	0.8228D 04
0.4046D 00	-0.1514D 05	-0.9115D 04	-0.8571D 04	0.2153D 04	0.1072D 05
0.6069D 00	-0.7489D 04	-0.1136D 05	-0.7104D 04	0.2153D 04	0.9257D 04
0.8092D 00	-0.3402D 04	-0.1112D 05	-0.4683D 04	0.2153D 04	0.6836D 04

TOTAL FORCE AT JOINT 2 X = 0.6069D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2376D 05	-0.2178D 04	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2110D 05	-0.3560D 04	-0.4982D 04	0.2153D 04	0.7135D 04
0.4046D 00	-0.1484D 05	-0.6579D 04	-0.7420D 04	0.2153D 04	0.9573D 04
0.6069D 00	-0.8636D 04	-0.8902D 04	-0.6927D 04	0.2153D 04	0.9080D 04
0.8092D 00	-0.4592D 04	-0.9509D 04	-0.5202D 04	0.2153D 04	0.7355D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.715244D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.140112D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.210205D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.282707D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.363857D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.525252D 01	0.250000D 01

X = 0.4046D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.705484D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.135661D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.204129D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.279127D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.351513D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.354954D 01	0.168945D 01

X = 0.8092D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.705401D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.133814D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.201805D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.279415D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.346212D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.299435D 01	0.142520D 01

X = 0.2023D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.741724D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.136237D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.206173D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.293220D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.350956D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.242444D 01	0.115394D 01

X = 0.3156D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.855166D 00	C.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.153025D 01	C.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.231050D 01	C.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.332534D 01	C.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.391798D 01	C.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.245777D 01	C.116980D 01

X = 0.4046D 00 A = 0.5856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	C.242000D 05	0.157000D 05	0.406093D 05	0.948006D 00	0.116027D 01
0.598000D 05	C.370000D 05	0.270000D 05	0.717175D 05	0.167421D 01	0.119929D 01
0.883000D 05	C.541000D 05	0.422000D 05	0.108216D 06	0.252624D 01	0.122554D 01
0.125000D 06	C.792000D 05	0.675000D 05	0.156800D 06	0.366043D 01	0.125440D 01
0.150000D 06	C.909000D 05	0.700000D 05	0.183132D 06	0.427514D 01	0.122088D 01
0.900000D 05	C.450000D 05	0.344520D 05	0.110137D 06	0.257111D 01	0.122375D 01

X = 0.4855D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.103734D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.181792D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.274292D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.399242D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.463583D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.272235D 01	0.129573D 01

X = 0.6069D 00 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.120181D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.209350D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 05	0.315672D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.460536D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 05	0.533125D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 05	0.308396D 01	0.146785D 01

STRESS ANALYSIS
PMAx = 0.428371D 05 B = 0.404594D 00 P = 0.408366D 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.4284D 05
0.2023D 00	0.3213D 05
0.4046D 00	-0.0

TOTAL FORCE AT JOINT 3 X = C.4046D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4262D 05	-0.3591D 05	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.3678D 05	-0.3455D 05	-0.2409D 04	0.2153D 04	0.4562D 04
0.4046D 00	-0.6598D 04	-0.3415D 05	-0.6276D 04	0.2153D 04	0.8429D 04
0.6069D 00	-0.3542D 02	-0.1769D 05	-0.2970D 03	0.2153D 04	0.2450D 04
0.8092D 00	-0.5439D 01	-0.1211D 05	-0.8167D 02	0.2153D 04	0.2235D 04

TOTAL FORCE AT JOINT 3			X = 0.8092D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4201D 05	-0.2823D 05	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.3590D 05	-0.2804D 05	-0.4474D 04	0.2153D 04	0.6627D 04
0.4046D 00	-0.9067D 04	-0.2970D 05	-0.8206D 04	0.2153D 04	0.1036D 05
0.6069D 00	-0.2548D 03	-0.1857D 05	-0.1087D 04	0.2153D 04	0.3240D 04
0.8092D 00	-0.4218D 02	-0.1265D 05	-0.3177D 03	0.2153D 04	0.2471D 04

TOTAL FORCE AT JOINT 3			X = 0.2023D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3831D 05	-0.1463D 05	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.3190D 05	-0.1596D 05	-0.7530D 04	0.2153D 04	0.9683D 04
0.4046D 00	-0.1258D 05	-0.2046D 05	-0.1014D 05	0.2153D 04	0.1229D 05
0.6069D 00	-0.2279D 04	-0.1815D 05	-0.4258D 04	0.2153D 04	0.6412D 04
0.8092D 00	-0.5401D 03	-0.1344D 05	-0.1661D 04	0.2153D 04	0.3814D 04

TOTAL FORCE AT JOINT 3			X = 0.3156D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3378D 05	-0.8051D 04	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2824D 05	-0.1005D 05	-0.7532D 04	0.2153D 04	0.9685D 04
0.4046D 00	-0.1457D 05	-0.1470D 05	-0.9956D 04	0.2153D 04	0.1211D 05
0.6069D 00	-0.4736D 04	-0.1555D 05	-0.6210D 04	0.2153D 04	0.8363D 04
0.8092D 00	-0.1543D 04	-0.1301D 05	-0.3127D 04	0.2153D 04	0.5280D 04

TOTAL FORCE AT JOINT 3			X = 0.4046D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3029D 05	-0.5197D 04	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2574D 05	-0.7165D 04	-0.6837D 04	0.2153D 04	0.8990D 04
0.4046D 00	-0.1506D 05	-0.1141D 05	-0.9308D 04	0.2153D 04	0.1146D 05
0.6069D 00	-0.6356D 04	-0.1328D 05	-0.6908D 04	0.2153D 04	0.9061D 04
0.8092D 00	-0.2514D 04	-0.1213D 05	-0.4068D 04	0.2153D 04	0.6221D 04

TOTAL FORCE AT JOINT 3			X = 0.4855D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2742D 05	-0.3595D 04	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2373D 05	-0.5356D 04	-0.6075D 04	0.2153D 04	0.8228D 04
0.4046D 00	-0.1514D 05	-0.9115D 04	-0.8571D 04	0.2153D 04	0.1072D 05
0.6069D 00	-0.7489D 04	-0.1136D 05	-0.7104D 04	0.2153D 04	0.9257D 04
0.8092D 00	-0.3402D 04	-0.1112D 05	-0.4683D 04	0.2153D 04	0.6836D 04

TOTAL FORCE AT JOINT 3			X = 0.6069D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2376D 05	-0.2178D 04	0.0	0.2153D 04	0.2153D 04
0.2023D 00	-0.2110D 05	-0.3560D 04	-0.4982D 04	0.2153D 04	0.7135D 04
0.4046D 00	-0.1484D 05	-0.6579D 04	-0.7420D 04	0.2153D 04	0.9573D 04
0.6069D 00	-0.8636D 04	-0.8902D 04	-0.6927D 04	0.2153D 04	0.9081D 04
0.8092D 00	-0.4593D 04	-0.9509D 04	-0.5202D 04	0.2153D 04	0.7356D 04

X = 0.0 A = 0.256CD 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.7152360 00	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1401110 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.2102020 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.2827040 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.3638530 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.5252460 01	0.2500000 01

X = 0.4046D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.7054750 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1356590 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.2041270 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2791240 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.3515090 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.3549500 01	0.1689450 01

X = 0.8092D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.7053920 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1338130 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.2018030 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2794120 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.3462080 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.2994320 01	0.1425200 01

X = 0.2023D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.7417150 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1362350 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2061710 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2532170 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3509520 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2424410 01	0.1153940 01

X = 0.3156D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.8551560 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1530230 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2310480 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3325300 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3917940 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2457740 01	0.1169800 01

X = 0.4046D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.9479950 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1674190 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2526210 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3660390 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4275090 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2571080 01	0.1223750 01

X = 0.4355D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.103732D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.181789D 01	0.130223D 01
0.383000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.274289D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.399237D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.463577D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.272232D 01	0.129573D 01

X = 0.6069D 00

A = 0.367CD 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514313D 05	0.120179D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.209348D 01	0.149964D 01
0.863000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.315668D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.460531D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.533119D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.308392D 01	0.146785D 01

STRESS ANALYSIS

P MAX = 0.352143D 05

B = 0.766738D 00

P = 0.636175D 05

TOTAL FORCE AT B1

X = 0.0

Y	SIGMA X
0.0	0.3521D 05
0.3834D 00	0.2641D 05
0.7667D 00	-0.0

TOTAL FORCE AT B1

X = 0.7667D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3504D 05	-0.2870D 05	0.0
0.3834D 00	-0.3023D 05	-0.2840D 05	-0.1980D 04
0.7667D 00	-0.5424D 04	-0.2807D 05	-0.5159D 04
0.1150D 01	-0.2912D 02	-0.1454D 05	-0.2442D 03
0.1533D 01	-0.4471D 01	-0.9956D 04	-0.6714D 02

TOTAL FORCE AT B1

X = 0.1533D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3453D 05	-0.2321D 05	0.0
0.3834D 00	-0.2951D 05	-0.2305D 05	-0.3678D 04
0.7667D 00	-0.7454D 04	-0.2441D 05	-0.6745D 04
0.1150D 01	-0.2094D 03	-0.1526D 05	-0.8938D 03
0.1533D 01	-0.3467D 02	-0.1040D 05	-0.2612D 03

TOTAL FORCE AT B1

X = 0.3834D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3150D 05	-0.1203D 05	0.0
0.3834D 00	-0.2622D 05	-0.1312D 05	-0.6190D 04
0.7667D 00	-0.1067D 05	-0.1682D 05	-0.8333D 04
0.1150D 01	-0.1873D 04	-0.1492D 05	-0.3501D 04
0.1533D 01	-0.4440D 03	-0.1105D 05	-0.1365D 04

TOTAL FORCE AT B1

X = 0.59810 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.27770 05	-0.65190 04	0.0
0.38340 00	-0.23220 05	-0.82590 04	-0.61920 04
0.76670 00	-0.11980 05	-0.12090 05	-0.81840 04
0.11500 01	-0.38930 04	-0.12790 05	-0.51050 04
0.15330 01	-0.12680 04	-0.10700 05	-0.25700 04

TOTAL FORCE AT B1

X = 0.76670 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.24900 05	-0.42720 04	0.0
0.38340 00	-0.21160 05	-0.58900 04	-0.56200 04
0.76670 00	-0.12380 05	-0.93830 04	-0.76520 04
0.11500 01	-0.52250 04	-0.10920 05	-0.56780 04
0.15330 01	-0.20670 04	-0.99720 04	-0.33440 04

TOTAL FORCE AT B1

X = 0.92010 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.22540 05	-0.29550 04	0.0
0.38340 00	-0.19510 05	-0.44030 04	-0.49940 04
0.76670 00	-0.12440 05	-0.74930 04	-0.70460 04
0.11500 01	-0.61560 04	-0.93350 04	-0.58400 04
0.15330 01	-0.27970 04	-0.91420 04	-0.38500 04

TOTAL FORCE AT B1

X = 0.11500 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.19530 05	-0.17910 04	0.0
0.38340 00	-0.17350 05	-0.25270 04	-0.40950 04
0.76670 00	-0.12200 05	-0.54090 04	-0.60990 04
0.11500 01	-0.70990 04	-0.73180 04	-0.56950 04
0.15330 01	-0.37750 04	-0.78170 04	-0.42770 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.8700620 00	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6301930 05	0.1704400 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9504450 05	0.2557050 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.3439600 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.4426150 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2550000 06	0.6389450 01	0.2500000 01

X = 0.76670-01

A = 0.23650 01

B = 0.54000 00

C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.8581880 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5511250 05	0.1650250 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.2483140 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.3395450 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1305760 06	0.4276000 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.4317860 01	0.1689450 01

X = 0.1533D 00		A = 0.2161D 01		B = 0.4820D 00		C = 0.3800D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.302169D 05		0.858087D 00		0.863341D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.573215D 05		0.162779D 01		0.958554D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.864463D 05		0.245487D 01		0.979007D 00	
0.125000D 06		0.792000D 05		0.675000D 05		0.119692D 06		0.339895D 01		0.957534D 00	
0.150000D 06		0.909000D 05		0.700000D 05		0.148305D 06		0.421151D 01		0.988703D 00	
0.900000D 05		0.450000D 05		0.344520D 05		0.128268D 06		0.364249D 01		0.142520D 01	
X = 0.3834D 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.317729D 05		0.902273D 00		0.907797D 00	
0.593000D 05		0.370000D 05		0.270000D 05		0.583593D 05		0.165726D 01		0.975907D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.883176D 05		0.250800D 01		0.100020D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.125605D 06		0.356689D 01		0.100484D 01	
0.153000D 06		0.909000D 05		0.700000D 05		0.150338D 06		0.426922D 01		0.100225D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.103855D 06		0.294922D 01		0.115394D 01	
X = 0.5981D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.104027D 01		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.186148D 01		0.109616D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.281062D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.404512D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167833D 06		0.476605D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.298976D 01		0.116980D 01	
X = 0.7667D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.115321D 01		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.203660D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.307306D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.445275D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.520051D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.312763D 01		0.122375D 01	
X = 0.9201D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.126187D 01		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.221141D 01		0.130223D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.117497D 06		0.333663D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.485659D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.196583D 06		0.563927D 01		0.132389D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116616D 06		0.331161D 01		0.129573D 01	
X = 0.1150D 01		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.146194D 01		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.254665D 01		0.149964D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.384000D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.197278D 06		0.560221D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.648522D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.375149D 01		0.146785D 01	

STRESS ANALYSIS
 PMAX = 0.260150D 05 B = 0.565438D 03 P = 0.347206D 05

TOTAL FORCE AT B2

X = 0.0

Y	SIGMA X
0.0	0.2602D 05
0.2832D 00	0.1951D 05
0.5664D 00	-0.0

TOTAL FORCE AT B2

X = 0.5654D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2589D 05	-0.2120E 05	0.0
0.2832D 00	-0.2233D 05	-0.2098E 05	-0.1463D 04
0.5664D 00	-0.4007D 04	-0.2074E 05	-0.3811D 04
0.8497D 00	-0.2151D 02	-0.1074E 05	-0.1804D 03
0.1133D 01	-0.3303D 01	-0.7355E 04	-0.4960D 02

TOTAL FORCE AT B2

X = 0.1133D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2551D 05	-0.1714D 05	0.0
0.2832D 00	-0.2180D 05	-0.1703D 05	-0.2717D 04
0.5664D 00	-0.5506D 04	-0.1804D 05	-0.4983D 04
0.8497D 00	-0.1547D 03	-0.1127D 05	-0.6603D 03
0.1133D 01	-0.2562D 02	-0.7684D 04	-0.1930D 03

TOTAL FORCE AT B2

X = 0.2832D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2327D 05	-0.8888D 04	0.0
0.2832D 00	-0.1937D 05	-0.9695D 04	-0.4573D 04
0.5664D 00	-0.7885D 04	-0.1243D 05	-0.6156D 04
0.8497D 00	-0.1384D 04	-0.1102D 05	-0.2586D 04
0.1133D 01	-0.3280D 03	-0.8165D 04	-0.1309D 04

TOTAL FORCE AT B2

X = 0.4418D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2051D 05	-0.4890D 04	0.0
0.2832D 00	-0.1715D 05	-0.6102D 04	-0.4574D 04
0.5664D 00	-0.8848D 04	-0.8930D 04	-0.6046D 04
0.8497D 00	-0.2876D 04	-0.9446D 04	-0.3771D 04
0.1133D 01	-0.9370D 03	-0.7902D 04	-0.1899D 04

TOTAL FORCE AT B2

X = 0.5664D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1840D 05	-0.3156D 04	0.0
0.2832D 00	-0.1563D 05	-0.4351D 04	-0.4152D 04
0.5664D 00	-0.9146D 04	-0.6932D 04	-0.5653D 04
0.8497D 00	-0.3860D 04	-0.8064D 04	-0.4195D 04
0.1133D 01	-0.1527D 04	-0.7367D 04	-0.2470D 04

TOTAL FORCE AT B2

X = 0.6797D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1665D 05	-0.2183D 04	0.0
0.2832D 00	-0.1441D 05	-0.3253D 04	-0.3689D 04
0.5664D 00	-0.9194D 04	-0.5536D 04	-0.5205D 04
0.8497D 00	-0.4548D 04	-0.6897D 04	-0.4314D 04
0.1133D 01	-0.2066D 04	-0.6754D 04	-0.2844D 04

TOTAL FORCE AT B2

X = 0.8497D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1443D 05	-0.1323D 04	-0.1789D-03
0.2832D 00	-0.1282D 05	-0.2162D 04	-0.3026D 04
0.5664D 00	-0.9012D 04	-0.3996D 04	-0.4506D 04
0.8497D 00	-0.5245D 04	-0.5406D 04	-0.4207D 04
0.1133D 01	-0.2789D 04	-0.5775D 04	-0.3159D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.117773D 01	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.230710D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.346125D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.465507D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.559130D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.864885D 01	0.250000D 01

X = 0.5664D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.116165D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.223380D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.336121D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.455613D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.578804D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.584471D 01	0.168945D 01

X = 0.1133D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.116152D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.220340D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.332294D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.460087D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.570076D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.493053D 01	0.142520D 01

X = 0.2832D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.122133D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.224329D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.335487D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.482818D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.577887D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.399210D 01	0.115394D 01

X = 0.4418D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.140812D 01	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.251972D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.380449D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.547553D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.645138D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.404658D 01	0.116980D 01
X = 0.5664D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.156099D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.275677D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.415973D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.602730D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.703948D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.423360D 01	0.122375D 01
X = 0.6797D 00	A = 0.5242D 00	B = 0.5380D-01	C = 0.4200D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.170808D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.259339D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.451651D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.657395D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.763339D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.448264D 01	0.129573D 01
X = 0.8497D 00	A = 0.3670D 00	B = 0.2980D-01	C = 0.3170D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.197890D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.344717D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.519788D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.758323D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.877848D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.507807D 01	0.146785D 01

TIME = 1.6000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.196895D 02	0.551519D 02	0.118344D 01	0.543813D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.455647D 00	0.440043D 00	0.897977D 00	0.624595D 05	0.116665D 02	0.105065D 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.110595D 00	0.244406D 03	0.920377D 01	0.104058D 04	0.486228D 04	-0.238114D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SCRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.448305D 01	0.543813D 04	0.239640D 04	0.489531D 02	0.239301D 04	-0.694571D 01

SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.321455D 02	0.154691D 04	-0.126585D 04	0.114415D 08	0.238468D 08	0.430843D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.361443D 02	-0.605212D 02	-0.158301D 03	0.204167D 04	-0.105192D 04	-0.316602D 03
BETAD PRIME	F	E	COS(B)-COS(80)	FDIFF	GAMMA
0.104660D 00	0.150000D 01	0.116982D 01	0.118097D 00	0.177145D 00	0.178085D 00
COS(GAMMA)	1 - FDIFF**2	SFOIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.934185D 00	0.968620D 00	0.984185D 00	0.288955D 00	0.177145D 00	0.309214D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.135000D 02	0.430116D 01	0.798407D 00	0.450159D 00	0.620249D 00	0.880016D 00
COS(BETA+DEL)	W2/386.4	FI2X(T)	FI2Y(T)	FI2XT(T)	FI2YT(T)
0.474944D 00	0.608178D 00	0.230620D 00	0.427313D 00	0.240928D 00	0.130029D 00
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.471548D 00	0.557342D 00	0.730060D 00	0.775346D 00	0.916412D 00	0.142679D 01
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.608275D 00	0.402990D 00	0.392171D 00	0.919892D 00	0.368970D 01	0.526444D 01
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.224435D 01	-0.645170D 00	-0.537178D 00	0.749871D 03	0.319891D 01	0.319836D 01
COS(PHI)	F(DELTA)	FITY	AARN	BARN	CARN
0.999488D 00	0.399409D 05	-0.602563D 00	-0.534488D 04	0.312339D 05	-0.535494D 03
TAN(LAMBDA)					
-0.397823D 00					

INITIAL VALUE OF LAMBDA = 0.521166D 00

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FINAL VALUE OF LAMBDA = 0.569675D 00

BQUAD = 0.130519D 05 CQUAD = 0.415564D 08 TEST = 0.108096D 00

FA	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	FB2X
0.754167D 04	0.635066D 04	0.406767D 04	0.464920D 05	0.464906D 05	0.402666D 05
FB1X					
0.729603D 05					

STRESS ANALYSIS

PMAX = 0.651143D 05 B = 0.310071D 00 P = 0.754167D 04

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.0

Y SIGMA X

0.0	0.6511D 05
0.1550D 00	0.4884D 05
0.3101D 00	-0.0

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.3101D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6479D 05	-0.5306D 05	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.5590D 05	-0.5252D 05	-0.3662D 04	0.3273D 04	0.6535D 04
0.3101D 00	-0.1003D 05	-0.5191D 05	-0.9540D 04	0.3273D 04	0.1281D 05
0.4651D 00	-0.5384D 02	-0.2688D 05	-0.4515D 03	0.3273D 04	0.3724D 04
0.6201D 00	-0.8267D 01	-0.1841D 05	-0.1241D 03	0.3273D 04	0.3357D 04

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.6201D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6385D 05	-0.4291D 05	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.5457D 05	-0.4262D 05	-0.6801D 04	0.3273D 04	0.1007D 05
0.3101D 00	-0.1378D 05	-0.4515D 05	-0.1247D 05	0.3273D 04	0.1575D 05
0.4651D 00	-0.3873D 03	-0.2822D 05	-0.1653D 04	0.3273D 04	0.4526D 04
0.6201D 00	-0.6411D 02	-0.1523D 05	-0.4829D 03	0.3273D 04	0.3756D 04

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.1550D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5824D 05	-0.2225D 05	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.4849D 05	-0.2427D 05	-0.1145D 05	0.3273D 04	0.1472D 05
0.3101D 00	-0.1973D 05	-0.3111D 05	-0.1541D 05	0.3273D 04	0.1868D 05
0.4651D 00	-0.3464D 04	-0.2758D 05	-0.6473D 04	0.3273D 04	0.9746D 04
0.6201D 00	-0.8210D 03	-0.2044D 05	-0.2525D 04	0.3273D 04	0.5798D 04

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.2419D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5134D 05	-0.1224D 05	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.4293D 05	-0.1527D 05	-0.1145D 05	0.3273D 04	0.1472D 05
0.3101D 00	-0.2214D 05	-0.2235D 05	-0.1513D 05	0.3273D 04	0.1841D 05
0.4651D 00	-0.7199D 04	-0.2364D 05	-0.9439D 04	0.3273D 04	0.1271D 05
0.6201D 00	-0.2345D 04	-0.1978D 05	-0.4753D 04	0.3273D 04	0.8026D 04

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.3101D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4604D 05	-0.7900D 04	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.3913D 05	-0.1089D 05	-0.1039D 05	0.3273D 04	0.1367D 05
0.3101D 00	-0.2289D 05	-0.1725D 05	-0.1415D 05	0.3273D 04	0.1742D 05
0.4651D 00	-0.9651D 04	-0.2018D 05	-0.1050D 05	0.3273D 04	0.1377D 05
0.6201D 00	-0.3821D 04	-0.1844D 05	-0.6183D 04	0.3273D 04	0.9456D 04

L EQUIVALENT = 0.2378D 00 TOTAL FORCE AT JOINT A X = 0.3721D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4169D 05	-0.5464D 04	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.3607D 05	-0.8141D 04	-0.9234D 04	0.3273D 04	0.1251D 05
0.3101D 00	-0.2301D 05	-0.1386D 05	-0.1303D 05	0.3273D 04	0.1630D 05
0.4651D 00	-0.1138D 05	-0.1725D 05	-0.1080D 05	0.3273D 04	0.1407D 05
0.6201D 00	-0.5171D 04	-0.1691D 05	-0.7118D 04	0.3273D 04	0.1039D 05

L EQUIVALENT = 0.2378D 00

TOTAL FORCE AT JOINT A

X = 0.4651D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3612D 05	-0.3311D 04	0.0	0.3273D 04	0.3273D 04
0.1550D 00	-0.3208D 05	-0.5411D 04	-0.7573D 04	0.3273D 04	0.1085D 05
0.3101D 00	-0.2256D 05	-0.1000D 05	-0.1128D 05	0.3273D 04	0.1455D 05
0.4651D 00	-0.1313D 05	-0.1353D 05	-0.1053D 05	0.3273D 04	0.1380D 05
0.6201D 00	-0.6981D 04	-0.1445D 05	-0.7908D 04	0.3273D 04	0.1118D 05

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.470535D 00	0.875385D 00
0.593000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.921752D 00	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.138287D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.185983D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.239369D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.345546D 01	0.250000D 01

X = 0.3101D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.464114D 00	0.863442D 00
0.593000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.892468D 00	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.134250D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.183628D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.231249D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.233513D 01	0.168945D 01

X = 0.6201D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.464059D 00	0.863341D 00
0.593000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.880321D 00	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.132761D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.183818D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.227762D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.196989D 01	0.142520D 01

X = 0.1550D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.487955D 00	0.907797D 00
0.593000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.896258D 00	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.135635D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.192900D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.230882D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.159496D 01	0.115394D 01

X = 0.2419D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.562585D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.100670D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.152000D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.218763D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.257751D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.161688D 01	0.116980D 01

X = 0.3101D 00 A = 0.6E56D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.623662D 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.110141D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.166193D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.240808D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.281247D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.169145D 01	0.122375D 01

X = 0.3721D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.682428D 00	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.119595D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.180447D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.262648D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.304975D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.179094D 01	0.129573D 01

X = 0.4651D 00 A = 0.367CD 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.790628D 00	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.137724D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.207670D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.302971D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.350725D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.202883D 01	0.146785D 01

STRESS ANALYSIS
FMAX = 0.457071D 05 B = 0.431702D 00 P = 0.464920D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.4571D 05
0.2159D 00	0.3428D 05
0.4317D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.4317D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4548D 05	-0.3725D 05	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.3924D 05	-0.3686D 05	-0.2571D 04	0.2297D 04	0.4868D 04
0.4317D 00	-0.7040D 04	-0.3644D 05	-0.6697D 04	0.2297D 04	0.8994D 04
0.6476D 00	-0.3779D 02	-0.1387D 05	-0.3169D 03	0.2297D 04	0.2614D 04
0.8634D 00	-0.5803D 01	-0.1292D 05	-0.8714D 02	0.2297D 04	0.2385D 04

TOTAL FORCE AT JOINT 2 X = 0.8634D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4482D 05	-0.3012D 05	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.3831D 05	-0.2992D 05	-0.4774D 04	0.2297D 04	0.7071D 04
0.4317D 00	-0.9675D 04	-0.3169D 05	-0.8755D 04	0.2297D 04	0.1105D 05
0.6476D 00	-0.2718D 03	-0.1160D 04	-0.1160D 04	0.2297D 04	0.3458D 04
0.8634D 00	-0.4500D 02	-0.1350D 05	-0.3390D 03	0.2297D 04	0.2636D 04

TOTAL FORCE AT JOINT 2					
X = 0.2159D 00					
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4088D 05	-0.1562D 05	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.3404D 05	-0.1703D 05	-0.8035D 04	0.2297D 04	0.1033D 05
0.4317D 00	-0.1385D 05	-0.2183D 05	-0.1082D 05	0.2297D 04	0.1311D 05
0.6476D 00	-0.2432D 04	-0.1936D 05	-0.4544D 04	0.2297D 04	0.6841D 04
0.8634D 00	-0.5763D 03	-0.1434D 05	-0.1772D 04	0.2297D 04	0.4070D 04
TOTAL FORCE AT JOINT 2					
X = 0.3367D 00					
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3604D 05	-0.8591D 04	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.3014D 05	-0.1072D 05	-0.8037D 04	0.2297D 04	0.1033D 05
0.4317D 00	-0.1554D 05	-0.1569D 05	-0.1062D 05	0.2297D 04	0.1292D 05
0.6476D 00	-0.5054D 04	-0.1660D 05	-0.6626D 04	0.2297D 04	0.8923D 04
0.8634D 00	-0.1646D 04	-0.1388D 05	-0.3336D 04	0.2297D 04	0.5634D 04
TOTAL FORCE AT JOINT 2					
X = 0.4317D 00					
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3232D 05	-0.5545D 04	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.2747D 05	-0.7645D 04	-0.7295D 04	0.2297D 04	0.9592D 04
0.4317D 00	-0.1607D 05	-0.1218D 05	-0.9932D 04	0.2297D 04	0.1223D 05
0.6476D 00	-0.6782D 04	-0.1417D 05	-0.7370D 04	0.2297D 04	0.9668D 04
0.8634D 00	-0.2682D 04	-0.1294D 05	-0.4340D 04	0.2297D 04	0.6638D 04
TOTAL FORCE AT JOINT 2					
X = 0.5180D 00					
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2926D 05	-0.3836D 04	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.2532D 05	-0.5715D 04	-0.6482D 04	0.2297D 04	0.8780D 04
0.4317D 00	-0.1615D 05	-0.9726D 04	-0.9146D 04	0.2297D 04	0.1144D 05
0.6476D 00	-0.7990D 04	-0.1212D 05	-0.7580D 04	0.2297D 04	0.9877D 04
0.8634D 00	-0.3630D 04	-0.1187D 05	-0.4997D 04	0.2297D 04	0.7294D 04
TOTAL FORCE AT JOINT 2					
X = 0.6476D 00					
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2535D 05	-0.2324D 04	0.0	0.2297D 04	0.2297D 04
0.2159D 00	-0.2252D 05	-0.3799D 04	-0.5316D 04	0.2297D 04	0.7613D 04
0.4317D 00	-0.1583D 05	-0.7020D 04	-0.7917D 04	0.2297D 04	0.1021D 05
0.6476D 00	-0.9214D 04	-0.9499D 04	-0.7392D 04	0.2297D 04	0.9689D 04
0.8634D 00	-0.4900D 04	-0.1015D 05	-0.5551D 04	0.2297D 04	0.7848D 04
X = 0.0					
A = 0.2560D 01					
B = 0.6000D 00					
C = 0.0					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.670325D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.131313D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.197003D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.264952D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.341006D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.492265D 01	0.250000D 01

X = 0.43170-01	A = 0.23650 01	B = 0.54000 00	C = 0.21300-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.6611770 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1271410 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.1913100 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2615970 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.3294370 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.3326620 01	0.1689450 01
X = 0.86340-01	A = 0.21610 01	B = 0.48200 00	C = 0.38000-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.6610990 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1254110 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1891310 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2618670 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.3244690 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.2806300 01	0.1425200 01
X = 0.21590 00	A = 0.15280 01	B = 0.30600 00	C = 0.65500-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.6951420 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1276810 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1932250 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2748050 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3289150 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2272180 01	0.1153940 01
X = 0.33670 00	A = 0.95300 00	B = 0.14820 00	C = 0.54300-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.8014590 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1434140 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2165400 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3116500 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3671920 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2303420 01	0.1169800 01
X = 0.43170 00	A = 0.68560 00	B = 0.85500-01	C = 0.47500-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.8884690 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1569070 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2357590 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3430550 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4006650 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2409630 01	0.1223750 01
X = 0.51800 00	A = 0.52420 00	B = 0.53800-01	C = 0.42000-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.9721880 00	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1703750 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2570650 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.3741680 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.4344680 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2551380 01	0.1295730 01

X = 0.6476D 00

A = 0.367CD 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.112633D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.196202D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.295847D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.431613D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.499644D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.289028D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.457064D 05

B = 0.431695D 00

P = 0.464906D 05

TOTAL FORCE AT JOINT 3

X = 0.0

Y	SIGMA X
0.0	0.4571D 05
0.2158D 00	0.3428D 05
0.4317D 00	-0.0

TOTAL FORCE AT JOINT 3

X = 0.4317D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4548D 05	-0.3725D 05	0.0	0.2297D 04	0.2297D 04
0.2158D 00	-0.3924D 05	-0.3686D 05	-0.2571D 04	0.2297D 04	0.4868D 04
0.4317D 00	-0.704CD 04	-0.3644D 05	-0.6696D 04	0.2297D 04	0.8954D 04
0.6475D 00	-0.3775D 02	-0.1887D 05	-0.3169D 03	0.2297D 04	0.2614D 04
0.8634D 00	-0.5803D 01	-0.1252D 05	-0.8714D 02	0.2297D 04	0.2385D 04

TOTAL FORCE AT JOINT 3

X = 0.8634D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4482D 05	-0.3012D 05	0.0	0.2297D 04	0.2297D 04
0.2158D 00	-0.3831D 05	-0.2992D 05	-0.4774D 04	0.2297D 04	0.7071D 04
0.4317D 00	-0.9674D 04	-0.3169D 05	-0.8755D 04	0.2297D 04	0.1105D 05
0.6475D 00	-0.2718D 03	-0.1981D 05	-0.1160D 04	0.2297D 04	0.3458D 04
0.8634D 00	-0.4500D 02	-0.1350D 05	-0.3390D 03	0.2297D 04	0.2636D 04

TOTAL FORCE AT JOINT 3

X = 0.2158D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4088D 05	-0.1562D 05	0.0	0.2297D 04	0.2297D 04
0.2158D 00	-0.3404D 05	-0.1703D 05	-0.8035D 04	0.2297D 04	0.1033D 05
0.4317D 00	-0.1385D 05	-0.2183D 05	-0.1082D 05	0.2297D 04	0.1311D 05
0.6475D 00	-0.2432D 04	-0.1936D 05	-0.4544D 04	0.2297D 04	0.6841D 04
0.8634D 00	-0.5763D 03	-0.1434D 05	-0.1772D 04	0.2297D 04	0.4070D 04

TOTAL FORCE AT JOINT 3

X = 0.3367D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.36040 05	-0.85910 04	0.0	0.22970 04	0.22970 04
0.21580 00	-0.30130 05	-0.10720 05	-0.80360 04	0.22970 04	0.10330 05
0.43170 00	-0.15540 05	-0.15690 05	-0.10620 05	0.22970 04	0.12920 05
0.64750 00	-0.50530 04	-0.16600 05	-0.16620 04	0.22970 04	0.89230 04
0.86340 00	-0.16460 04	-0.13880 05	-0.33360 04	0.22970 04	0.56340 04

TOTAL FORCE AT JOINT 3 X = 0.43170 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.32320 05	-0.55450 04	0.0	0.22970 04	0.22970 04
0.21580 00	-0.27470 05	-0.76440 04	-0.72950 04	0.22970 04	0.95920 04
0.43170 00	-0.16070 05	-0.12180 05	-0.99310 04	0.22970 04	0.12230 05
0.64750 00	-0.67820 04	-0.14170 05	-0.73700 04	0.22970 04	0.96680 04
0.86340 00	-0.26820 04	-0.12940 05	-0.43400 04	0.22970 04	0.66380 04

TOTAL FORCE AT JOINT 3 X = 0.51800 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.29260 05	-0.38350 04	0.0	0.22970 04	0.22970 04
0.21580 00	-0.25320 05	-0.57150 04	-0.64820 04	0.22970 04	0.87790 04
0.43170 00	-0.16150 05	-0.97250 04	-0.91460 04	0.22970 04	0.11440 05
0.64750 00	-0.79960 04	-0.12120 05	-0.75800 04	0.22970 04	0.98770 04
0.86340 00	-0.36360 04	-0.11870 05	-0.49970 04	0.22970 04	0.72940 04

TOTAL FORCE AT JOINT 3 X = 0.64750 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.25350 05	-0.23240 04	0.0	0.22970 04	0.22970 04
0.21580 00	-0.22520 05	-0.37990 04	-0.53160 04	0.22970 04	0.76130 04
0.43170 00	-0.15830 05	-0.70200 04	-0.79170 04	0.22970 04	0.10210 05
0.64750 00	-0.92140 04	-0.94990 04	-0.73910 04	0.22970 04	0.96890 04
0.86340 00	-0.49000 04	-0.10150 05	-0.55510 04	0.22970 04	0.78480 04

X = 0.0 A = 0.25600 01 B = 0.60000 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.6703350 00	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1313150 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.1970060 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.2649560 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.3410110 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.4922720 01	0.2500000 01

X = 0.43170-01 A = 0.23650 01 B = 0.54000 00 C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.6611870 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1271430 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.1913120 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2616010 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.3294420 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.3326670 01	0.1689450 01

X = 0.86340-01 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.302169 05	0.661109 00	0.863341 00
0.598000 05	0.370000 05	0.270000 05	0.573215 05	0.125412 01	0.958554 00
0.883000 05	0.541000 05	0.422000 05	0.864463 05	0.189134 01	0.979007 00
0.125000 06	0.792000 05	0.675000 05	0.119692 06	0.261871 01	0.957534 00
0.150000 06	0.909000 05	0.700000 05	0.148305 06	0.324474 01	0.988703 00
0.900000 05	0.450000 05	0.344520 05	0.128268 06	0.280634 01	0.142520 01

X = 0.21580 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.317729 05	0.695152 00	0.907797 00
0.598000 05	0.370000 05	0.270000 05	0.583593 05	0.127683 01	0.975907 00
0.883000 05	0.541000 05	0.422000 05	0.883176 05	0.193228 01	0.100020 01
0.125000 06	0.792000 05	0.675000 05	0.125605 06	0.274809 01	0.100484 01
0.150000 06	0.909000 05	0.700000 05	0.150338 06	0.328920 01	0.100225 01
0.900000 05	0.450000 05	0.344520 05	0.103855 06	0.227221 01	0.115394 01

X = 0.33670 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.366324 05	0.801471 00	0.104664 01
0.598000 05	0.370000 05	0.270000 05	0.655505 05	0.143417 01	0.109616 01
0.883000 05	0.541000 05	0.422000 05	0.989740 05	0.216543 01	0.112088 01
0.125000 06	0.792000 05	0.675000 05	0.142446 06	0.311654 01	0.113957 01
0.150000 06	0.909000 05	0.700000 05	0.167833 06	0.367198 01	0.111889 01
0.900000 05	0.450000 05	0.344520 05	0.105282 06	0.230345 01	0.116980 01

X = 0.43170 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.888482 00	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.156909 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.236762 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.343060 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.400671 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.240967 01	0.122375 01

X = 0.51800 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.972202 00	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.170377 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.257069 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.374174 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.434475 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.255141 01	0.129573 01

X = 0.64750 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.112635 01	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.196205 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.295851 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.431620 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.499651 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.289032 01	0.146785 01

STRESS ANALYSIS

PMAX = 0.3771150 05 B = 0.8211110 00 P = 0.7296030 05

TOTAL FORCE AT B1

X = 0.0

Y	SIGMA X
0.0	0.37710 05
0.41060 00	0.28280 05
0.82110 00	-0.0

TOTAL FORCE AT B1

X = 0.82110-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.37520 05	-0.30730 05	0.0
0.41060 00	-0.32380 05	-0.30420 05	-0.21210 04
0.82110 00	-0.58080 04	-0.30060 05	-0.55250 04
0.12320 01	-0.31180 02	-0.15570 05	-0.26150 03
0.16420 01	-0.47880 01	-0.10660 05	-0.71900 02

TOTAL FORCE AT B1

X = 0.16420 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.36980 05	-0.24850 05	0.0
0.41060 00	-0.31610 05	-0.24680 05	-0.39390 04
0.82110 00	-0.79820 04	-0.26150 05	-0.72240 04
0.12320 01	-0.22430 03	-0.16340 05	-0.95720 03
0.16420 01	-0.37130 02	-0.11140 05	-0.27970 03

TOTAL FORCE AT B1

X = 0.41060 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.33730 05	-0.12880 05	0.0
0.41060 00	-0.28080 05	-0.14050 05	-0.66290 04
0.82110 00	-0.11430 05	-0.18010 05	-0.89240 04
0.12320 01	-0.20060 04	-0.15970 05	-0.37490 04
0.16420 01	-0.47550 03	-0.11840 05	-0.14620 04

TOTAL FORCE AT B1

X = 0.64050 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.29740 05	-0.70880 04	-0.27250 03
0.41060 00	-0.24860 05	-0.88450 04	-0.65310 04
0.82110 00	-0.12830 05	-0.12950 05	-0.87640 04
0.12320 01	-0.41700 04	-0.13690 05	-0.54670 04
0.16420 01	-0.13580 04	-0.11450 05	-0.27530 04

TOTAL FORCE AT B1

X = 0.82110 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.26670 05	-0.45750 04	0.0
0.41060 00	-0.22660 05	-0.63070 04	-0.60190 04
0.82110 00	-0.13260 05	-0.10050 05	-0.81940 04
0.12320 01	-0.55950 04	-0.11690 05	-0.60810 04
0.16420 01	-0.22130 04	-0.10680 05	-0.35810 04

TOTAL FORCE AT B1

X = 0.93530 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2414D 05	-0.3165D 04	-0.2764D-03
0.4106D 00	-0.2089D 05	-0.4715D 04	-0.5348D 04
0.8211D 00	-0.1333D 05	-0.8024D 04	-0.7546D 04
0.1232D 01	-0.6593D 04	-0.9998D 04	-0.6254D 04
0.1642D 01	-0.2955D 04	-0.9791D 04	-0.4123D 04

TOTAL FORCE AT B1

X = 0.1232D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2092D 05	-0.1918D 04	0.0
0.4106D 00	-0.1858D 05	-0.3134D 04	-0.4386D 04
0.8211D 00	-0.1306D 05	-0.5792D 04	-0.6532D 04
0.1232D 01	-0.7602D 04	-0.7837D 04	-0.6099D 04
0.1642D 01	-0.4043D 04	-0.8371D 04	-0.4580D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.812447D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.159154D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.238772D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.321127D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.413305D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.596634D 01	0.250000D 01

X = 0.8211D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.801359D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.154097D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.231871D 01	0.950283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.317060D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.395284D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.403193D 01	0.168945D 01

X = 0.1642D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.801265D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.152000D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.229230D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.317388D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.393263D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.340129D 01	0.142520D 01

X = 0.4106D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.842525D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.154752D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.234192D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.333069D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.398652D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.275392D 01	0.115394D 01

X = 0.6405D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.971383D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.173821D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.999740D 05	0.262450D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.377725D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.445044D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105292D 06	0.279176D 01	0.116980D 01

X = 0.8211D 0C A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.107684D 01	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.190174D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.286956D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.415789D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.485614D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.292052D 01	0.122375D 01

X = 0.9853D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.117831D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.206497D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.311568D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.453499D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.526584D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.309232D 01	0.129573D 01

X = 0.1232D 01 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.136513D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.237801D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.358572D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.523123D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.605577D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.350307D 01	0.146785D 01

STRESS ANALYSIS
P_{MAX} = 0.280158D 05 B = 0.610002D 00 P = 0.402666D 05

TOTAL FORCE AT E2 X = 0.0

Y	SIGMA X
0.0	0.2802D 05
0.3050D 00	0.2101D 05
0.6100D 00	-0.0

TOTAL FORCE AT B2 X = 0.6100D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2788D 05	-0.2263D 05	0.0
0.3050D 00	-0.2405D 05	-0.2260D 05	-0.1576D 04
0.6100D 00	-0.4215D 04	-0.2234D 05	-0.4105D 04
0.9150D 00	-0.2316D 02	-0.1157D 05	-0.1943D 03
0.1220D 01	-0.3557D 01	-0.7920D 04	-0.5341D 02

TOTAL FORCE AT B2				X = 0.1220D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.2747D 05	-0.1846D 05	0.0	
0.3050D 00	-0.2348D 05	-0.1834D 05	-0.2926D 04	
0.6100D 00	-0.5930D 04	-0.1942D 05	-0.5367D 04	
0.9150D 00	-0.1666D 03	-0.1214D 05	-0.7111D 03	
0.1220D 01	-0.2759D 02	-0.8275D 04	-0.2078D 03	

TOTAL FORCE AT B2				X = 0.3050D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.2506D 05	-0.9571D 04	0.0	
0.3050D 00	-0.2086D 05	-0.1044D 05	-0.4925D 04	
0.6100D 00	-0.8491D 04	-0.1338D 05	-0.6630D 04	
0.9150D 00	-0.1491D 04	-0.1187D 05	-0.2785D 04	
0.1220D 01	-0.3532D 03	-0.8792D 04	-0.1086D 04	

TOTAL FORCE AT B2				X = 0.4758D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.2209D 05	-0.5266D 04	0.0	
0.3050D 00	-0.1847D 05	-0.6571D 04	-0.4926D 04	
0.6100D 00	-0.9528D 04	-0.9617D 04	-0.6511D 04	
0.9150D 00	-0.3098D 04	-0.1017D 05	-0.4061D 04	
0.1220D 01	-0.1009D 04	-0.8510D 04	-0.2045D 04	

TOTAL FORCE AT B2				X = 0.6100D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.1981D 05	-0.3399D 04	0.0	
0.3050D 00	-0.1684D 05	-0.4686D 04	-0.4471D 04	
0.6100D 00	-0.9850D 04	-0.7465D 04	-0.6087D 04	
0.9150D 00	-0.4157D 04	-0.8684D 04	-0.4518D 04	
0.1220D 01	-0.1644D 04	-0.7933D 04	-0.2660D 04	

TOTAL FORCE AT B2				X = 0.7320D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.1794D 05	-0.2351D 04	0.0	
0.3050D 00	-0.1552D 05	-0.3503D 04	-0.3973D 04	
0.6100D 00	-0.9901D 04	-0.5961D 04	-0.5606D 04	
0.9150D 00	-0.4898D 04	-0.7427D 04	-0.4646D 04	
0.1220D 01	-0.2225D 04	-0.7274D 04	-0.3063D 04	

TOTAL FORCE AT B2				X = 0.9150D 00
Y	SIGMA X	SIGMA Y	TAU XY	
0.0	-0.1554D 05	-0.1425D 04	-0.1927D 03	
0.3050D 00	-0.1380D 05	-0.2328D 04	-0.3258D 04	
0.6100D 00	-0.9705D 04	-0.4303D 04	-0.4852D 04	
0.9150D 00	-0.5648D 04	-0.5822D 04	-0.4531D 04	
0.1220D 01	-0.3004D 04	-0.6219D 04	-0.3402D 04	

X = 0.0		A = 0.2560D 01		B = 0.6000D 00		C = 0.0					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.306386D 05		0.109362D 01		0.875389D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.600193D 05		0.214234D 01		0.100367D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.900445D 05		0.321406D 01		0.101976D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.121102D 06		0.432263D 01		0.968815D 00	
0.150000D 06		0.909000D 05		0.700000D 05		0.155864D 06		0.556342D 01		0.103909D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.225000D 06		0.803118D 01		0.250000D 01	
X = 0.6100D -C1		A = 0.2365D 01		B = 0.5400D 00		C = 0.2130D -01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.302205D 05		0.107869D 01		0.863442D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.581125D 05		0.207427D 01		0.971780D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.874420D 05		0.312117D 01		0.990283D 00	
0.125000D 06		0.792000D 05		0.675000D 05		0.119568D 06		0.426789D 01		0.956547D 00	
0.150000D 06		0.909000D 05		0.700000D 05		0.150576D 06		0.537469D 01		0.100384D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.152050D 06		0.542730D 01		0.168945D 01	
X = 0.1220D 03		A = 0.2161D 01		B = 0.4820D 00		C = 0.3800D -01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.302169D 05		0.107857D 01		0.863341D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.573215D 05		0.204604D 01		0.958554D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.864463D 05		0.308563D 01		0.979007D 00	
0.125000D 06		0.792000D 05		0.675000D 05		0.119692D 06		0.427229D 01		0.957534D 00	
0.150000D 06		0.909000D 05		0.700000D 05		0.148303D 06		0.529364D 01		0.988703D 00	
0.900000D 05		0.450000D 05		0.344520D 05		0.128263D 06		0.457841D 01		0.142520D 01	
X = 0.3050D 0C		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D -01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.317729D 05		0.113411D 01		0.907797D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.583593D 05		0.208308D 01		0.975907D 00	
0.883000D 05		0.541000D 05		0.422000D 05		0.883176D 05		0.315242D 01		0.100020D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.125605D 06		0.448337D 01		0.100484D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.150338D 06		0.536617D 01		0.100225D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.103855D 06		0.370700D 01		0.115394D 01	
X = 0.4758D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D -01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.130756D 01		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.233977D 01		0.109616D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.353279D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.508449D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167833D 06		0.559065D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.375796D 01		0.116980D 01	
X = 0.6100D 00		A = 0.6856D 00		B = 0.8550D -01		C = 0.4750D -01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.144951D 01		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.255989D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.386266D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.559685D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.653675D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.393126D 01		0.122375D 01	

X = 0.7320D 00	A = 0.5242D 00	B = 0.5380D-01	C = 0.4200D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.158610D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.277962D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.419396D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.610446D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.708824D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.416251D 01	0.129573D 01
X = 0.9150D 00	A = 0.3670D 00	B = 0.2980D-01	C = 0.3170D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.183758D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.320099D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.482667D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.704166D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.815156D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.471541D 01	0.146785D 01
TIME = 1.7000					
AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.161421D 02	0.544544D 02	0.920675D 00	0.531103D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.503587D 00	0.482570D 00	0.875857D 00	0.795557D 05	0.119292D 02	0.106747D 01
O(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.112365D 00	0.228640D 03	0.173414D 02	0.196062D 04	0.661013D 04	-0.289523D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.574466D 01	0.531103D 04	0.234574D 04	0.484328D 02	0.256294D 04	-0.692375D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.390857D 02	0.186760D 04	-0.126185D 04	0.131529D 08	0.216383D 08	0.532394D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.515687D 02	-0.775529D 02	0.275818D 03	0.285609D 04	-0.976974D 03	0.551636D 03
BETAD PRIME	F	E	COS(B)-COS(B0)	FDIFF	GAMMA
0.141900D 00	0.150000D 01	0.116982D 01	0.959773D-01	0.143966D 00	0.144468D 00
COS(GAMMA)	1 - FDIFF**2	SFDIF1	GAMMA PRIME	SIN(GAMMA)	GAMMAD PRIME
0.989583D 00	0.979274D 00	0.989583D 00	0.389433D 00	0.143966D 00	0.458036D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.121913D 01	0.610335D 00	0.620249D 00	0.901765D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.432226D 00	0.608178D 00	0.320474D 00	0.666614D 00	0.334728D 00	0.160439D 00
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.655203D 00	0.829053D 00	0.105670D 01	0.107732D 01	0.136318D 01	0.204804D 01
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.877131D 00	0.404644D 00	0.393692D 00	0.919243D 00	0.368970D-01	0.755666D-01
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.323635D-01	-0.826732D 00	-0.688349D 00	0.168568D 04	0.319891D-01	0.319836D-01

COS(PHI) 0.999488D 00 F(DELTA P) 0.465385D 05 FITY -0.653663D 00 AARN -0.161485D 05 BARN 0.417937D 05 DARN -0.159240D 04
TAN(LAMBDA) -0.356996D 00

INITIAL VALUE OF LAMBDA = 0.710216D 00

CASE 2

FINAL VALUE OF LAMBDA = 0.816505D 00

BQUAD = 0.151854D 05 CQUAD = 0.574286D 08 TEST = 0.431021D 00

FA 0.806234D 04 FA*COS(LAMBDA) 0.552086D 04 FA*SIN(LAMBDA) 0.587549D 04 F43 0.524177D 05 F32 0.524160D 05 FB2X 0.502739D 05
FB1X 0.902050D 05

STRESS ANALYSIS

PMAK = 0.665796D 05 B = 0.317049D 00 P = 0.806234D 04

L EQUIVALENT = 0.2431D C0 TOTAL FORCE AT JOINT A X = 0.0

Y	SIGMA X
0.0	0.6658D 05
0.1535D 0C	0.4993D 05
0.3170D 0C	-0.0

L EQUIVALENT = 0.2431D C0 TOTAL FORCE AT JOINT A X = 0.3170D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6625D 05	-0.5426D 05	0.0	0.3347D 04	0.3347D 04
0.1535D 0C	-0.5716D 05	-0.5370D 05	-0.3744D 04	0.3347D 04	0.7091D 04
0.3170D 0C	-0.1025D 05	-0.5308D 05	-0.9755D 04	0.3347D 04	0.1310D 05
0.4756D 0C	-0.5505D 02	-0.2749D 05	-0.4616D 03	0.3347D 04	0.3808D 04
0.6341D 0C	-0.8453D 01	-0.1882D 05	-0.1269D 03	0.3347D 04	0.3474D 04

L EQUIVALENT = 0.2431D C0 TOTAL FORCE AT JOINT A X = 0.6341D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6529D 05	-0.4388D 05	0.0	0.3347D 04	0.3347D 04
0.1535D 0C	-0.5580D 05	-0.4358D 05	-0.6954D 04	0.3347D 04	0.1030D 05
0.3170D 0C	-0.1409D 05	-0.4616D 05	-0.1275D 05	0.3347D 04	0.1610D 05
0.4756D 0C	-0.3960D 03	-0.2886D 05	-0.1690D 04	0.3347D 04	0.5037D 04
0.6341D 0C	-0.6556D 02	-0.1967D 05	-0.4938D 03	0.3347D 04	0.3840D 04

L EQUIVALENT = 0.2431D C0 TOTAL FORCE AT JOINT A X = 0.1585D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.59550 05	-0.22750 05	0.0	0.33470 04	0.33470 04
0.15850 00	-0.49580 05	-0.24810 05	-0.11700 05	0.33470 04	0.15050 05
0.31700 00	-0.20180 05	-0.31800 05	-0.15760 05	0.33470 04	0.15100 05
0.47560 00	-0.35420 04	-0.28200 05	-0.66190 04	0.33470 04	0.99650 04
0.63410 00	-0.83950 03	-0.20900 05	-0.25820 04	0.33470 04	0.59280 04

L EQUIVALENT = 0.24310 00 TOTAL FORCE AT JOINT A X = 0.24730 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.52500 05	-0.12510 05	0.0	0.33470 04	0.33470 04
0.15850 00	-0.43900 05	-0.15620 05	-0.11710 05	0.33470 04	0.15050 05
0.31700 00	-0.22640 05	-0.22850 05	-0.15470 05	0.33470 04	0.18820 05
0.47560 00	-0.73610 04	-0.24170 05	-0.96510 04	0.33470 04	0.13000 05
0.63410 00	-0.23980 04	-0.20220 05	-0.48600 04	0.33470 04	0.82070 04

L EQUIVALENT = 0.24310 00 TOTAL FORCE AT JOINT A X = 0.31700 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.47680 05	-0.80770 04	0.0	0.33470 04	0.33470 04
0.15850 00	-0.40010 05	-0.11140 05	-0.10630 05	0.33470 04	0.13970 05
0.31700 00	-0.23410 05	-0.17740 05	-0.14470 05	0.33470 04	0.17810 05
0.47560 00	-0.98790 04	-0.20640 05	-0.10740 05	0.33470 04	0.14080 05
0.63410 00	-0.39070 04	-0.18850 05	-0.63220 04	0.33470 04	0.96690 04

L EQUIVALENT = 0.24310 00 TOTAL FORCE AT JOINT A X = 0.38050 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.42620 05	-0.55870 04	0.0	0.33470 04	0.33470 04
0.15850 00	-0.36880 05	-0.83240 04	-0.94420 04	0.33470 04	0.12790 05
0.31700 00	-0.23530 05	-0.14170 05	-0.13320 05	0.33470 04	0.16670 05
0.47560 00	-0.11640 05	-0.17650 05	-0.11040 05	0.33470 04	0.14390 05
0.63410 00	-0.52880 04	-0.17290 05	-0.72790 04	0.33470 04	0.10630 05

L EQUIVALENT = 0.24310 00 TOTAL FORCE AT JOINT A X = 0.47560 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.36930 05	-0.33860 04	0.0	0.33470 04	0.33470 04
0.15850 00	-0.32800 05	-0.55330 04	-0.77430 04	0.33470 04	0.11090 05
0.31700 00	-0.23060 05	-0.10230 05	-0.11530 05	0.33470 04	0.14880 05
0.47560 00	-0.13420 05	-0.13840 05	-0.10770 05	0.33470 04	0.14110 05
0.63410 00	-0.71380 04	-0.14780 05	-0.80860 04	0.33470 04	0.11430 05

X = 0.0 A = 0.25600 01 B = 0.60000 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.4601800 00	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.9014660 00	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.1352430 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.1818900 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.2341010 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.3379410 01	0.2500000 01

X = 0.31700-01 A = 0.23650 01 B = 0.54000 00 C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
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0.350000D 05	0.242000D 05	0.157000C 05	0.302205D 05	0.453900D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.872827D 00	0.971780D 00
0.883000D 05	0.541000D 05	0.422000C 05	0.374420D 05	0.131335D 01	0.950283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.179587D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.226160D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.228374D 01	0.168945D 01

X = 0.6341D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.453847D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.860947D 00	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.129839D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.179772D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.222749D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.192653D 01	0.142520D 01

X = 0.1585D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.477217D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.876534D 00	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.383176D 05	0.132650D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.188654D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.225801D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.155986D 01	0.115394D 01

X = 0.2473D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.550204D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.984544D 00	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.148655D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.213948D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.252079D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.158130D 01	0.116980D 01

X = 0.3170C 00

A = 0.6856D 00

B = 0.3550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.609937C 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.107717C 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.162536C 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.235508D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.275058D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.165422D 01	0.122375D 01

X = 0.3805D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.667410D 00	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.116963D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.176476D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.256868D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.298264D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.175153D 01	0.129573D 01

X = 0.4756D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
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0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.773229D 00	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.134693D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.203100D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.296304D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.760000D 05	0.228373D 06	0.343007D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.198418D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.485326D 05 B = 0.458389D 00 P = 0.524177D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.4853D 05
0.2292D 00	0.3640D 05
0.4584D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.4584D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4829D 05	-0.3955D 05	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.4167D 05	-0.3914D 05	-0.2729D 04	0.2440D 04	0.5169D 04
0.4584D 00	-0.7475D 04	-0.3869D 05	-0.7111D 04	0.2440D 04	0.9550D 04
0.6876D 00	-0.4013D 02	-0.2004D 05	-0.3365D 03	0.2440D 04	0.2776D 04
0.9168D 00	-0.6162D 01	-0.1372D 05	-0.9253D 02	0.2440D 04	0.2532D 04

TOTAL FORCE AT JOINT 2 X = 0.9168D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4759D 05	-0.3198D 05	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.4068D 05	-0.3177D 05	-0.5069D 04	0.2440D 04	0.7509D 04
0.4584D 00	-0.1027D 05	-0.3365D 05	-0.9297D 04	0.2440D 04	0.1174D 05
0.6876D 00	-0.2886D 03	-0.2103D 05	-0.1232D 04	0.2440D 04	0.3671D 04
0.9168D 00	-0.4779D 02	-0.1434D 05	-0.3600D 03	0.2440D 04	0.2799D 04

TOTAL FORCE AT JOINT 2 X = 0.2292D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4341D 05	-0.1658D 05	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.3614D 05	-0.1809D 05	-0.8531D 04	0.2440D 04	0.1097D 05
0.4584D 00	-0.1471D 05	-0.2318D 05	-0.1143D 05	0.2440D 04	0.1392D 05
0.6876D 00	-0.2582D 04	-0.2056D 05	-0.4825D 04	0.2440D 04	0.7264D 04
0.9168D 00	-0.6119D 03	-0.1523D 05	-0.1882D 04	0.2440D 04	0.4321D 04

TOTAL FORCE AT JOINT 2 X = 0.3575D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3827D 05	-0.9122D 04	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.3200D 05	-0.1138D 05	-0.8533D 04	0.2440D 04	0.1097D 05
0.4584D 00	-0.1651D 05	-0.1666D 05	-0.1128D 05	0.2440D 04	0.1372D 05
0.6876D 00	-0.5366D 04	-0.1762D 05	-0.7035D 04	0.2440D 04	0.9475D 04
0.9158D 00	-0.1748D 04	-0.1474D 05	-0.3543D 04	0.2440D 04	0.5982D 04

TOTAL FORCE AT JOINT 2

X = 0.4584D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3432D 05	-0.5888D 04	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.2917D 05	-0.8117D 04	-0.7746D 04	0.2440D 04	0.1019D 05
0.4584D 00	-0.1706D 05	-0.1293D 05	-0.1055D 05	0.2440D 04	0.1299D 05
0.6876D 00	-0.7201D 04	-0.1504D 05	-0.7826D 04	0.2440D 04	0.1027D 05
0.9168D 00	-0.2848D 04	-0.1374D 05	-0.4609D 04	0.2440D 04	0.7048D 04

TOTAL FORCE AT JOINT 2

X = 0.5501D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3107D 05	-0.4073D 04	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.2688D 05	-0.6068D 04	-0.6883D 04	0.2440D 04	0.9322D 04
0.4584D 00	-0.1715D 05	-0.1033D 05	-0.9711D 04	0.2440D 04	0.1215D 05
0.6876D 00	-0.8484D 04	-0.1287D 05	-0.8048D 04	0.2440D 04	0.1049D 05
0.9168D 00	-0.3854D 04	-0.1260D 05	-0.5306D 04	0.2440D 04	0.7745D 04

TOTAL FORCE AT JOINT 2

X = 0.6876D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2692D 05	-0.2468D 04	0.0	0.2440D 04	0.2440D 04
0.2292D 00	-0.2391D 05	-0.4033D 04	-0.5644D 04	0.2440D 04	0.8084D 04
0.4584D 00	-0.1681D 05	-0.7454D 04	-0.8406D 04	0.2440D 04	0.1085D 05
0.6876D 00	-0.9784D 04	-0.1009D 05	-0.7848D 04	0.2440D 04	0.1029D 05
0.9168D 00	-0.5203D 04	-0.1077D 05	-0.5894D 04	0.2440D 04	0.8334D 04

X = 0.0

A = 0.256CD 01

B = 0.60CD 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.3C6386D 05	0.631299D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.6C0193D 05	0.123668D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.9C0445D 05	0.185534D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.249527D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.321153D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.463606D 01	0.250000D 01

X = 0.4584D-01

A = 0.236D 01

B = 0.54CD 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.3C2205D 05	0.622684D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.5E1125D 05	0.119739D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.180172D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.246367D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.310258D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.313295D 01	0.168945D 01

X = 0.9168D-01

A = 0.216D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.622611D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.118109D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.84463D 05	0.178120D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.246621D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.305579D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.264292D 01	0.142520D 01

X = 0.2292D 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.317729D 05		0.654671D 00		0.907797D 00	
0.598000D 05		0.370000D 05		0.270000D 05		0.583593D 05		0.120248D 01		0.975907D 00	
0.893000D 05		0.541000D 05		0.422000D 05		0.883176D 05		0.181976D 01		0.100020D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.125605D 06		0.258866D 01		0.100484D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.150338D 06		0.309766D 01		0.100225D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.103855D 06		0.213989D 01		0.115394D 01	
X = 0.3575D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.754799D 00		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.135065D 01		0.109616D 01	
0.893000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.203933D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.293506D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167833D 06		0.345815D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.216931D 01		0.116980D 01	
X = 0.4584D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.836743D 00		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.147772D 01		0.119929D 01	
0.893000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.222975D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156800D 06		0.323082D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.377339D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.226935D 01		0.122375D 01	
X = 0.5501D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.915588D 00		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.160455D 01		0.130223D 01	
0.893000D 05		0.541000D 05		0.422000D 05		0.117497D 06		0.242099D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.352385D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.198583D 06		0.409174D 01		0.132385D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116616D 06		0.240284D 01		0.129573D 01	
X = 0.6876D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFTEY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.106076D 01		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.184780D 01		0.149964D 01	
0.893000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.278623D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.197278D 06		0.406485D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.470555D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.272201D 01		0.146785D 01	

STRESS ANALYSIS

PMAX = 0.485318D 05 B = 0.458381D 00 P = 0.524160D 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.4853D 05
0.2292D 00	0.3640D 05
0.4584D 00	-0.0

TOTAL FORCE AT JOINT 3			X = 0.4584D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4829D 05	-0.3955D 05	0.0	0.2439D 04	0.2439D 04
0.2292D 00	-0.4167D 05	-0.3914D 05	-0.2729D 04	0.2439D 04	0.5169D 04
0.4584D 00	-0.7475D 04	-0.3869D 05	-0.7110D 04	0.2439D 04	0.9550D 04
0.6876D 00	-0.4013D 02	-0.2004D 05	-0.3365D 03	0.2439D 04	0.2776D 04
0.9168D 00	-0.6162D 01	-0.1372D 05	-0.9252D 02	0.2439D 04	0.2532D 04

TOTAL FORCE AT JOINT 3			X = 0.9168D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4759D 05	-0.3198D 05	0.0	0.2439D 04	0.2439D 04
0.2292D 00	-0.4068D 05	-0.3176D 05	-0.5069D 04	0.2439D 04	0.7508D 04
0.4584D 00	-0.1027D 05	-0.3365D 05	-0.9296D 04	0.2439D 04	0.1174D 05
0.6876D 00	-0.2886D 03	-0.2103D 05	-0.1232D 04	0.2439D 04	0.3671D 04
0.9168D 00	-0.4779D 02	-0.1433D 05	-0.3600D 03	0.2439D 04	0.2799D 04

TOTAL FORCE AT JOINT 3			X = 0.2292D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4341D 05	-0.1658D 05	0.0	0.2439D 04	0.2439D 04
0.2292D 00	-0.3614D 05	-0.1809D 05	-0.8531D 04	0.2439D 04	0.1097D 05
0.4584D 00	-0.1471D 05	-0.2318D 05	-0.1148D 05	0.2439D 04	0.1352D 05
0.6876D 00	-0.2582D 04	-0.2056D 05	-0.4825D 04	0.2439D 04	0.7264D 04
0.9168D 00	-0.6119D 03	-0.1523D 05	-0.1882D 04	0.2439D 04	0.4321D 04

TOTAL FORCE AT JOINT 3			X = 0.3575D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3827D 05	-0.9122D 04	0.0	0.2439D 04	0.2439D 04
0.2292D 00	-0.3200D 05	-0.1138D 05	-0.8533D 04	0.2439D 04	0.1097D 05
0.4584D 00	-0.1651D 05	-0.1666D 05	-0.1128D 05	0.2439D 04	0.1372D 05
0.6876D 00	-0.5366D 04	-0.1762D 05	-0.7035D 04	0.2439D 04	0.9475D 04
0.9168D 00	-0.1748D 04	-0.1474D 05	-0.3543D 04	0.2439D 04	0.5982D 04

TOTAL FORCE AT JOINT 3			X = 0.4584D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3432D 05	-0.5888D 04	0.0	0.2439D 04	0.2439D 04
0.2292D 00	-0.2917D 05	-0.8117D 04	-0.7746D 04	0.2439D 04	0.1019D 05
0.4584D 00	-0.1706D 05	-0.1293D 05	-0.1055D 05	0.2439D 04	0.1258D 05
0.6876D 00	-0.7201D 04	-0.1504D 05	-0.7826D 04	0.2439D 04	0.1027D 05
0.9168D 00	-0.2848D 04	-0.1374D 05	-0.4608D 04	0.2439D 04	0.7048D 04

TOTAL FORCE AT JOINT 3			X = 0.5501D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3107D 05	-0.4073D 04	0.0	0.2439D 04	0.2439D 04
0.2292D 00	-0.2688D 05	-0.6068D 04	-0.6883D 04	0.2439D 04	0.9322D 04
0.4584D 00	-0.1715D 05	-0.1033D 05	-0.9711D 04	0.2439D 04	0.1215D 05
0.6876D 00	-0.8484D 04	-0.1287D 05	-0.8048D 04	0.2439D 04	0.1049D 05
0.9168D 00	-0.3854D 04	-0.1260D 05	-0.5306D 04	0.2439D 04	0.7745D 04

TOTAL FORCE AT JOINT 3

X = 0.68760 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.26920 05	-0.24680 04	0.0	0.24390 04	0.24390 04
0.22920 00	-0.23910 05	-0.40330 04	-0.56440 04	0.24390 04	0.80840 04
0.45840 00	-0.16810 05	-0.74540 04	-0.84060 04	0.24390 04	0.10850 05
0.68760 00	-0.97840 04	-0.10090 05	-0.78480 04	0.24390 04	0.10290 05
0.91680 00	-0.52030 04	-0.10770 05	-0.58940 04	0.24390 04	0.83330 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.6313100 00	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1236700 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.1855370 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.2495310 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.3211580 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.4636140 01	0.2500000 01

X = 0.45840-01

A = 0.23650 01

B = 0.54000 00

C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.6226940 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1197410 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.1801750 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2463710 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.3102630 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.3133000 01	0.1689450 01

X = 0.91680-01

A = 0.21610 01

B = 0.48200 00

C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.2021690 05	0.6226210 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1181110 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1781230 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2466260 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.3055840 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.2642960 01	0.1425200 01

X = 0.22920 00

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.6546820 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1202500 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1819790 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2588100 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3097710 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2139930 01	0.1153940 01

X = 0.35750 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.7548110 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1350670 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2039360 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.2935110 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3458210 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2169350 01	0.1169800 01

X = 0.4584D 00 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.836757D 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.147774D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.222979D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.323088D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.377345D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.226939D 01	0.122375D 01

X = 0.5501D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.915603D 00	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.160458D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.242103D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.352391D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.409181D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.240288D 01	0.129573D 01

X = 0.6876D 00 A = 0.367CD 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.106077D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.184783D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.278628D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.406492D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.470563D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.272205D 01	0.146785D 01

STRESS ANALYSIS
 P_{MAX} = 0.419321D 05 B = 0.913007D 00 P = 0.902050D 05

TOTAL FORCE AT B1 X = 0.0

Y	SIGMA X
0.0	0.4193D 05
0.4555D 00	0.3145D 05
0.9130D 00	-0.0

TOTAL FORCE AT B1 X = 0.9130D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.4172D 05	-0.3417D 05	0.0
0.4555D 00	-0.3600D 05	-0.3382D 05	-0.2358D 04
0.9130D 00	-0.6458D 04	-0.3343D 05	-0.6143D 04
0.1370D 01	-0.3467D 02	-0.1731D 05	-0.2907D 03
0.1826D 01	-0.5324D 01	-0.1185D 05	-0.7994D 02

TOTAL FORCE AT B1 X = 0.1826D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.4112D 05	-0.2763D 05	0.0
0.4565D 00	-0.3514D 05	-0.2745D 05	-0.4380D 04
0.9130D 00	-0.8875D 04	-0.2907D 05	-0.8032D 04
0.1370D 01	-0.2494D 03	-0.1817D 05	-0.1064D 04
0.1826D 01	-0.4129D 02	-0.1239D 05	-0.3110D 03

TOTAL FORCE AT B1

X = 0.4565D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3751D 05	-0.1433D 05	0.0
0.4565D 00	-0.3122D 05	-0.1563D 05	-0.7371D 04
0.9130D 00	-0.1271D 05	-0.2003D 05	-0.9923D 04
0.1370D 01	-0.2231D 04	-0.1776D 05	-0.4168D 04
0.1826D 01	-0.5287D 03	-0.1316D 05	-0.1626D 04

TOTAL FORCE AT B1

X = 0.7121D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3306D 05	-0.7881D 04	0.0
0.4565D 00	-0.2765D 05	-0.9835D 04	-0.7373D 04
0.9130D 00	-0.1426D 05	-0.1439D 05	-0.9745D 04
0.1370D 01	-0.4636D 04	-0.1522D 05	-0.6078D 04
0.1826D 01	-0.1510D 04	-0.1274D 05	-0.3061D 04

TOTAL FORCE AT B1

X = 0.9130D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2965D 05	-0.5087D 04	0.0
0.4565D 00	-0.2520D 05	-0.7013D 04	-0.6692D 04
0.9130D 00	-0.1474D 05	-0.1117D 05	-0.9111D 04
0.1370D 01	-0.6222D 04	-0.1300D 05	-0.6762D 04
0.1826D 01	-0.2461D 04	-0.1117D 05	-0.3982D 04

TOTAL FORCE AT B1

X = 0.1096D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2684D 05	-0.3519D 04	-0.3073D 03
0.4565D 00	-0.2323D 05	-0.5243D 04	-0.5947D 04
0.9130D 00	-0.1482D 05	-0.8923D 04	-0.8390D 04
0.1370D 01	-0.7230D 04	-0.1112D 05	-0.6954D 04
0.1826D 01	-0.3330D 04	-0.1089D 05	-0.4584D 04

TOTAL FORCE AT B1

X = 0.1370D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2326D 05	-0.2132D 04	0.0
0.4565D 00	-0.2066D 05	-0.3485D 04	-0.4877D 04
0.9130D 00	-0.1453D 05	-0.6440D 04	-0.7263D 04
0.1370D 01	-0.8453D 04	-0.8714D 04	-0.6781D 04
0.1826D 01	-0.4495D 04	-0.9308D 04	-0.5092D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.7306730 00	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1431350 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.2147390 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.2888050 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.3717050 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.5365820 01	0.2500000 01
X = 0.91300-01 A = 0.23650 01 B = 0.54000 00 C = 0.21300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.7207010 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1385870 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.2085330 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2851480 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.3590960 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.3626110 01	0.1689450 01
X = 0.18260 00 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.7206160 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1367010 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.2061580 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2854420 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.3536800 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.3058940 01	0.1425200 01
X = 0.45650 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.7577230 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1391760 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2106210 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2995450 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3585270 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2476730 01	0.1153940 01
X = 0.71210 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.8736120 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1563260 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2360340 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3397070 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.4002500 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2510790 01	0.1169800 01
X = 0.91300 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.9684550 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1710330 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2560740 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3739390 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4367360 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2626570 01	0.1223750 01
X = 0.10960 01 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01					

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.105971D 01	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.185713D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.280208D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.407854D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.473582D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.278107D 01	0.129573D 01

X = 0.1370D 01 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.122773D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.213866D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.322481D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.470470D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.544625D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.315048D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.313042D 05 B = 0.681600D 00 P = 0.502739D 05

TOTAL FORCE AT B2 X = 0.0

Y	SIGMA X
0.0	0.3130D 05
0.3408D 00	0.2348D 05
0.6816D 00	-0.0

TOTAL FORCE AT B2 X = 0.6816D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3115D 05	-0.2551D 05	0.0
0.3408D 00	-0.2688D 05	-0.2525D 05	-0.1761D 04
0.6816D 00	-0.4821D 04	-0.2496D 05	-0.4586D 04
0.1022D 01	-0.2588D 02	-0.1292D 05	-0.2171D 03
0.1363D 01	-0.3974D 01	-0.8850D 04	-0.5968D 02

TOTAL FORCE AT B2 X = 0.1363D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3070D 05	-0.2063D 05	0.0
0.3408D 00	-0.2624D 05	-0.2049D 05	-0.3270D 04
0.6816D 00	-0.6626D 04	-0.2170D 05	-0.5996D 04
0.1022D 01	-0.1862D 03	-0.1357D 05	-0.7946D 03
0.1363D 01	-0.3082D 02	-0.9246D 04	-0.2322D 03

TOTAL FORCE AT B2 X = 0.3408D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2800D 05	-0.1069D 05	0.0
0.3408D 00	-0.2331D 05	-0.1167D 05	-0.5503D 04
0.6816D 00	-0.9488D 04	-0.1495D 05	-0.7408D 04
0.1022D 01	-0.1665D 04	-0.1326D 05	-0.3112D 04
0.1363D 01	-0.3947D 03	-0.9824D 04	-0.1214D 04

TOTAL FORCE AT B2 X = 0.5316D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2468D 05	-0.5884D 04	0.0
0.3408D 00	-0.2064D 05	-0.7342D 04	-0.5504D 04
0.6816D 00	-0.1065D 05	-0.1075D 05	-0.7275D 04
0.1022D 01	-0.3461D 04	-0.1137D 05	-0.4538D 04
0.1363D 01	-0.1128D 04	-0.9509D 04	-0.2285D 04

TOTAL FORCE AT B2 X = 0.6816D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2214D 05	-0.3798D 04	0.0
0.3408D 00	-0.1881D 05	-0.5236D 04	-0.4996D 04
0.6816D 00	-0.1101D 05	-0.8341D 04	-0.6802D 04
0.1022D 01	-0.4645D 04	-0.9703D 04	-0.5048D 04
0.1363D 01	-0.1837D 04	-0.8865D 04	-0.2973D 04

TOTAL FORCE AT B2 X = 0.8179D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2004D 05	-0.2627D 04	0.0
0.3408D 00	-0.1734D 05	-0.3914D 04	-0.4440D 04
0.6816D 00	-0.1106D 05	-0.6661D 04	-0.6264D 04
0.1022D 01	-0.5472D 04	-0.8299D 04	-0.5191D 04
0.1363D 01	-0.2486D 04	-0.8127D 04	-0.3422D 04

TOTAL FORCE AT B2 X = 0.1022D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.1736D 05	-0.1592D 04	-0.2153D -03
0.3408D 00	-0.1542D 05	-0.2602D 04	-0.3641D 04
0.6816D 00	-0.1084D 05	-0.4808D 04	-0.5422D 04
0.1022D 01	-0.6311D 04	-0.6506D 04	-0.5062D 04
0.1363D 01	-0.3356D 04	-0.6949D 04	-0.3802D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.978739D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.191729D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.287644D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.386856D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155364D 06	0.497901D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.718754D 01	0.250000D 01

X = 0.6816D -01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D -01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.965383D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.185638D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.279330D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.381957D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.481010D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.445719D 01	0.168945D 01

X = 0.1363D 00 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D -01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.302169 05	0.965269 00	0.863341 00
0.598000 05	0.370000 05	0.270000 05	0.573215 05	0.183111 01	0.958554 00
0.883000 05	0.541000 05	0.422000 05	0.864463 05	0.276150 01	0.975007 00
0.125000 06	0.792000 05	0.675000 05	0.119692 06	0.382351 01	0.957534 00
0.150000 06	0.909000 05	0.700000 05	0.148305 06	0.473757 01	0.988703 00
0.900000 05	0.450000 05	0.344520 05	0.128268 06	0.409747 01	0.142520 01

X = 0.34080 00

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.317729 05	0.101497 01	0.907797 00
0.598000 05	0.370000 05	0.270000 05	0.583593 05	0.186427 01	0.975907 00
0.883000 05	0.541000 05	0.422000 05	0.883176 05	0.282127 01	0.100020 01
0.125000 06	0.792000 05	0.675000 05	0.125605 06	0.401242 01	0.100484 01
0.150000 06	0.909000 05	0.700000 05	0.150338 06	0.480248 01	0.100225 01
0.900000 05	0.450000 05	0.344520 05	0.103855 06	0.331760 01	0.115394 01

X = 0.53160 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.366324 05	0.117021 01	0.104664 01
0.598000 05	0.370000 05	0.270000 05	0.655505 05	0.209399 01	0.109616 01
0.883000 05	0.541000 05	0.422000 05	0.989740 05	0.316169 01	0.112088 01
0.125000 06	0.792000 05	0.675000 05	0.142446 06	0.455039 01	0.113957 01
0.150000 06	0.909000 05	0.700000 05	0.167833 06	0.536136 01	0.111889 01
0.900000 05	0.450000 05	0.344520 05	0.105282 06	0.336321 01	0.116980 01

X = 0.68160 00

A = 0.68560 00

B = 0.85500-01

C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.129725 01	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.229099 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.345691 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.500893 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.585010 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.351830 01	0.122375 01

X = 0.81790 00

A = 0.52420 00

B = 0.53800-01

C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.141949 01	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.248763 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.375340 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.546322 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.634366 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.372526 01	0.129573 01

X = 0.10220 01

A = 0.36700 00

B = 0.29800-01

C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.164455 01	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.286474 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.431965 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.630197 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.729528 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.422008 01	0.146785 01

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.118249D 02	0.537919D 02	0.600878D 00	0.519028D 04
BETA	SIN(BETA)	CCS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.562891D 00	0.533634D C0	0.845715D 00	0.102732D 06	0.122490D 02	0.108794D 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.114520D 00	0.209452D C3	0.346277D 02	0.391500D 04	0.959459D 04	-0.351342D 01
ZDPRIME	B(T)	B(T)-R(T)**2	50RT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.650545D 01	0.519028D 04	0.229671D 04	0.475240D 02	0.276971D 04	-0.615494D 01
SPRIME	APRIME	BPRIME	AAND8	B(T)**2-A(T)**2	BETA PRIME
-0.474312D 02	0.228345D 04	-0.112174D 04	0.149586D 08	0.192678D 08	0.656577D 00
FDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.682623D 02	-0.878236D 02	0.121121D 04	0.370984D 04	-0.406182D 03	0.242242D 04
BETAD PRIME	F	E	COS(B)-COS(B0)	FDIFF	GAMMA
0.168786D 00	0.150000D 01	0.116982D 01	0.658357D-01	0.987535D-01	0.989148D-01
CGS(GAMMA)	1 - FDIFF**2	SFCIF1	GAMMA PRIME	SIN(GAMMA)	GAMMA0 PRIME
0.995112D 00	0.990248D 00	0.995112D 00	0.528139D 00	0.987535D-01	0.657647D 00
G**2 + H**2	GH212	AN2	AT2	CEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.185420D 01	0.725976D 00	0.620249D 00	0.925798D 00
COS(BETA+DEL)	W2/386.4	FI2X(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.378019D 00	0.608178D 00	0.426286D 00	0.104401D 01	0.408761D 00	0.166904D 00
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.835047D 00	0.121091D 01	0.147092D 01	0.137303D 01	0.199105D 01	0.278353D 01
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.122040D 01	0.413195D 00	0.401538D 00	0.915843D 00	0.368970D-01	0.102704D 00
FI3Y(T)	FI4T	FI5T	FRIT)	PHI	SIN(PHI)
0.450290D-01	-0.926219D 00	-0.779509D 00	0.365925D 04	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTA)	FITY	AARN	BARN	CARN
0.999488D 00	0.544902D 05	-0.459787D 00	-0.332763D 05	0.595253D C5	-0.321964D 04
TAN(LAMBDA)					
-0.345223D 00					

INITIAL VALUE OF LAMBDA = 0.960746D 00

CASE 2

FINAL VALUE OF LAMBDA = 0.108659D 01

BQUAQ = 0.194375D 05 CQUAD = 0.943285D 03 TEST = -0.540061D-01

FA	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	FB2X
0.100733D 05	0.466920D 04	0.891528C 04	0.598839D 05	0.598816D 05	0.626571D 05

FB1X
0.111135D 06

STRESS ANALYSIS

P_{MAX} = 0.717097D 05

B = 0.341478D 00

P = 0.100733D 05

L EQUIVALENT = 0.2619D 00

TOTAL FORCE AT JOINT A

X = 0.0

Y

SIGMA X

0.0
0.1707D 00
0.3415D 00

0.7171D 05
0.5378D 05
-0.0

L EQUIVALENT = 0.2619D 00

TOTAL FORCE AT JOINT A

X = 0.3415D-01

Y

SIGMA X

SIGMA Y

TAU XY

SHEARING STRESS

TAU + SHEAR

0.0
0.1707D 00
0.3415D 00
0.5122D 00
0.6830D 00

-0.7135D 05
-0.6156D 05
-0.1104D 05
-0.5929D 02
-0.9104D 01

-0.5844D 05
-0.5784D 05
-0.5717D 05
-0.2961D 05
-0.2027D 05

0.0
-0.4033D 04
-0.1051D 05
-0.4972D 03
-0.1367D 03

0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04

0.3605D 04
0.7637D 04
0.1411D 05
0.4102D 04
0.3741D 04

L EQUIVALENT = 0.2619D 00

TOTAL FORCE AT JOINT A

X = 0.6830D-01

Y

SIGMA X

SIGMA Y

TAU XY

SHEARING STRESS

TAU + SHEAR

0.0
0.1707D 00
0.3415D 00
0.5122D 00
0.6830D 00

-0.7032D 05
-0.6010D 05
-0.1518D 05
-0.4265D 03
-0.7061D 02

-0.4726D 05
-0.4694D 05
-0.4972D 05
-0.3108D 05
-0.2118D 05

0.0
-0.7490D 04
-0.1374D 05
-0.1820D 04
-0.5319D 03

0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04

0.3605D 04
0.1109D 05
0.1734D 05
0.5425D 04
0.4136D 04

L EQUIVALENT = 0.2619D 00

TOTAL FORCE AT JOINT A

X = 0.1707D 00

Y

SIGMA X

SIGMA Y

TAU XY

SHEARING STRESS

TAU + SHEAR

0.0
0.1707D 00
0.3415D 00
0.5122D 00
0.6830D 00

-0.6414D 05
-0.5340D 05
-0.2173D 05
-0.3815D 04
-0.9042D 03

-0.2450D 05
-0.2672D 05
-0.3426D 05
-0.3038D 05
-0.2251D 05

0.0
-0.1261D 05
-0.1697D 05
-0.7129D 04
-0.2780D 04

0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04

0.3605D 04
0.1621D 05
0.2057D 05
0.1073D 05
0.6385D 04

L EQUIVALENT = 0.2619D 00

TOTAL FORCE AT JOINT A

X = 0.2664D 00

Y

SIGMA X

SIGMA Y

TAU XY

SHEARING STRESS

TAU + SHEAR

0.0
0.1707D 00
0.3415D 00
0.5122D 00
0.6830D 00

-0.5654D 05
-0.4728D 05
-0.2439D 05
-0.7928D 04
-0.2583D 04

-0.1348D 05
-0.1632D 05
-0.2462D 05
-0.2604D 05
-0.2178D 05

0.0
-0.1261D 05
-0.1667D 05
-0.1039D 05
-0.5234D 04

0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04
0.3605D 04

0.3605D 04
0.1621D 05
0.2027D 05
0.1400D 05
0.8839D 04

L EQUIVALENT = 0.2619D 00

TOTAL FORCE AT JOINT A

X = 0.3415D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.50710 05	-0.87000 04	0.0	0.35050 04	0.36050 04
0.17070 00	-0.43100 05	-0.11990 05	-0.11440 05	0.35050 04	0.15050 05
0.34150 00	-0.25210 05	-0.19110 05	-0.15580 05	0.35050 04	0.19190 05
0.51220 00	-0.10640 05	-0.22230 05	-0.11560 05	0.35050 04	0.15170 05
0.68300 00	-0.42080 04	-0.20310 05	-0.68090 04	0.35050 04	0.10410 05

L EQUIVALENT = 0.26190 00 TOTAL FORCE AT JOINT A X = 0.40980 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.45910 05	-0.60180 04	0.0	0.36050 04	0.36050 04
0.17070 00	-0.39720 05	-0.89660 04	-0.10170 05	0.36050 04	0.13770 05
0.34150 00	-0.25340 05	-0.15260 05	-0.14350 05	0.36050 04	0.17950 05
0.51220 00	-0.12540 05	-0.19010 05	-0.11890 05	0.36050 04	0.15500 05
0.68300 00	-0.56950 04	-0.18620 05	-0.78390 04	0.36050 04	0.11440 05

L EQUIVALENT = 0.26190 00 TOTAL FORCE AT JOINT A X = 0.51220 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.39780 05	-0.36470 04	0.0	0.36050 04	0.36050 04
0.17070 00	-0.35330 05	-0.59600 04	-0.83400 04	0.36050 04	0.11540 05
0.34150 00	-0.24840 05	-0.11010 05	-0.12420 05	0.36050 04	0.16020 05
0.51220 00	-0.14460 05	-0.14900 05	-0.11600 05	0.36050 04	0.15200 05
0.68300 00	-0.76880 04	-0.15920 05	-0.87090 04	0.36050 04	0.12310 05

X = 0.0 A = 0.25600 01 B = 0.60000 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063660 05	0.4272590 00	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.8369760 00	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.1255680 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.1688780 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.2173540 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.3137650 01	0.2500000 01

X = 0.34150-01 A = 0.23650 01 B = 0.54000 00 C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.4214280 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.8103850 00	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.1219390 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.1667400 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.2099800 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.2120360 01	0.1689450 01

X = 0.68300-01 A = 0.21610 01 B = 0.48200 00 C = 0.38600-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.4213790 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.7993550 00	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1205500 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.1669120 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.2068140 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.1788710 01	0.1425200 01

X = 0.17070 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.443077D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.813827D 00	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.123160D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.175158D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.209648D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.144826D 01	0.115394D 01

X = 0.2664D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.510843D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.914110D 00	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.138020D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.198643D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.234045D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.146818D 01	0.116980D 01

X = 0.3415D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.566302D 00	0.116027D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.100011D 01	0.119929D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.108216D 06	0.150908D 01	0.122554D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.218660D 01	0.125440D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.255380D 01	0.122088D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.153588D 01	0.122375D 01

X = 0.4098D 00

A = 0.5242D 00

B = 0.5380D-01

C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.619664D 00	0.126960D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.108595D 01	0.130223D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.163851D 01	0.133066D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.238492D 01	0.136817D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.276926D 01	0.132389D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.162622D 01	0.129573D 01

X = 0.5122D 00

A = 0.3670D 00

B = 0.2980D-01

C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.717912D 00	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.125058D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.188570D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.275106D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.318468D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.184224D 01	0.146785D 01

STRESS ANALYSIS

PMAX = 0.518740D 05

B = 0.489948D 00

P = 0.598839D 05

TOTAL FORCE AT JOINT 2

X = 0.0

Y

SIGMA X

0.0	0.5187D 05
0.2450D 00	0.3891D 05
0.4895D 00	-0.0

TOTAL FORCE AT JOINT 2			X = 0.4899D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5162D 05	-0.4227D 05	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.4454D 05	-0.4184D 05	-0.2917D 04	0.2607D 04	0.5525D 04
0.4899D 00	-0.7990D 04	-0.4136D 05	-0.7600D 04	0.2607D 04	0.1021D 05
0.7349D 00	-0.4289D 02	-0.2142D 05	-0.3597D 03	0.2607D 04	0.2967D 04
0.9799D 00	-0.6586D 01	-0.1467D 05	-0.9800D 02	0.2607D 04	0.2706D 04

TOTAL FORCE AT JOINT 2			X = 0.9799D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5087D 05	-0.3419D 05	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.4348D 05	-0.3395D 05	-0.548D 04	0.2607D 04	0.8025D 04
0.4899D 00	-0.1098D 05	-0.3597D 05	-0.9937D 04	0.2607D 04	0.1254D 05
0.7349D 00	-0.3085D 03	-0.2248D 05	-0.137D 04	0.2607D 04	0.3924D 04
0.9799D 00	-0.5108D 02	-0.1532D 05	-0.3847D 03	0.2607D 04	0.2952D 04

TOTAL FORCE AT JOINT 2			X = 0.2450D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4640D 05	-0.1772D 05	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.3863D 05	-0.1933D 05	-0.919D 04	0.2607D 04	0.1173D 05
0.4899D 00	-0.1572D 05	-0.2478D 05	-0.1238D 05	0.2607D 04	0.1488D 05
0.7349D 00	-0.2760D 04	-0.2197D 05	-0.5137D 04	0.2607D 04	0.7764D 04
0.9799D 00	-0.6541D 03	-0.1628D 05	-0.2011D 04	0.2607D 04	0.4619D 04

TOTAL FORCE AT JOINT 2			X = 0.3822D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4090D 05	-0.9750D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.3420D 05	-0.1217D 05	-0.9121D 04	0.2607D 04	0.1173D 05
0.4899D 00	-0.1764D 05	-0.1781D 05	-0.1206D 05	0.2607D 04	0.1466D 05
0.7349D 00	-0.5735D 04	-0.1883D 05	-0.7520D 04	0.2607D 04	0.1013D 05
0.9799D 00	-0.1868D 04	-0.1576D 05	-0.3737D 04	0.2607D 04	0.6354D 04

TOTAL FORCE AT JOINT 2			X = 0.4899D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3668D 05	-0.6293D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.3118D 05	-0.8676D 04	-0.8279D 04	0.2607D 04	0.1089D 05
0.4899D 00	-0.1824D 05	-0.1382D 05	-0.1127D 05	0.2607D 04	0.1388D 05
0.7349D 00	-0.7657D 04	-0.1608D 05	-0.8355D 04	0.2607D 04	0.1097D 05
0.9799D 00	-0.3044D 04	-0.1469D 05	-0.4926D 04	0.2607D 04	0.7533D 04

TOTAL FORCE AT JOINT 2			X = 0.5879D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3321D 05	-0.4353D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.2874D 05	-0.6486D 04	-0.7357D 04	0.2607D 04	0.9964D 04
0.4899D 00	-0.1833D 05	-0.1104D 05	-0.1038D 05	0.2607D 04	0.1299D 05
0.7349D 00	-0.9068D 04	-0.1375D 05	-0.8622D 04	0.2607D 04	0.1121D 05
0.9799D 00	-0.4120D 04	-0.1347D 05	-0.5671D 04	0.2607D 04	0.8278D 04

TOTAL FORCE AT JOINT 2

X = -0.7349D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU X SHEAR
0.0	-0.2877D 05	-0.2638D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.2556D 05	-0.4311D 04	-0.6033D 04	0.2607D 04	0.8640D 04
0.4899D 00	-0.1757D 05	-0.7967D 04	-0.8985D 04	0.2607D 04	0.1159D 05
0.7349D 00	-0.1046D 05	-0.1078D 05	-0.8389D 04	0.2607D 04	0.1100D 05
0.9799D 00	-0.5561D 04	-0.1151D 05	-0.6300D 04	0.2607D 04	0.8907D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.590635D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.115702D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.173583D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.233454D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.300466D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.433743D 01	0.250000D 01

X = 0.4899D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.582575D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.112026D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.168566D 01	0.950283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.230498D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.290273D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.253115D 01	0.168545D 01

X = 0.9799D-01

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.582506D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.110501D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.166647D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.230736D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.285896D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.247268D 01	0.142520D 01

X = 0.2450D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.612502D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.112502D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.170254D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.242136D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.289813D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.200205D 01	0.115394D 01

X = 0.3822D 00

A = 0.9530D 00

B = 0.1482D 00

C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.706180D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.126365D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.190797D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.274600D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.323540D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.202958D 01	0.116980D 01

X = 0.4899D 00

A = 0.6856D 00

B = 0.8550D-01

C = 0.4750D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.782846 00	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.138253 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.208612 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.302272 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.353033 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.212317 01	0.122375 01

X = 0.58790 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.856612 00	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.150120 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.226505 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.329686 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.362818 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.224806 01	0.129573 01

X = 0.73490 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.952429 00	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.856783 05	0.172877 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.260676 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.380302 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.440245 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.254667 01	0.146785 01

STRESS ANALYSIS
P MAX = 0.518730 05 B = 0.489939 00 P = 0.598816 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.51870 05
0.24500 00	0.38900 05
0.48990 00	-0.0

TOTAL FORCE AT JOINT 3 X = 0.48990-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.51620 05	-0.42270 05	0.0	0.26070 04	0.26070 04
0.24500 00	-0.44530 05	-0.41840 05	-0.29170 04	0.26070 04	0.55250 04
0.48990 00	-0.79890 04	-0.41350 05	-0.76000 04	0.26070 04	0.10210 05
0.73490 00	-0.42890 02	-0.21420 05	-0.35970 03	0.26070 04	0.29670 04
0.97990 00	-0.65860 01	-0.14670 05	-0.98890 02	0.26070 04	0.27060 04

TOTAL FORCE AT JOINT 3 X = 0.97990-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.50870 05	-0.34190 05	0.0	0.26070 04	0.26070 04
0.24500 00	-0.43480 05	-0.33950 05	-0.54180 04	0.26070 04	0.80250 04
0.48990 00	-0.10980 05	-0.35960 05	-0.99360 04	0.26070 04	0.12540 05
0.73490 00	-0.30850 03	-0.22480 05	-0.13170 04	0.26070 04	0.39240 04
0.97990 00	-0.51080 02	-0.15320 05	-0.38470 03	0.26070 04	0.29920 04

TOTAL FORCE AT JOINT 3

X = 0.2450D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4640D 05	-0.1772D 05	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.3863D 05	-0.1933D 05	-0.9119D 04	0.2607D 04	0.1173D 05
0.4899D 00	-0.1572D 05	-0.2478D 05	-0.1228D 05	0.2607D 04	0.1488D 05
0.7349D 00	-0.2760D 04	-0.2197D 05	-0.5157D 04	0.2607D 04	0.7764D 04
0.9799D 00	-0.6540D 03	-0.1628D 05	-0.2011D 04	0.2607D 04	0.4619D 04

TOTAL FORCE AT JOINT 3

X = 0.3822D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4090D 05	-0.9750D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.3420D 05	-0.1217D 05	-0.9121D 04	0.2607D 04	0.1173D 05
0.4899D 00	-0.1764D 05	-0.1781D 05	-0.1206D 05	0.2607D 04	0.1466D 05
0.7349D 00	-0.5735D 04	-0.1883D 05	-0.7519D 04	0.2607D 04	0.1013D 05
0.9799D 00	-0.1868D 04	-0.1576D 05	-0.3786D 04	0.2607D 04	0.6354D 04

TOTAL FORCE AT JOINT 3

X = 0.4899D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3668D 05	-0.6293D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.3117D 05	-0.8676D 04	-0.8279D 04	0.2607D 04	0.1089D 05
0.4899D 00	-0.1824D 05	-0.1382D 05	-0.1127D 05	0.2607D 04	0.1388D 05
0.7349D 00	-0.7697D 04	-0.1608D 05	-0.8365D 04	0.2607D 04	0.1097D 05
0.9799D 00	-0.3044D 04	-0.1469D 05	-0.4926D 04	0.2607D 04	0.7533D 04

TOTAL FORCE AT JOINT 3

X = 0.5879D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3321D 05	-0.4353D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.2873D 05	-0.6485D 04	-0.7357D 04	0.2607D 04	0.9964D 04
0.4899D 00	-0.1833D 05	-0.1104D 05	-0.1038D 05	0.2607D 04	0.1299D 05
0.7349D 00	-0.9068D 04	-0.1375D 05	-0.8602D 04	0.2607D 04	0.1121D 05
0.9799D 00	-0.4120D 04	-0.1347D 05	-0.5671D 04	0.2607D 04	0.8278D 04

TOTAL FORCE AT JOINT 3

X = 0.7349D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.2877D 05	-0.2638D 04	0.0	0.2607D 04	0.2607D 04
0.2450D 00	-0.2556D 05	-0.4311D 04	-0.6033D 04	0.2607D 04	0.8640D 04
0.4899D 00	-0.1797D 05	-0.7967D 04	-0.8985D 04	0.2607D 04	0.1159D 05
0.7349D 00	-0.1046D 05	-0.1078D 05	-0.8389D 04	0.2607D 04	0.1100D 05
0.9799D 00	-0.5561D 04	-0.1151D 05	-0.6300D 04	0.2607D 04	0.8907D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.590646D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.115704D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.173587D 01	0.101976D 01
0.125000D 06	0.752000D 05	0.675000D 05	0.121102D 06	0.233458D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.300472D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.433752D 01	0.250000D 01

X = 0.4899D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.5825860 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1120280 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.3744200 05	0.1685690 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2305020 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.2902780 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.2931200 01	0.1689450 01
X = 0.97990-01 A = 0.21610 01 B = 0.49200 00 C = 0.38000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.2021690 05	0.5825180 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1105040 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1666500 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2307400 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.2859010 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.2472730 01	0.1425200 01
X = 0.24500 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.6125130 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1125040 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1702570 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2421400 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.2898190 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2002090 01	0.1153940 01
X = 0.38220 00 A = 0.55300 00 B = 0.14820 00 C = 0.54300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.7061930 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1263670 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.1908010 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.2746050 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3235460 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2029620 01	0.1169800 01
X = 0.48990 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.7828610 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1382560 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2086160 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3022770 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.3530400 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2123210 01	0.1223750 01
X = 0.58790 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.8566280 00	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1501230 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2265090 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.3296930 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.3828250 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2248110 01	0.1295730 01
X = 0.73490 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01					

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.992448 00	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.172881 01	0.149964 01
0.833000 05	0.541000 05	0.422000 05	0.135223 06	0.260681 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.380309 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.440253 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.254672 01	0.146785 01

STRESS ANALYSIS
 PMAX = 0.465432 05 B = 0.101341 01 P = 0.111135 06

TOTAL FORCE AT B1 X = 0.0

Y	SIGMA X
0.0	0.46540 05
0.50670 00	0.34910 05
0.10130 01	-0.0

TOTAL FORCE AT B1 X = 0.10130 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.46310 05	-0.37930 05	-0.68670-04
0.50670 00	-0.39960 05	-0.37540 05	-0.26180 04
0.10130 01	-0.71690 04	-0.37110 05	-0.68190 04
0.15200 01	-0.38480 02	-0.19220 05	-0.32270 03
0.20270 01	-0.59090 01	-0.13160 05	-0.88730 02

TOTAL FORCE AT B1 X = 0.20270 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.45640 05	-0.30670 05	0.0
0.50670 00	-0.39010 05	-0.30460 05	-0.48610 04
0.10130 01	-0.98510 04	-0.32270 05	-0.89150 04
0.15200 01	-0.27680 03	-0.20170 05	-0.11810 04
0.20270 01	-0.45830 02	-0.13750 05	-0.34520 03

TOTAL FORCE AT B1 X = 0.50670 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.41630 05	-0.15900 05	-0.27740-03
0.50670 00	-0.34660 05	-0.17340 05	-0.81820 04
0.10130 01	-0.14110 05	-0.22230 05	-0.11010 05
0.15200 01	-0.24760 04	-0.19720 05	-0.46270 04
0.20270 01	-0.58680 03	-0.14610 05	-0.18050 04

TOTAL FORCE AT B1 X = 0.79050 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.36700 05	-0.87480 04	0.0
0.50670 00	-0.30690 05	-0.10920 05	-0.81840 04
0.10130 01	-0.15830 05	-0.15980 05	-0.10820 05
0.15200 01	-0.51460 04	-0.16900 05	-0.67470 04
0.20270 01	-0.16760 04	-0.14140 05	-0.33970 04

TOTAL FORCE AT B1

X = 0.1013D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3291D 05	-0.5647D 04	0.0
0.5067D 00	-0.2797D 05	-0.7784D 04	-0.7428D 04
0.1013D 01	-0.1636D 05	-0.1240D 05	-0.1011D 05
0.1520D 01	-0.6906D 04	-0.1443D 05	-0.7505D 04
0.2027D 01	-0.2731D 04	-0.1318D 05	-0.4420D 04

TOTAL FORCE AT B1

X = 0.1216D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2980D 05	-0.3906D 04	0.0
0.5067D 00	-0.2578D 05	-0.5819D 04	-0.8601D 04
0.1013D 01	-0.1645D 05	-0.9904D 04	-0.9313D 04
0.1520D 01	-0.8136D 04	-0.1234D 05	-0.7718D 04
0.2027D 01	-0.3696D 04	-0.1208D 05	-0.5088D 04

TOTAL FORCE AT B1

X = 0.1520D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2582D 05	-0.2367D 04	0.0
0.5067D 00	-0.2293D 05	-0.3868D 04	-0.5413D 04
0.1013D 01	-0.1612D 05	-0.7149D 04	-0.8062D 04
0.1520D 01	-0.9383D 04	-0.9672D 04	-0.7527D 04
0.2027D 01	-0.4990D 04	-0.1033D 05	-0.5652D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.658283D 00	0.875389D 00
0.593000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.128954D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.193464D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.260192D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.334879D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.483421D 01	0.250000D 01

X = 0.1013D 00

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.649299D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.124857D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.187873D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.256897D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.323519D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.326686D 01	0.168945D 01

X = 0.2027D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.649223D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.123158D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.185733D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.257163D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.318640D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.275589D 01	0.142520D 01

X = 0.50670 00		A = 0.15280 01		B = 0.30600 00		C = 0.65500-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.6826530 00	0.9077970 00		
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1253870 01	0.9759070 00		
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1897540 01	0.1000200 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2698680 01	0.1004840 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3230060 01	0.1002250 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2231360 01	0.1153940 01		
X = 0.79050 00		A = 0.95300 00		B = 0.14820 00		C = 0.54300-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.7870610 00	0.1046640 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1408380 01	0.1096160 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2126490 01	0.1120880 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3060510 01	0.1139570 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3605960 01	0.1118890 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2262030 01	0.1169800 01		
X = 0.10130 01		A = 0.68560 00		B = 0.85500-01		C = 0.47500-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.8725070 00	0.1160270 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1540880 01	0.1199290 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2325050 01	0.1225540 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3368920 01	0.1254400 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.3934670 01	0.1220880 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2366340 01	0.1223750 01		
X = 0.12160 01		A = 0.52420 00		B = 0.53800-01		C = 0.42000-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.9547220 00	0.1269600 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1673140 01	0.1302230 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2524470 01	0.1330660 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.3674460 01	0.1368170 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.4266630 01	0.1323890 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2505540 01	0.1295730 01		
X = 0.15200 01		A = 0.36700 00		B = 0.29800-01		C = 0.31700-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1106100 01	0.1470890 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.1926770 01	0.1499640 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.2905320 01	0.1531400 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.4238590 01	0.1578220 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.4906670 01	0.1522480 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.2838350 01	0.1467850 01		

STRESS ANALYSIS

P_{MAX} = 0.3494750 05

B = 0.7609280 00

P = 0.6265710 05

TOTAL FORCE AT B2

X = 0.0

Y	SIGMA X
0.0	0.3495D 05
0.3805D 00	0.2621D 05
0.7609D 00	-0.0

TOTAL FORCE AT B2

X = 0.7609D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3477D 05	-0.2848D 05	0.0
0.3805D 00	-0.3000D 05	-0.2819D 05	-0.1965D 04
0.7609D 00	-0.5383D 04	-0.2786D 05	-0.5120D 04
0.1141D 01	-0.2890D 02	-0.1443D 05	-0.2423D 03
0.1522D 01	-0.4437D 01	-0.9880D 04	-0.6663D 02

TOTAL FORCE AT B2

X = 0.1522D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3427D 05	-0.2303D 05	0.0
0.3805D 00	-0.2929D 05	-0.2287D 05	-0.3650D 04
0.7609D 00	-0.7397D 04	-0.2423D 05	-0.6694D 04
0.1141D 01	-0.2078D 03	-0.1515D 05	-0.8670D 03
0.1522D 01	-0.3441D 02	-0.1032D 05	-0.2592D 03

TOTAL FORCE AT B2

X = 0.3805D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3126D 05	-0.1194D 05	0.0
0.3805D 00	-0.2602D 05	-0.1302D 05	-0.6143D 04
0.7609D 00	-0.1059D 05	-0.1669D 05	-0.8270D 04
0.1141D 01	-0.1859D 04	-0.1480D 05	-0.3474D 04
0.1522D 01	-0.4406D 03	-0.1097D 05	-0.1355D 04

TOTAL FORCE AT B2

X = 0.5935D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2756D 05	-0.6568D 04	0.0
0.3805D 00	-0.2304D 05	-0.8197D 04	-0.6145D 04
0.7609D 00	-0.1189D 05	-0.1200D 05	-0.8122D 04
0.1141D 01	-0.3864D 04	-0.1269D 05	-0.5056D 04
0.1522D 01	-0.1259D 04	-0.1062D 05	-0.2551D 04

TOTAL FORCE AT B2

X = 0.7609D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2471D 05	-0.4240D 04	0.0
0.3805D 00	-0.2100D 05	-0.5845D 04	-0.5578D 04
0.7609D 00	-0.1229D 05	-0.9212D 04	-0.7534D 04
0.1141D 01	-0.5185D 04	-0.1033D 05	-0.5635D 04
0.1522D 01	-0.2051D 04	-0.9896D 04	-0.3319D 04

TOTAL FORCE AT B2

X = 0.9131D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.22370 05	-0.29330 04	0.0
0.38050 00	-0.19360 05	-0.43690 04	-0.49560 04
0.76090 00	-0.12350 05	-0.74360 04	-0.69930 04
0.11410 01	-0.61090 04	-0.92650 04	-0.57950 04
0.15220 01	-0.27760 04	-0.90730 04	-0.38200 04

TOTAL FORCE AT 82

X = 0.11410 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.19390 05	-0.17770 04	0.0
0.38050 00	-0.17220 05	-0.29040 04	-0.40640 04
0.76090 00	-0.12110 05	-0.53680 04	-0.60530 04
0.11410 01	-0.70450 04	-0.72630 04	-0.56520 04
0.15220 01	-0.37470 04	-0.77580 04	-0.42440 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.8767040 00	0.8753850 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1717410 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.2576570 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.3465250 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.4459940 01	0.1039050 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.6438230 01	0.2500000 01

X = 0.76090-01

A = 0.23650 01

B = 0.54000 00

C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.8647400 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1662850 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.2502100 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.3421370 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.4308640 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.4350820 01	0.1689450 01

X = 0.15220 00

A = 0.21610 01

B = 0.48200 00

C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.8646380 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1640220 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.2473610 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.3424900 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.4243670 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.3670300 01	0.1425200 01

X = 0.38050 00

A = 0.15280 01

B = 0.30600 00

C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.9091610 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1669910 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2527150 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.3594120 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.4301820 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2971730 01	0.1153940 01

X = 0.59350 00

A = 0.95300 00

B = 0.14820 00

C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.366324 05	0.104821 01	0.104664 01
0.598000 05	0.370000 05	0.270000 05	0.655505 05	0.187569 01	0.109616 01
0.883000 05	0.541000 05	0.422000 05	0.989740 05	0.283208 01	0.112088 01
0.125000 06	0.792000 05	0.675000 05	0.142446 06	0.407600 01	0.113957 01
0.150000 06	0.909000 05	0.700000 05	0.167833 06	0.480243 01	0.111889 01
0.900000 05	0.450000 05	0.344520 05	0.105282 06	0.301259 01	0.116980 01

X = 0.7609 00 A = 0.6856 00 B = 0.8550 -01 C = 0.4750 -01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093 05	0.116201 01	0.116027 01
0.598000 05	0.370000 05	0.270000 05	0.717175 05	0.205215 01	0.119929 01
0.883000 05	0.541000 05	0.422000 05	0.108216 06	0.305652 01	0.122554 01
0.125000 06	0.792000 05	0.675000 05	0.156800 06	0.448674 01	0.125440 01
0.150000 06	0.909000 05	0.700000 05	0.183132 06	0.524021 01	0.122088 01
0.900000 05	0.450000 05	0.344520 05	0.110137 06	0.315151 01	0.122375 01

X = 0.9131 00 A = 0.5242 00 B = 0.5380 -01 C = 0.4200 -01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.127150 01	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.222829 01	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.336211 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.489367 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.568232 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.333689 01	0.129573 01

X = 0.1141 00 A = 0.3670 00 B = 0.2980 -01 C = 0.3170 -01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.147310 01	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.256609 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.386932 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.564498 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.653474 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.378013 01	0.146785 01

TIME = 1.9000

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113 03	0.710666 02	0.663941 01	0.532666 02	0.216768 00	0.509454 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.635184 00	0.593326 00	0.804963 00	0.133767 06	0.126331 02	0.111252 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.117107 00	0.186405 03	0.669483 02	0.756917 04	0.145208 05	-0.416666 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.637557 01	0.509454 04	0.225721 04	0.475101 02	0.302272 04	-0.409840 01
SPRIME	APRIME	BPRIME	AAND8	B(T)**2-A(T)**2	BETA PRIME
-0.562500 02	0.279136 04	-0.746933 03	0.164785 08	0.168175 08	0.788736 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.823241 02	-0.860703 02	0.259260 04	0.440192 04	0.854642 03	0.518520 04
BETAD PRIME	F	E	COS(B)-COS(80)	FOIFF	GAMMA
0.148025 00	0.150000 01	0.116982 01	0.250825 -01	0.376238 -01	0.376327 -01

COS(GAMMA)	1--FDIFF**2	SFDTFI	GAMMA PRIME	SIN(GAMMA)	GAMMA PRIME
0.999292D 00	0.998584D 00	0.999292D 00	0.702464D 00	0.376238D-01	0.864944D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.267578D 01	0.636680D 00	0.620249D 00	0.950684D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.310161D 00	0.608178D 00	0.504741D 00	0.154709D 01	0.368119D 00	0.120099D 00
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.872860D 00	0.166719D 01	0.188187D 01	0.143520D 01	0.274129D 01	0.333818D 01
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.155858D 01	0.436815D 00	0.423056D 00	0.906104D 00	0.368970D-01	0.123169D 00
FI3Y(T)	FI4T	FI5T	FR(T)	PHI	SIN(PHI)
0.575070D-01	-0.917529D 00	-0.763947D 00	0.733646D 04	0.319891D-01	0.319836D-01
COS(PHI)	FI0ELTAP)	FITY	AARN	BARN	DARN
0.999488D 00	0.639513D 05	0.432241D-01	-0.594851D 05	0.881016D 05	-0.562829D 04
TAN(LAMBDA)					
-0.369904D 00					

INITIAL VALUE OF LAMBDA = 0.120831D 01

CASE 2

FINAL VALUE OF LAMBDA = 0.130344D 01

BQUAC =	0.281217D 05	CQUAD =	0.197585D 09	TEST =	0.180236D-01
FA	FA*COS(LAMBDA)	FA*SIN(LAMBDA)	F43	F32	F82X
0.144102D 05	0.380691D 04	0.138983D 05	0.692183D 05	0.692153D 05	0.780212D 05
F81X					
0.136561D 06					

STRESS ANALYSIS

PMAX = 0.808000D 05 B = 0.384766D 00 P = 0.144102D 05

L EQUIVALENT = 0.2951D 00	TOTAL FORCE AT JOINT A	X = 0.0
Y	SIGMA X	
0.0	0.8080D 05	
0.1924D 00	0.6060D 05	
0.3848D 00	-0.0	

L EQUIVALENT = 0.2951D 00	TOTAL FORCE AT JOINT A	X = 0.3848D-01			
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.8040D 05	-0.6585D 05	0.0	0.4061D 04	0.4061D 04
0.1924D 00	-0.6937D 05	-0.6517D 05	-0.4544D 04	0.4061D 04	0.8606D 04
0.3848D 00	-0.1244D 05	-0.6442D 05	-0.1184D 05	0.4061D 04	0.1590D 05
0.5771D 00	-0.6681D 02	-0.3336D 05	-0.5602D 03	0.4061D 04	0.4622D 04
0.7695D 00	-0.1026D 02	-0.2284D 05	-0.1540D 03	0.4061D 04	0.4215D 04

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L EQUIVALENT = 0.2951D 00		TOTAL FORCE AT,JOINT A		X = 0.7655D-01		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR	
0.0	-0.7923D 05	-0.5325D 05	0.0	0.4061D 04	0.4061D 04	
0.1924D 00	-0.6772D 05	-0.5289D 05	-0.8439D 04	0.4061D 04	0.1250D 05	
0.3848D 00	-0.1710D 05	-0.5602D 05	-0.1548D 05	0.4061D 04	0.1954D 05	
0.5771D 00	-0.4806D 03	-0.3502D 05	-0.2051D 04	0.4061D 04	0.6112D 04	
0.7655D 00	-0.7956D 02	-0.2387D 05	-0.5993D 03	0.4061D 04	0.4661D 04	

L EQUIVALENT = 0.2951D 00		TOTAL FORCE AT,JOINT A		X = 0.1924D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR	
0.0	-0.7227D 05	-0.2760D 05	0.0	0.4061D 04	0.4061D 04	
0.1924D 00	-0.6017D 05	-0.3011D 05	-0.1420D 05	0.4061D 04	0.1827D 05	
0.3848D 00	-0.2449D 05	-0.3860D 05	-0.1912D 05	0.4061D 04	0.2318D 05	
0.5771D 00	-0.4299D 04	-0.3423D 05	-0.8032D 04	0.4061D 04	0.1209D 05	
0.7695D 00	-0.1019D 04	-0.2536D 05	-0.3133D 04	0.4061D 04	0.7194D 04	

L EQUIVALENT = 0.2951D 00		TOTAL FORCE AT,JOINT A		X = 0.3001D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR	
0.0	-0.6371D 05	-0.1519D 05	0.0	0.4061D 04	0.4061D 04	
0.1924D 00	-0.5327D 05	-0.1895D 05	-0.1421D 05	0.4061D 04	0.1827D 05	
0.3848D 00	-0.2748D 05	-0.2774D 05	-0.1878D 05	0.4061D 04	0.2284D 05	
0.5771D 00	-0.8934D 04	-0.2934D 05	-0.1171D 05	0.4061D 04	0.1577D 05	
0.7695D 00	-0.2910D 04	-0.2454D 05	-0.5898D 04	0.4061D 04	0.9959D 04	

L EQUIVALENT = 0.2951D 00		TOTAL FORCE AT,JOINT A		X = 0.3848D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR	
0.0	-0.5713D 05	-0.9803D 04	0.0	0.4061D 04	0.4061D 04	
0.1924D 00	-0.4856D 05	-0.1351D 03	-0.1290D 05	0.4061D 04	0.1656D 05	
0.3848D 00	-0.2841D 05	-0.2153D 05	-0.1756D 05	0.4061D 04	0.2162D 05	
0.5771D 00	-0.1199D 05	-0.2505D 05	-0.1303D 05	0.4061D 04	0.1709D 05	
0.7695D 00	-0.4742D 04	-0.2288D 05	-0.7673D 04	0.4061D 04	0.1173D 05	

L EQUIVALENT = 0.2951D 00		TOTAL FORCE AT,JOINT A		X = 0.4617D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR	
0.0	-0.5173D 05	-0.6780D 04	0.0	0.4061D 04	0.4061D 04	
0.1924D 00	-0.4476D 05	-0.1010D 05	-0.1146D 05	0.4061D 04	0.1552D 05	
0.3848D 00	-0.2856D 05	-0.1719D 05	-0.1617D 05	0.4061D 04	0.2023D 05	
0.5771D 00	-0.1413D 05	-0.2142D 05	-0.1340D 05	0.4061D 04	0.1746D 05	
0.7695D 00	-0.6417D 04	-0.2098D 05	-0.8833D 04	0.4061D 04	0.1289D 05	

L EQUIVALENT = 0.2951D 00		TOTAL FORCE AT,JOINT A		X = 0.5771D 00		
Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR	
0.0	-0.4482D 05	-0.4109D 04	0.0	0.4061D 04	0.4061D 04	
0.1924D 00	-0.3981D 05	-0.6715D 04	-0.9397D 04	0.4061D 04	0.1346D 05	
0.3848D 00	-0.2799D 05	-0.1241D 05	-0.1399D 05	0.4061D 04	0.1806D 05	
0.5771D 00	-0.1629D 05	-0.1679D 05	-0.1307D 05	0.4061D 04	0.1713D 05	
0.7695D 00	-0.8662D 04	-0.1794D 05	-0.9813D 04	0.4061D 04	0.1387D 05	

X = 0.0	A = 0.25600 01	B = 0.60000 00	C = 0.0
SIGMA S	TAU S	TAU N	SIGMA G
0.350000 05	0.242000 05	0.157000 05	0.306386 05
0.598000 05	0.370000 05	0.270000 05	0.600193 05
0.883000 05	0.541000 05	0.422000 05	0.900445 05
0.125000 06	0.792000 05	0.675000 05	0.121102 06
0.150000 06	0.909000 05	0.700000 05	0.155864 06
0.900000 05	0.450000 05	0.344520 05	0.225000 06
MARGIN OF SAFETY	K		
0.379191 00	0.875385 00		
0.742813 00	0.100367 01		
0.111441 01	0.101976 01		
0.149879 01	0.968815 00		
0.192901 01	0.103909 01		
0.278465 01	0.250000 01		
X = 0.38480-01	A = 0.23650 01	B = 0.54000 00	C = 0.21300-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000 05	0.242000 05	0.157000 05	0.302205 05
0.598000 05	0.370000 05	0.270000 05	0.581125 05
0.883000 05	0.541000 05	0.422000 05	0.874420 05
0.125000 06	0.792000 05	0.675000 05	0.119568 06
0.150000 06	0.909000 05	0.700000 05	0.150576 06
0.900000 05	0.450000 05	0.344520 05	0.152050 06
MARGIN OF SAFETY	K		
0.374016 00	0.863442 00		
0.719214 00	0.971780 00		
0.108220 01	0.990283 00		
0.147981 01	0.956547 00		
0.186357 01	0.100384 01		
0.188181 01	0.168945 01		
X = 0.76950-01	A = 0.21610 01	B = 0.48200 00	C = 0.38000-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000 05	0.242000 05	0.157000 05	0.302169 05
0.598000 05	0.370000 05	0.270000 05	0.573215 05
0.883000 05	0.541000 05	0.422000 05	0.864463 05
0.125000 06	0.792000 05	0.675000 05	0.119692 06
0.150000 06	0.909000 05	0.700000 05	0.148305 06
0.900000 05	0.450000 05	0.344520 05	0.128268 06
MARGIN OF SAFETY	K		
0.373972 00	0.863341 00		
0.709425 00	0.958554 00		
0.106988 01	0.979007 00		
0.148133 01	0.957534 00		
0.183546 01	0.988703 00		
0.158747 01	0.142520 01		
X = 0.19240 00	A = 0.15280 01	B = 0.30600 00	C = 0.65500-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000 05	0.242000 05	0.157000 05	0.317729 05
0.598000 05	0.370000 05	0.270000 05	0.583593 05
0.883000 05	0.541000 05	0.422000 05	0.883176 05
0.125000 06	0.792000 05	0.675000 05	0.125605 06
0.150000 06	0.909000 05	0.700000 05	0.150338 06
0.900000 05	0.450000 05	0.344520 05	0.103855 06
MARGIN OF SAFETY	K		
0.393229 00	0.907797 00		
0.722268 00	0.975907 00		
0.109304 01	0.100020 01		
0.155452 01	0.100484 01		
0.186061 01	0.100225 01		
0.128533 01	0.115394 01		
X = 0.30010 00	A = 0.95300 00	B = 0.14820 00	C = 0.54300-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000 05	0.242000 05	0.157000 05	0.366324 05
0.598000 05	0.370000 05	0.270000 05	0.655505 05
0.883000 05	0.541000 05	0.422000 05	0.989740 05
0.125000 06	0.792000 05	0.675000 05	0.142446 06
0.150000 06	0.909000 05	0.700000 05	0.167833 06
0.900000 05	0.450000 05	0.344520 05	0.105282 06
MARGIN OF SAFETY	K		
0.453371 00	0.104664 01		
0.811270 00	0.109616 01		
0.122493 01	0.112088 01		
0.176295 01	0.113957 01		
0.207714 01	0.111889 01		
0.130300 01	0.116980 01		
X = 0.38480 00	A = 0.68560 00	B = 0.85500-01	C = 0.47500-01
SIGMA S	TAU S	TAU N	SIGMA G
0.350000 05	0.242000 05	0.157000 05	0.406093 05
0.598000 05	0.370000 05	0.270000 05	0.717175 05
0.883000 05	0.541000 05	0.422000 05	0.108216 06
0.125000 06	0.792000 05	0.675000 05	0.156800 06
0.150000 06	0.909000 05	0.700000 05	0.183132 06
0.900000 05	0.450000 05	0.344520 05	0.110137 06
MARGIN OF SAFETY	K		
0.502591 00	0.116027 01		
0.887593 00	0.119929 01		
0.133930 01	0.122554 01		
0.194060 01	0.125440 01		
0.226649 01	0.122088 01		
0.136309 01	0.122375 01		
X = 0.46170 00	A = 0.52420 00	B = 0.53800-01	C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359 05	0.549949 00	0.126960 01
0.598000 05	0.370000 05	0.270000 05	0.778732 05	0.963778 00	0.130223 01
0.883000 05	0.541000 05	0.422000 05	0.117497 06	0.145417 01	0.133066 01
0.125000 06	0.792000 05	0.675000 05	0.171021 06	0.211660 01	0.136817 01
0.150000 06	0.909000 05	0.700000 05	0.198583 06	0.245771 01	0.132389 01
0.900000 05	0.450000 05	0.344520 05	0.116616 06	0.143270 01	0.129573 01

X = 0.57710 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.637145 00	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.396783 05	0.110988 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.167355 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.244156 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.282639 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.163498 01	0.146785 01

STRESS ANALYSIS
 PMAX = 0.557706 05 B = 0.526751 00 P = 0.692183 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.55770 05
0.26340 00	0.41830 05
0.52680 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.52680-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.55490 05	-0.45450 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.47980 05	-0.44980 05	-0.31370 04	0.28030 04	0.59400 04
0.52680 00	-0.85900 04	-0.44460 05	-0.81710 04	0.28030 04	0.10570 05
0.79010 00	-0.46110 02	-0.23030 05	-0.38670 03	0.28030 04	0.31500 04
0.10540 01	-0.70810 01	-0.15710 05	-0.10630 03	0.28030 04	0.29100 04

TOTAL FORCE AT JOINT 2 X = 0.10540 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.54690 05	-0.35750 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.46740 05	-0.35500 05	-0.58250 04	0.28030 04	0.86280 04
0.52680 00	-0.11800 05	-0.33670 05	-0.10680 05	0.28030 04	0.13490 05
0.79010 00	-0.33170 03	-0.24170 05	-0.14160 04	0.28030 04	0.42190 04
0.10540 01	-0.54910 02	-0.15470 05	-0.41360 03	0.28030 04	0.32170 04

TOTAL FORCE AT JOINT 2 X = 0.26340 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.45880 05	-0.19050 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.41530 05	-0.20780 05	-0.98040 04	0.28030 04	0.12610 05
0.52680 00	-0.16500 05	-0.26640 05	-0.13200 05	0.28030 04	0.16000 05
0.79010 00	-0.29670 04	-0.23620 05	-0.55440 04	0.28030 04	0.83470 04
0.10540 01	-0.70220 03	-0.17500 05	-0.21620 04	0.28030 04	0.49660 04

TOTAL FORCE AT JOINT 2

X = 0.41090 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.43980 05	-0.10480 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.36770 05	-0.13080 05	-0.98060 04	0.28030 04	0.12610 05
0.52680 00	-0.18570 05	-0.19140 05	-0.12960 05	0.28030 04	0.15760 05
0.79010 00	-0.61660 04	-0.20250 05	-0.80840 04	0.28030 04	0.10890 05
0.10540 01	-0.20090 04	-0.16940 05	-0.40710 04	0.28030 04	0.68740 04

TOTAL FORCE AT JOINT 2

X = 0.52680 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.39440 05	-0.67660 04	0.0	0.28030 04	0.28030 04
0.26340 00	-0.33520 05	-0.93280 04	-0.89010 04	0.28030 04	0.11700 05
0.52680 00	-0.19610 05	-0.14860 05	-0.12120 05	0.28030 04	0.14920 05
0.79010 00	-0.82750 04	-0.17290 05	-0.89930 04	0.28030 04	0.11800 05
0.10540 01	-0.32730 04	-0.15790 05	-0.52960 04	0.28030 04	0.80990 04

TOTAL FORCE AT JOINT 2

X = 0.63210 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.35700 05	-0.46800 04	0.0	0.28030 04	0.28030 04
0.26340 00	-0.30890 05	-0.69730 04	-0.79090 04	0.28030 04	0.10710 05
0.52680 00	-0.19710 05	-0.11870 05	-0.11160 05	0.28030 04	0.13960 05
0.79010 00	-0.97500 04	-0.14790 05	-0.92490 04	0.28030 04	0.12050 05
0.10540 01	-0.44290 04	-0.14480 05	-0.60970 04	0.28030 04	0.89000 04

TOTAL FORCE AT JOINT 2

X = 0.79010 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.30540 05	-0.28360 04	0.0	0.28030 04	0.28030 04
0.26340 00	-0.27480 05	-0.46350 04	-0.64860 04	0.28030 04	0.92890 04
0.52680 00	-0.19320 05	-0.85660 04	-0.96600 04	0.28030 04	0.12460 05
0.79010 00	-0.11240 05	-0.11590 05	-0.90190 04	0.28030 04	0.11820 05
0.10540 01	-0.59790 04	-0.12380 05	-0.67730 04	0.28030 04	0.95760 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.5493690 00	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1076180 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.1614550 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.2171430 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.2794730 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.4034390 01	0.2500000 01

X = 0.52680-01

A = 0.23650 01

B = 0.54000 00

C = 0.21300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.5418710 0C	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1041990 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.1567890 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2143930 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.2699920 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.2726350 01	0.1689450 01
X = 0.10540 00 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.5418080 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1027810 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1550030 01	0.9750070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2146150 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.2659210 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.2299920 01	0.1425200 01
X = 0.26340 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.5697070 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1046420 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1583590 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2252180 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.2695640 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.1862170 01	0.1153940 01
X = 0.41090 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.6568400 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1175360 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.1774660 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.2554140 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3009350 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.1887780 01	0.1169800 01
X = 0.52680 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.7281500 0C	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1285940 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.1940370 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.2811520 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.3283670 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.1974830 01	0.1223750 01
X = 0.63210 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.7967620 00	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1396310 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2106790 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.3066520 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.3560710 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2691000 01	0.1295730 01
X = 0.79010 00 A = 0.36700 00 B = 0.25800-01 C = 0.31700-01					

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813 05	0.923090 00	0.147089 01
0.598000 05	0.370000 05	0.270000 05	0.896783 05	0.160799 01	0.149964 01
0.883000 05	0.541000 05	0.422000 05	0.135223 06	0.242463 01	0.153140 01
0.125000 06	0.792000 05	0.675000 05	0.197278 06	0.353731 01	0.157822 01
0.150000 06	0.909000 05	0.700000 05	0.228373 06	0.409486 01	0.152248 01
0.900000 05	0.450000 05	0.344520 05	0.132106 06	0.236874 01	0.146785 01

STRESS ANALYSIS
 PMAX = 0.557694 05 B = 0.526740 00 P = 0.692153 05

TOTAL FORCE AT JOINT 3 X = 0.0

Y	SIGMA X
0.0	0.55770 05
0.26340 00	0.41830 05
0.52670 00	-0.0

TOTAL FORCE AT JOINT 3 X = 0.52670-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.55490 05	-0.45450 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.47880 05	-0.44980 05	-0.31360 04	0.28030 04	0.59400 04
0.52670 00	-0.85900 04	-0.44460 05	-0.81710 04	0.28030 04	0.10970 05
0.79010 00	-0.46110 02	-0.23030 05	-0.38670 03	0.28030 04	0.31900 04
0.10530 01	-0.70800 01	-0.15770 05	-0.10630 03	0.28030 04	0.29100 04

TOTAL FORCE AT JOINT 3 X = 0.10530 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.54690 05	-0.36750 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.46740 05	-0.36500 05	-0.58250 04	0.28030 04	0.86280 04
0.52670 00	-0.11800 05	-0.38670 05	-0.10680 05	0.28030 04	0.13490 05
0.79010 00	-0.33170 03	-0.24170 05	-0.14160 04	0.28030 04	0.42190 04
0.10530 01	-0.54910 02	-0.16470 05	-0.41360 03	0.28030 04	0.32170 04

TOTAL FORCE AT JOINT 3 X = 0.26340 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.45880 05	-0.19050 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.41530 05	-0.20780 05	-0.98040 04	0.28030 04	0.12610 05
0.52670 00	-0.16900 05	-0.26640 05	-0.13200 05	0.28030 04	0.16000 05
0.79010 00	-0.29670 04	-0.23620 05	-0.55440 04	0.28030 04	0.83470 04
0.10530 01	-0.70220 03	-0.17500 05	-0.21620 04	0.28030 04	0.49660 04

TOTAL FORCE AT JOINT 3 X = 0.41090 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.43570 05	-0.10480 05	0.0	0.28030 04	0.28030 04
0.26340 00	-0.36770 05	-0.13080 05	-0.98060 04	0.28030 04	0.12610 05
0.52670 00	-0.18970 05	-0.19140 05	-0.12960 05	0.28030 04	0.15760 05
0.79010 00	-0.61660 04	-0.20250 05	-0.80840 04	0.28030 04	0.10890 05
0.10530 01	-0.20090 04	-0.16940 05	-0.40710 04	0.28030 04	0.68740 04

TOTAL FORCE AT JOINT 3 X = 0.52670 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3943D 05	-0.6766D 04	0.0	0.2803D 04	0.2803D 04
0.2634D 00	-0.3352D 05	-0.9328D 04	-0.8901D 04	0.2803D 04	0.1170D 05
0.5257D 00	-0.1961D 05	-0.1486D 05	-0.1212D 05	0.2803D 04	0.1492D 05
0.7931D 00	-0.8275D 04	-0.1729D 05	-0.8993D 04	0.2803D 04	0.1180D 05
0.1053D 01	-0.3273D 04	-0.1579D 05	-0.5296D 04	0.2803D 04	0.8099D 04

TOTAL FORCE AT JOINT 3 X = 0.6321D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3570D 05	-0.4680D 04	0.0	0.2803D 04	0.2803D 04
0.2634D 00	-0.3089D 05	-0.6973D 04	-0.7909D 04	0.2803D 04	0.1071D 05
0.5257D 00	-0.1971D 05	-0.1187D 05	-0.1116D 05	0.2803D 04	0.1396D 05
0.7931D 00	-0.9749D 04	-0.1478D 05	-0.9248D 04	0.2803D 04	0.1205D 05
0.1053D 01	-0.4429D 04	-0.1448D 05	-0.6097D 04	0.2803D 04	0.8900D 04

TOTAL FORCE AT JOINT 3 X = 0.7901D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3094D 05	-0.2836D 04	0.0	0.2803D 04	0.2803D 04
0.2634D 00	-0.2747D 05	-0.4635D 04	-0.6486D 04	0.2803D 04	0.9289D 04
0.5257D 00	-0.1932D 05	-0.8566D 04	-0.9660D 04	0.2803D 04	0.1246D 05
0.7931D 00	-0.1124D 05	-0.1159D 05	-0.9019D 04	0.2803D 04	0.1182D 05
0.1053D 01	-0.5979D 04	-0.1238D 05	-0.6773D 04	0.2803D 04	0.9576D 04

K = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU M	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.549381D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.107620D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.161459D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.217148D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.279479D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.345200D 05	0.225030D 06	0.403447D 01	0.250000D 01

X = 0.5267D -01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D -01

SIGMA S	TAU S	TAU M	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.541883D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.104201D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.156792D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119558D 06	0.214398D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.269998D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.345200D 05	0.152050D 06	0.272641D 01	0.168945D 01

X = 0.1053D 00 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D -01

SIGMA S	TAU S	TAU M	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.541820D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.102783D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.155007D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.214619D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.265926D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.345200D 05	0.128268D 06	0.229997D 01	0.142520D 01

X = 0.2634D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D -01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.5697200 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1046440 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1583620 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2252230 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.2695700 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.1862220 01	0.1153940 01

X = 0.41090 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.6568550 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1175390 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.1774700 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.2554200 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3009410 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.1887820 01	0.1169800 01

X = 0.52670 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.7281660 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1285970 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.1940410 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.2811580 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.3283740 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.1974870 01	0.1223750 01

X = 0.63210 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.7967790 00	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1396340 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2106840 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.3066580 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.3560790 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2091040 01	0.1295730 01

X = 0.79010 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.9231100 00	0.1470890 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.1608020 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.2424680 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.3537390 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.4094950 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.2368790 01	0.1467850 01

STRESS ANALYSIS
P_{MAX} = 0.5159350 05 B = 0.1123370 01 P = 0.1365610 06

TOTAL FORCE AT B1 X = 0.0

Y	SIGMA X
0.0	0.51590 05
0.56170 00	0.38700 05
0.11230 01	-0.0

	TOTAL FORCE AT B1		X = 0.11230 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.51340 05	-0.42050 05	0.0
0.55170 C0	-0.44290 05	-0.41610 05	-0.29020 04
0.11230 C1	-0.79460 04	-0.41130 05	-0.75590 04
0.15850 C1	-0.42660 02	-0.21300 05	-0.35770 03
0.22470 C1	-0.65500 01	-0.14590 05	-0.98360 02

	TOTAL FORCE AT B1		X = 0.22470 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.50590 05	-0.34000 05	0.0
0.55170 C0	-0.43240 05	-0.33770 05	-0.53890 04
0.11230 C1	-0.10920 05	-0.35770 05	-0.98830 04
0.15850 C1	-0.30680 03	-0.22360 05	-0.13100 04
0.22470 C1	-0.50800 02	-0.15240 05	-0.38270 03

	TOTAL FORCE AT B1		X = 0.56170 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.46150 05	-0.17630 05	0.0
0.55170 C0	-0.38420 05	-0.19230 05	-0.90700 04
0.11230 C1	-0.15640 05	-0.24650 05	-0.12210 05
0.15850 C1	-0.27450 04	-0.21850 05	-0.51290 04
0.22470 C1	-0.65050 03	-0.16190 05	-0.20000 04

	TOTAL FORCE AT B1		X = 0.87620 00
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.40680 05	-0.96970 04	0.0
0.55170 C0	-0.34020 05	-0.12100 05	-0.90720 04
0.11230 C1	-0.17550 05	-0.17710 05	-0.11990 05
0.15850 C1	-0.57040 04	-0.18730 05	-0.74790 04
0.22470 C1	-0.18580 04	-0.15670 05	-0.37660 04

	TOTAL FORCE AT B1		X = 0.11230 01
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.36480 05	-0.62590 04	0.0
0.55170 C0	-0.31010 05	-0.86290 04	-0.82340 04
0.11230 C1	-0.18140 05	-0.13750 05	-0.11210 05
0.15850 C1	-0.76550 04	-0.15990 05	-0.83200 04
0.22470 C1	-0.30280 04	-0.14610 05	-0.48990 04

	TOTAL FORCE AT B1		X = 0.13480 01
Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.33030 05	-0.43290 04	0.0
0.55170 C0	-0.28580 05	-0.64510 04	-0.73170 04
0.11230 C1	-0.18230 05	-0.10980 05	-0.10320 05
0.15850 C1	-0.90190 04	-0.13680 05	-0.85560 04
0.22470 C1	-0.40980 04	-0.13390 05	-0.56400 04

TOTAL FORCE AT B1

X = 0.1685D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2862D 05	-0.2624D 04	0.0
0.5617D 00	-0.2542D 05	-0.4288D 04	-0.6000D 04
0.1123D 01	-0.1787D 05	-0.7924D 04	-0.8936D 04
0.1685D 01	-0.1040D 05	-0.1072D 05	-0.8343D 04
0.2247D 01	-0.5531D 04	-0.1145D 05	-0.6266D 04

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.593847D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.116331D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.174527D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.234723D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.302100D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.436102D 01	0.250000D 01

K = 0.1123D 00 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.585742D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.112635D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.169483D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.231751D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.291851D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.294708D 01	0.168945D 01

X = 0.2247D 00 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.585673D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.111102D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.167553D 01	0.975007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.231990D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.287450D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.248613D 01	0.142520D 01

X = 0.5617D 00 A = 0.1528D 01 B = 0.3060D 00 C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.615832D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.113114D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.171180D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.243452D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.291389D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.201294D 01	0.115394D 01

X = 0.8762D 00 A = 0.9530D 00 B = 0.1482D 00 C = 0.5430D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.710019D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.127052D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.191834D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.276093D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.325299D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.204061D 01	0.116980D 01

X = 0.1123D 01 A = 0.6856D 00 B = 0.8550D-01 C = 0.4750D-01

		COMMON BLOCK /TABLE1 / MAP SIZE 78					
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
R1	0	R2	28	LL	50		

		COMMON BLOCK /JUNK / MAP SIZE 50					
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
AARN	0	C	8	MU	10	COSPHI	18
W2	28	FI2YT	30	FDELPT	38	FI2XT	40
						BETA	20
						FI2T	48

		SCALAR MAP					
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
MRB2	08	ABSOLT	E0	LAMBDA	E8	Q	F0
S1	100	S2	108	BNUM	110	DENOM	118
S4	128	CNUM	130	BQUAD	138	CQUAD	140
						Z	F8
						S3	120
						N	148

		SUBPROGRAMS CALLED					
SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
DSIN	14C	DCOS	150				

TOTAL MEMORY REQUIREMENTS 00061C BYTES

TOTAL FORCE AT B2

X = 0.42460 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.34880 05	-0.13320 05	0.0
0.42460 00	-0.29040 05	-0.14530 05	-0.68550 04
0.84910 00	-0.11820 05	-0.18630 05	-0.92280 04
0.12740 01	-0.20750 04	-0.16520 05	-0.38770 04
0.16980 01	-0.49170 03	-0.12240 05	-0.15120 04

TOTAL FORCE AT B2

X = 0.66230 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.30750 05	-0.73300 04	0.0
0.42460 00	-0.25710 05	-0.91460 04	-0.68570 04
0.84910 00	-0.13260 05	-0.13390 05	-0.90630 04
0.12740 01	-0.43120 04	-0.14160 05	-0.56530 04
0.16980 01	-0.14050 04	-0.11850 05	-0.28470 04

TOTAL FORCE AT B2

X = 0.84910 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.27580 05	-0.47310 04	0.0
0.42460 00	-0.23440 05	-0.65220 04	-0.62240 04
0.84910 00	-0.13710 05	-0.10390 05	-0.84740 04
0.12740 01	-0.57860 04	-0.12090 05	-0.62880 04
0.16980 01	-0.22890 04	-0.11040 05	-0.37030 04

TOTAL FORCE AT B2

X = 0.10190 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.24970 05	-0.32720 04	0.0
0.42460 00	-0.21600 05	-0.48760 04	-0.55310 04
0.84910 00	-0.13780 05	-0.82980 04	-0.78030 04
0.12740 01	-0.68170 04	-0.10340 05	-0.64670 04
0.16980 01	-0.30970 04	-0.10120 05	-0.42630 04

TOTAL FORCE AT B2

X = 0.12740 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.21630 05	-0.19830 04	0.0
0.42460 00	-0.19210 05	-0.32410 04	-0.45350 04
0.84910 00	-0.13510 05	-0.59900 04	-0.67550 04
0.12740 01	-0.78620 04	-0.81040 04	-0.63060 04
0.16980 01	-0.41810 04	-0.86570 04	-0.47360 04

X = 0.0

A = 0.25600 01

B = 0.60000 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3063860 05	0.7856550 00	0.8753890 00
0.5980000 05	0.3700000 05	0.2700000 05	0.6001930 05	0.1539050 01	0.1003670 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9004450 05	0.2308980 01	0.1019760 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1211020 06	0.3105370 01	0.9688150 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1558640 06	0.3996760 01	0.1039090 01
0.9000000 05	0.4500000 05	0.3445200 05	0.2250000 06	0.5769600 01	0.2500000 01

X = 0.8491D-01		A = 0.2365D 01		B = 0.5400D 00		C = 0.2130D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.774933D 00	0.863442D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.149016D 01	0.971780D 00		
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.224224D 01	0.990283D 00		
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.306605D 01	0.956547D 00		
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.386117D 01	0.100384D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.389897D 01	0.168945D 01		

X = 0.1698D 00		A = 0.2161D 01		B = 0.4820D 00		C = 0.3800D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.774842D 00	0.863341D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.146987D 01	0.958554D 00		
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.221671D 01	0.979007D 00		
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.306921D 01	0.957534D 00		
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.380294D 01	0.988703D 00		
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.328913D 01	0.142520D 01		

X = 0.4246D 00		A = 0.1528D 01		B = 0.3060D 00		C = 0.6550D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.814741D 00	0.907797D 00		
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.149649D 01	0.975907D 00		
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.226470D 01	0.100020D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.322085D 01	0.100484D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.385505D 01	0.100225D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.266311D 01	0.115394D 01		

X = 0.6623D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.935351D 00	0.104664D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.655503D 05	0.168089D 01	0.109616D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.989743D 05	0.253795D 01	0.112088D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.142445D 06	0.365265D 01	0.113957D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.430368D 01	0.111889D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.265972D 01	0.116980D 01		

X = 0.8491D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.406093D 05	0.104133D 01	0.116027D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.717175D 05	0.183903D 01	0.119929D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.108215D 06	0.277493D 01	0.122554D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.156800D 06	0.402077D 01	0.125440D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.183132D 06	0.469600D 01	0.122088D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.110137D 06	0.282421D 01	0.122375D 01		

X = 0.1019D 01		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.350000D 05	0.242000D 05	0.157000D 05	0.444359D 05	0.113945D 01	0.126960D 01		
0.598000D 05	0.370000D 05	0.270000D 05	0.778732D 05	0.199688D 01	0.130223D 01		
0.883000D 05	0.541000D 05	0.422000D 05	0.117497D 06	0.301294D 01	0.133066D 01		
0.125000D 06	0.792000D 05	0.675000D 05	0.171021D 06	0.438544D 01	0.136817D 01		
0.150000D 06	0.909000D 05	0.700000D 05	0.198583D 06	0.509219D 01	0.132389D 01		
0.900000D 05	0.450000D 05	0.344520D 05	0.116616D 06	0.299034D 01	0.129573D 01		

X = 0.1274D 01 A = 0.3670D 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.514813D 05	0.132012D 01	0.147089D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.896783D 05	0.229959D 01	0.149964D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.135223D 06	0.346747D 01	0.153140D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.197278D 06	0.505873D 01	0.157822D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.228373D 06	0.585608D 01	0.152248D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.132106D 06	0.338755D 01	0.146785D 01

TIME = 1.9400

AREA	T	S(T)	R(T)	Z(T)	S**2 + T**2
0.432113D 03	0.710666D 02	0.432180D 01	0.531272D 02	0.450932D-01	0.506913D 04
BETA	SIN(BETA)	COS(BETA)	A(T)	EBAR(T)	MU*2EBAR+L
0.667736D 00	0.619210D 00	0.785226D 00	0.148652D 06	0.128048D 02	0.112351D 01
D(T)	FS(T)	P(T)	FP(T)	B(T)	ZPRIME
0.118264D 00	0.176105D 03	0.857875D 02	0.969913D 04	0.172311D 05	-0.441442D 01
ZDPRIME	B(T)	B(T)-R(T)**2	SQRT(B(T)-R(T)**2)	A(T)-2	RPRIME
-0.597462D 01	0.506913D 04	0.224664D 04	0.473987D 02	0.313886D 04	-0.282641D 01
SPRIME	APRIME	BPRIME	AANDB	B(T)**2-A(T)**2	BETA PRIME
-0.595947D 02	0.301729D 04	-0.515112D 03	0.169119D 08	0.158437D 08	0.838167D 00
RDPRIME	SDPRIME	SFUNC	RFUNC	ADPRIME	BDPRIME
0.856340D 02	-0.806574D 02	0.320294D 04	0.455748D 04	0.153952D 04	0.640588D 04
BETAD PRIME	F	E	COS(B)-COS(B0)	FDIFF	GAMMA
0.1145E7D 00	0.150000D 01	0.116982D 01	0.534576D-02	0.801864D-02	0.801872D-02
COS(GAMMA)	1 - FDIFF**2	SFDIF1	GAMMA PRIME	SIN(GAMMA)	GAMMA PRIME
0.999968D 00	0.999936D 00	0.999968D 00	0.778526D 00	0.801864D-02	0.929059D 00
G**2 + H**2	GH212	AN2	AT2	DEL	SIN(BETA+DEL)
0.185000D 02	0.430116D 01	0.302167D 01	0.492857D 00	0.620249D 00	0.960275D 00
COS(BETA+DEL)	W2/386.4	FI2XN(T)	FI2YN(T)	FI2XT(T)	FI2YT(T)
0.279056D 00	0.608178D 00	0.512825D 00	0.176471D 01	0.287838D 00	0.836457D-01
FI2X(T)	FI2Y(T)	FI2T	A2X(T)	A2Y(T)	A3X(T)
0.800663D 00	0.184835D 01	0.201432D 01	0.131649D 01	0.303917D 01	0.339587D 01
A3Y(T)	THETA	SIN(THETA)	COS(THETA)	W3/386.4	FI3X(T)
0.165872D 01	0.454365D 00	0.438892D 00	0.898540D 00	0.368970D-01	0.125298D 00
FI3Y(T)	FI4T	FIST	FRIT)	PHI	SIN(PHI)
0.612016D-01	-0.859826D 00	-0.715904D 00	0.947672D 04	0.319891D-01	0.319836D-01
COS(PHI)	F(DELTA)	FITY	AARN	BARN	CARN
0.999488D 00	0.681463D 05	0.333826D 00	-0.731059D 05	0.103525D 06	-0.684940D 04
TAN(LAMBDA)					
-0.385410D 00					

INITIAL VALUE OF LAMBDA = 0.129078D 01

CASE 2

FINAL VALUE OF LAMBDA = 0.136826D 01

BQUAD = 0.332355D 05 CQUAD = 0.276018D 09 TEST = -0.325807D-01

FA 0.169814D 05 FA*COS(LAMBDA) 0.341584D 04 FA*SIN(LAMBDA) 0.166343D 05 F43 0.735257D 05 F32 0.735223D 05 FB2X 0.850967D 05
FB1X 0.143093D 06

STRESS ANALYSIS
PMAX = 0.853451D 05 B = 0.406409D 00 P = 0.169814D 05

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.0

Y	SIGMA X
0.0	0.8535D 05
0.2032D 00	0.6401D 05
0.4064D 00	-0.0

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.4064D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.8492D 05	-0.6955D 05	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.7327D 05	-0.6883D 05	-0.4800D 04	0.4290D 04	0.9090D 04
0.4064D 00	-0.1314D 05	-0.6804D 05	-0.1250D 05	0.4290D 04	0.1679D 05
0.6096D 00	-0.7057D 02	-0.3524D 05	-0.5918D 03	0.4290D 04	0.4882D 04
0.8128D 00	-0.1084D 02	-0.2413D 05	-0.1627D 03	0.4290D 04	0.4453D 04

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.8128D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.8369D 05	-0.5624D 05	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.7153D 05	-0.5586D 05	-0.8914D 04	0.4290D 04	0.1320D 05
0.4064D 00	-0.1806D 05	-0.5917D 05	-0.1635D 05	0.4290D 04	0.2064D 05
0.6096D 00	-0.5076D 03	-0.3699D 05	-0.2166D 04	0.4290D 04	0.6456D 04
0.8128D 00	-0.8403D 02	-0.2521D 05	-0.6330D 03	0.4290D 04	0.4923D 04

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.2032D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.7633D 05	-0.2916D 05	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.6355D 05	-0.3180D 05	-0.1500D 05	0.4290D 04	0.1929D 05
0.4064D 00	-0.2537D 05	-0.4077D 05	-0.2020D 05	0.4290D 04	0.2449D 05
0.6096D 00	-0.4541D 04	-0.3615D 05	-0.8484D 04	0.4290D 04	0.1277D 05
0.8128D 00	-0.1076D 04	-0.2678D 05	-0.3309D 04	0.4290D 04	0.7599D 04

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.3170D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6729D 05	-0.16C4D 05	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.5627D 05	-0.2002D 05	-0.1501D 05	0.4290D 04	0.1930D 05
0.4064D 00	-0.2903D 05	-0.2930D 05	-0.1983D 05	0.4290D 04	0.2412D 05
0.6096D 00	-0.9436D 04	-0.3099D 05	-0.1237D 05	0.4290D 04	0.1666D 05
0.8128D 00	-0.3074D 04	-0.2592D 05	-0.6230D 04	0.4290D 04	0.1052D 05

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.4064D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.6035D 05	-0.1035D 05	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.5129D 05	-0.1427D 05	-0.1362D 05	0.4290D 04	0.1791D 05
0.4064D 00	-0.3001D 05	-0.2274D 05	-0.1854D 05	0.4290D 04	0.2283D 05
0.6096D 00	-0.1266D 05	-0.2645D 05	-0.1376D 05	0.4290D 04	0.1805D 05
0.8128D 00	-0.5009D 04	-0.2417D 05	-0.8104D 04	0.4290D 04	0.1239D 05

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.4877D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5464D 05	-0.7162D 04	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.4728D 05	-0.1067D 05	-0.1210D 05	0.4290D 04	0.1639D 05
0.4064D 00	-0.3016D 05	-0.1816D 05	-0.1708D 05	0.4290D 04	0.2137D 05
0.6096D 00	-0.1492D 05	-0.2263D 05	-0.1415D 05	0.4290D 04	0.1844D 05
0.8128D 00	-0.6778D 04	-0.2216D 05	-0.9330D 04	0.4290D 04	0.1362D 05

L EQUIVALENT = 0.3117D 00 TOTAL FORCE AT JOINT A X = 0.6056D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4734D 05	-0.4340D 04	0.0	0.4290D 04	0.4290D 04
0.2032D 00	-0.4205D 05	-0.7093D 04	-0.9926D 04	0.4290D 04	0.1422D 05
0.4064D 00	-0.2956D 05	-0.1311D 05	-0.1478D 05	0.4290D 04	0.1907D 05
0.6096D 00	-0.1721D 05	-0.1774D 05	-0.1380D 05	0.4290D 04	0.1809D 05
0.8128D 00	-0.9150D 04	-0.1894D 05	-0.1036D 05	0.4290D 04	0.1465D 05

X = 0.0 A = 0.2560D 01 B = 0.6000D 00 C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.358997D 00	0.875385D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.703254D 00	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.105506D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.141897D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.182628D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.263636D 01	0.250000D 01

X = 0.4064D-01 A = 0.2365D 01 B = 0.5400D 00 C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.354098D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.680912D 00	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.102457D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.140100D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.176432D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.178159D 01	0.168945D 01

X = 0.8128D-01 A = 0.2161D 01 B = 0.4820D 00 C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.3540560 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.6716440 00	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1012900 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.1402450 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.1737720 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.1502930 01	0.1425200 01
X = 0.20320 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.3722870 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.6838030 00	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1034830 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.1471740 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.1761530 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1033550 06	0.1216880 01	0.1153940 01
X = 0.31700 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.4292260 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.7680650 00	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.1159690 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.1669060 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.1966520 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.1233610 01	0.1169800 01
X = 0.40640 00 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.4758250 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.8403240 00	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.1267980 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.1837250 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.2145790 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.1290490 01	0.1223750 01
X = 0.48770 00 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.5206610 00	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.9124510 00	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.1376730 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.2003880 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.2326820 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.1366410 01	0.1295730 01
X = 0.60960 00 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01					
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.6032130 00	0.1470890 01
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.1050770 01	0.1499640 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.1584430 01	0.1531400 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.2311530 01	0.1578220 01
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.2675870 01	0.1522480 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.1547910 01	0.1467850 01

STRESS ANALYSIS
 PMAX = 0.574796D 05 B = 0.542893D 00 P = 0.735257D 05

TOTAL FORCE AT JOINT 2 X = 0.0

Y	SIGMA X
0.0	0.5748D 05
0.2714D 00	0.4311D 05
0.5429D 00	-0.0

TOTAL FORCE AT JOINT 2 X = 0.5429D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5719D 05	-0.4684D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.4935D 05	-0.4636D 05	-0.3233D 04	0.2889D 04	0.6122D 04
0.5429D 00	-0.8853D 04	-0.4582D 05	-0.8421D 04	0.2889D 04	0.1131D 05
0.8143D 00	-0.4753D 02	-0.2373D 05	-0.3985D 03	0.2889D 04	0.3288D 04
0.1086D 01	-0.7298D 01	-0.1625D 05	-0.1096D 03	0.2889D 04	0.2999D 04

TOTAL FORCE AT JOINT 2 X = 0.1086D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5636D 05	-0.3788D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.4818D 05	-0.3762D 05	-0.6003D 04	0.2889D 04	0.8893D 04
0.5429D 00	-0.1217D 05	-0.3985D 05	-0.1101D 05	0.2889D 04	0.1390D 05
0.8143D 00	-0.3419D 03	-0.2491D 05	-0.1459D 04	0.2889D 04	0.4348D 04
0.1086D 01	-0.5660D 02	-0.1698D 05	-0.4263D 03	0.2889D 04	0.3316D 04

TOTAL FORCE AT JOINT 2 X = 0.2714D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5141D 05	-0.1964D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.4280D 05	-0.2142D 05	-0.1010D 05	0.2889D 04	0.1299D 05
0.5429D 00	-0.1742D 05	-0.2746D 05	-0.1360D 05	0.2889D 04	0.1649D 05
0.8143D 00	-0.3058D 04	-0.2435D 05	-0.5714D 04	0.2889D 04	0.8603D 04
0.1086D 01	-0.7247D 03	-0.1804D 05	-0.2229D 04	0.2889D 04	0.5118D 04

TOTAL FORCE AT JOINT 2 X = 0.4235D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4532D 05	-0.1080D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.3790D 05	-0.1348D 05	-0.1011D 05	0.2889D 04	0.1300D 05
0.5429D 00	-0.1955D 05	-0.1973D 05	-0.1336D 05	0.2889D 04	0.1625D 05
0.8143D 00	-0.6355D 04	-0.2087D 05	-0.8332D 04	0.2889D 04	0.1122D 05
0.1086D 01	-0.2070D 04	-0.1746D 05	-0.4196D 04	0.2889D 04	0.7085D 04

TOTAL FORCE AT JOINT 2 X = 0.5429D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4064D 05	-0.6973D 04	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.3454D 05	-0.9614D 04	-0.9174D 04	0.2889D 04	0.1206D 05
0.5429D 00	-0.2021D 05	-0.1532D 05	-0.1249D 05	0.2889D 04	0.1538D 05
0.8143D 00	-0.8528D 04	-0.1782D 05	-0.9269D 04	0.2889D 04	0.1216D 05
0.1086D 01	-0.3373D 04	-0.1628D 05	-0.5458D 04	0.2889D 04	0.8347D 04

TOTAL FORCE AT JOINT 2

X = 0.6515D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3680D 05	-0.4823D 04	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.3184D 05	-0.7186D 04	-0.8152D 04	0.2889D 04	0.1104D 05
0.5429D 00	-0.2031D 05	-0.1223D 05	-0.1150D 05	0.2889D 04	0.1439D 05
0.8143D 00	-0.1005D 05	-0.1524D 05	-0.9532D 04	0.2889D 04	0.1242D 05
0.1086D 01	-0.4565D 04	-0.1492D 05	-0.6284D 04	0.2889D 04	0.9173D 04

TOTAL FORCE AT JOINT 2

X = 0.8143D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3188D 05	-C.2923D 04	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.2832D 05	-C.4777D 04	-0.6685D 04	0.2889D 04	0.9574D 04
0.5429D 00	-0.1991D 05	-C.8828D 04	-0.9956D 04	0.2889D 04	0.1285D 05
0.8143D 00	-0.1159D 05	-C.1195D 05	-0.9295D 04	0.2889D 04	0.1218D 05
0.1086D 01	-0.6162D 04	-C.1276D 05	-0.6981D 04	0.2889D 04	0.9870D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.533034D 01	0.875386D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.104418D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.156655D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.210687D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.271163D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.291443D 01	0.250000D 01

X = 0.5429D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.525760D 01	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.101101D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.152127D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.208019D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.261964D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.264529D 01	0.168945D 01

X = 0.1086D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.525698D 01	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.997249D 00	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.150395D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.208233D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.258014D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.126268D 06	0.223154D 01	0.142520D 01

X = 0.2714D 00

A = 0.1528D 01

B = 0.3060D 00

C = 0.6550D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.552768D 01	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.101530D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.153650D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.218521D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.251549D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103835D 06	0.130681D 01	0.115394D 01

X = 0.4235D 00		A = 0.9530D 00		B = 0.1482D 00		C = 0.5430D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.366324D 05		0.637310D 00		0.104664D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.655505D 05		0.114041D 01		0.109616D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.989740D 05		0.172190D 01		0.112088D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.142446D 06		0.247820D 01		0.113957D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.167933D 06		0.291987D 01		0.111889D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.105282D 06		0.183165D 01		0.116980D 01	
X = 0.5429D 00		A = 0.6856D 00		B = 0.8550D-01		C = 0.4750D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.406093D 05		0.706499D 00		0.116027D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.717175D 05		0.124770D 01		0.119929D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.108216D 06		0.188268D 01		0.122554D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.156300D 06		0.272793D 01		0.125440D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.183132D 06		0.318604D 01		0.122088D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.110137D 06		0.191611D 01		0.122375D 01	
X = 0.6515D 00		A = 0.5242D 00		B = 0.5380D-01		C = 0.4200D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.444359D 05		0.773071D 00		0.126960D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.778732D 05		0.135480D 01		0.130223D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.117497D 06		0.204415D 01		0.133066D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.171021D 06		0.297534D 01		0.136817D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.198583D 06		0.345484D 01		0.132389D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.116616D 06		0.202882D 01		0.129573D 01	
X = 0.8143D 00		A = 0.3670D 00		B = 0.2980D-01		C = 0.3170D-01					
SIGMA S		TAU S		TAU N		SIGMA G		MARGIN OF SAFETY		K	
0.350000D 05		0.242000D 05		0.157000D 05		0.514813D 05		0.895643D 00		0.147089D 01	
0.598000D 05		0.370000D 05		0.270000D 05		0.896783D 05		0.156018D 01		0.149964D 01	
0.883000D 05		0.541000D 05		0.422000D 05		0.135223D 06		0.235254D 01		0.153140D 01	
0.125000D 06		0.792000D 05		0.675000D 05		0.197278D 06		0.343213D 01		0.157822D 01	
0.150000D 06		0.909000D 05		0.700000D 05		0.228373D 06		0.397310D 01		0.152248D 01	
0.900000D 05		0.450000D 05		0.344520D 05		0.132106D 06		0.229831D 01		0.146785D 01	

STRESS ANALYSIS

PMAX = 0.574783D 05 B = 0.542881D 00 P = 0.735223D 05

TOTAL FORCE AT JOINT 3

X = 0.0

Y

SIGMA X

0.0 0.5748D 05
0.2714D 00 0.4311D 05
0.5429D 00 -0.0

TOTAL FORCE AT JOINT 3

X = 0.5429D-01

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5719D 05	-0.4684D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.4935D 05	-0.4636D 05	-0.3233D 04	0.2889D 04	0.6122D 04
0.5429D 00	-0.8853D 04	-0.4582D 05	-0.8421D 04	0.2889D 04	0.1131D 05
0.8143D 00	-0.4752D 02	-0.2373D 05	-0.3985D 03	0.2889D 04	0.3288D 04
0.1086D 01	-0.7297D 01	-0.1625D 05	-0.1096D 03	0.2889D 04	0.2999D 04

TOTAL FORCE AT JOINT 3

X = 0.1086D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5636D 05	-0.3788D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.4817D 05	-0.3762D 05	-0.6003D 04	0.2889D 04	0.8893D 04
0.5429D 00	-0.1217D 05	-0.3985D 05	-0.1101D 05	0.2889D 04	0.1350D 05
0.8143D 00	-0.3418D 03	-0.2491D 05	-0.1459D 04	0.2889D 04	0.4348D 04
0.1086D 01	-0.5659D 02	-0.1698D 05	-0.4263D 03	0.2889D 04	0.3315D 04

TOTAL FORCE AT JOINT 3

X = 0.2714D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.5141D 05	-0.1964D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.4280D 05	-0.2142D 05	-0.1010D 05	0.2889D 04	0.1299D 05
0.5429D 00	-0.1742D 05	-0.2746D 05	-0.1360D 05	0.2889D 04	0.1649D 05
0.8143D 00	-0.3058D 04	-0.2435D 05	-0.5714D 04	0.2889D 04	0.8603D 04
0.1086D 01	-0.7247D 03	-0.1804D 05	-0.2229D 04	0.2889D 04	0.5118D 04

TOTAL FORCE AT JOINT 3

X = 0.4234D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4532D 05	-0.1080D 05	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.3790D 05	-0.1348D 05	-0.1011D 05	0.2889D 04	0.1300D 05
0.5429D 00	-0.1955D 05	-0.1973D 05	-0.1336D 05	0.2889D 04	0.1625D 05
0.8143D 00	-0.6355D 04	-0.2087D 05	-0.8332D 04	0.2889D 04	0.1122D 05
0.1086D 01	-0.2070D 04	-0.1746D 05	-0.4196D 04	0.2889D 04	0.7085D 04

TOTAL FORCE AT JOINT 3

X = 0.5429D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.4064D 05	-0.6973D 04	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.3454D 05	-0.9613D 04	-0.9173D 04	0.2889D 04	0.1206D 05
0.5429D 00	-0.2021D 05	-0.1532D 05	-0.1249D 05	0.2889D 04	0.1538D 05
0.8143D 00	-0.8528D 04	-0.1782D 05	-0.9265D 04	0.2889D 04	0.1216D 05
0.1086D 01	-0.3373D 04	-0.1628D 05	-0.5458D 04	0.2889D 04	0.8347D 04

TOTAL FORCE AT JOINT 3

X = 0.6515D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3680D 05	-0.4823D 04	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.3184D 05	-0.7186D 04	-0.8151D 04	0.2889D 04	0.1104D 05
0.5429D 00	-0.2031D 05	-0.1223D 05	-0.1150D 05	0.2889D 04	0.1439D 05
0.8143D 00	-0.1005D 05	-0.1524D 05	-0.9532D 04	0.2889D 04	0.1242D 05
0.1086D 01	-0.4565D 04	-0.1492D 05	-0.6284D 04	0.2889D 04	0.9173D 04

TOTAL FORCE AT JOINT 3

X = 0.8143D 00

Y	SIGMA X	SIGMA Y	TAU XY	SHEARING STRESS	TAU + SHEAR
0.0	-0.3189D 05	-0.2923D 04	0.0	0.2889D 04	0.2889D 04
0.2714D 00	-0.2832D 05	-0.4777D 04	-0.6685D 04	0.2889D 04	0.9574D 04
0.5429D 00	-0.1991D 05	-0.8828D 04	-0.9956D 04	0.2889D 04	0.1284D 05
0.8143D 00	-0.1159D 05	-0.1194D 05	-0.9295D 04	0.2889D 04	0.1218D 05
0.1086D 01	-0.6162D 04	-0.1276D 05	-0.6980D 04	0.2889D 04	0.9870D 04
X = 0.0	A = 0.2560D 01	B = 0.6000D 00	C = 0.0		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.533046D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.104421D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.156658D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.210691D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.271170D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.391452D 01	0.250000D 01
X = 0.5429D-01	A = 0.2365D 01	B = 0.5400D 00	C = 0.2130D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.525772D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.101103D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.152130D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.208023D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.261970D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.264535D 01	0.168945D 01
X = 0.1086D 00	A = 0.2161D 01	B = 0.4820D 00	C = 0.3800D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.525710D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.997272D 00	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.150398D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.208238D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.258020D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.223159D 01	0.142520D 01
X = 0.2714D 00	A = 0.1528D 01	B = 0.3060D 00	C = 0.6550D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.317729D 05	0.552781D 00	0.907797D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.583593D 05	0.101533D 01	0.975907D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.883176D 05	0.153654D 01	0.100020D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.125605D 06	0.218527D 01	0.100484D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.150338D 06	0.261555D 01	0.100225D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.103855D 06	0.180685D 01	0.115394D 01
X = 0.4234D 00	A = 0.9530D 00	B = 0.1482D 00	C = 0.5430D-01		
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.366324D 05	0.637325D 00	0.104664D 01
0.598000D 05	0.370000D 05	0.270000D 05	0.655505D 05	0.114044D 01	0.109616D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.989740D 05	0.172194D 01	0.112088D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.142446D 06	0.247826D 01	0.113957D 01
0.150000D 06	0.909000D 05	0.700000D 05	0.167833D 06	0.291993D 01	0.111889D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.105282D 06	0.183169D 01	0.116980D 01
X = 0.5429D 00	A = 0.6856D 00	B = 0.8550D-01	C = 0.4750D-01		

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.406093D 05	0.706516D 00	0.116027D 01
0.598000 05	0.370000 05	0.270000 05	0.717175D 05	0.124773D 01	0.119929D 01
0.883000 05	0.541000 05	0.422000 05	0.108216D 06	0.188272D 01	0.122554D 01
0.125000 06	0.792000 05	0.675000 05	0.156800D 06	0.272799D 01	0.125440D 01
0.150000 06	0.909000 05	0.700000 05	0.183132D 06	0.318611D 01	0.122088D 01
0.900000 05	0.450000 05	0.344520D 05	0.110137D 06	0.191615D 01	0.122375D 01

X = 0.6515D 00 A = 0.5242D 00 B = 0.5380D-01 C = 0.4200D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.444359D 05	0.773089D 00	0.126960D 01
0.598000 05	0.370000 05	0.270000 05	0.778732D 05	0.135483D 01	0.130223D 01
0.883000 05	0.541000 05	0.422000 05	0.117497D 06	0.204420D 01	0.133066D 01
0.125000 06	0.792000 05	0.675000 05	0.171021D 06	0.297541D 01	0.136817D 01
0.150000 06	0.909000 05	0.700000 05	0.198583D 06	0.345492D 01	0.132389D 01
0.900000 05	0.450000 05	0.344520D 05	0.116616D 06	0.202887D 01	0.129573D 01

X = 0.8143D 00 A = 0.367CD 00 B = 0.2980D-01 C = 0.3170D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813D 05	0.895664D 00	0.147089D 01
0.598000 05	0.370000 05	0.270000 05	0.896783D 05	0.156021D 01	0.149964D 01
0.883000 05	0.541000 05	0.422000 05	0.135223D 06	0.235259D 01	0.15314CD 01
0.125000 06	0.792000 05	0.675000 05	0.197278D 06	0.343221D 01	0.157822D 01
0.150000 06	0.909000 05	0.700000 05	0.228373D 06	0.397319D 01	0.152248D 01
0.900000 05	0.450000 05	0.344520D 05	0.132106D 06	0.229836D 01	0.146785D 01

STRESS ANALYSIS
P_{MAX} = 0.537278D 05 B = 0.116984D 01 P = 0.148093D 06

TOTAL FORCE AT B1 X = 0.0

Y	SIGMA X
0.0	0.5373D 05
0.5849D 00	0.4030D 05
0.1170D 01	-0.0

TOTAL FORCE AT B1 X = 0.1170D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.5346D 05	-0.4378D 05	0.0
0.5849D 00	-0.4613D 05	-0.4333D 05	-0.3022D 04
0.1170D 01	-0.8275D 04	-0.4283D 05	-0.7872D 04
0.1755D 01	-0.4442D 02	-0.2218D 05	-0.3725D 03
0.2340D 01	-0.6821D 01	-0.1519D 05	-0.1024D 03

TOTAL FORCE AT B1 X = 0.2340D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.5268D 05	-0.3541D 05	0.0
0.5849D 00	-0.4503D 05	-0.3517D 05	-0.5612D 04
0.1170D 01	-0.1137D 05	-0.3725D 05	-0.1029D 05
0.1755D 01	-0.3195D 03	-0.2329D 05	-0.1364D 04
0.2340D 01	-0.5290D 02	-0.1587D 05	-0.3985D 03

TOTAL FORCE AT B1 X = 0.5849D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.4806D 05	-0.1836D 05	0.0
0.5849D 00	-0.4001D 05	-0.2002D 05	-0.9445D 04
0.1170D 01	-0.1628D 05	-0.2567D 05	-0.1271D 05
0.1755D 01	-0.2858D 04	-0.2276D 05	-0.5341D 04
0.2340D 01	-0.6774D 03	-0.1686D 05	-0.2083D 04

TOTAL FORCE AT B1

X = 0.9125D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.4236D 05	-0.1010D 05	0.0
0.5849D 00	-0.3542D 05	-0.1260D 05	-0.9447D 04
0.1170D 01	-0.1327D 05	-0.1844D 05	-0.1249D 05
0.1755D 01	-0.5940D 04	-0.1951D 05	-0.7788D 04
0.2340D 01	-0.1935D 04	-0.1632D 05	-0.3922D 04

TOTAL FORCE AT B1

X = 0.1170D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3759D 05	-0.6518D 04	0.0
0.5849D 00	-0.3229D 05	-0.8986D 04	-0.8575D 04
0.1170D 01	-0.1889D 05	-0.1432D 05	-0.1167D 05
0.1755D 01	-0.7972D 04	-0.1665D 05	-0.8664D 04
0.2340D 01	-0.3153D 04	-0.1521D 05	-0.5102D 04

TOTAL FORCE AT B1

X = 0.1404D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3440D 05	-0.4509D 04	0.0
0.5849D 00	-0.2976D 05	-0.6717D 04	-0.7620D 04
0.1170D 01	-0.1899D 05	-0.1143D 05	-0.1075D 05
0.1755D 01	-0.9392D 04	-0.1424D 05	-0.8910D 04
0.2340D 01	-0.4267D 04	-0.1395D 05	-0.5874D 04

TOTAL FORCE AT B1

X = 0.1755D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2980D 05	-0.2732D 04	0.0
0.5849D 00	-0.2647D 05	-0.4465D 04	-0.6248D 04
0.1170D 01	-0.1861D 05	-0.8252D 04	-0.9306D 04
0.1755D 01	-0.1083D 05	-0.1117D 05	-0.8689D 04
0.2340D 01	-0.5760D 04	-0.1193D 05	-0.6525D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.570257D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.111710D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.900445D 05	0.167594D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.225399D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.290099D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344526D 05	0.225000D 06	0.418778D 01	0.250000D 01

X = 0.1170D 00

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D 01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3022050 05	0.5624740 00	0.8634420 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5811250 05	0.1081610 01	0.9717800 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8744200 05	0.1627500 01	0.9902830 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1195680 06	0.2225450 01	0.9565470 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1505760 06	0.2802580 01	0.1003840 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1520500 06	0.2830010 01	0.1689450 01

X = 0.23400 00 A = 0.21610 01 B = 0.48200 00 C = 0.38000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3021690 05	0.5624080 00	0.8633410 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5732150 05	0.1066890 01	0.9585540 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8644630 05	0.1608970 01	0.9790070 00
0.1250000 06	0.7920000 05	0.6750000 05	0.1196920 06	0.2227750 01	0.9575340 00
0.1500000 06	0.9090000 05	0.7000000 05	0.1483050 06	0.2760310 01	0.9887030 00
0.9000000 05	0.4500000 05	0.3445200 05	0.1282680 06	0.2387370 01	0.1425200 01

X = 0.58490 00 A = 0.15280 01 B = 0.30600 00 C = 0.65500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.5913690 00	0.9077970 00
0.5980000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1086200 01	0.9759070 00
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.1643800 01	0.1000200 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.2337810 01	0.1004840 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.2798140 01	0.1002250 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.1932980 01	0.1153940 01

X = 0.91250 00 A = 0.95300 00 B = 0.14820 00 C = 0.54300-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.6818140 00	0.1046640 01
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1220050 01	0.1096160 01
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.1842140 01	0.1120880 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.2651260 01	0.1139570 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.3123770 01	0.1118890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.1959550 01	0.1169800 01

X = 0.11700 01 A = 0.68560 00 B = 0.85500-01 C = 0.47500-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.7558350 00	0.1160270 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1334830 01	0.1199290 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2014150 01	0.1225540 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.2918420 01	0.1254400 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.3408520 01	0.1220880 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2049920 01	0.1223750 01

X = 0.14040 01 A = 0.52420 00 B = 0.53800-01 C = 0.42000-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.8270560 00	0.1269600 01
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1449400 01	0.1302230 01
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2186900 01	0.1330660 01
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.3183110 01	0.1368170 01
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.3696090 01	0.1323890 01
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2170500 01	0.1295730 01

X = 0.17550 01 A = 0.36700 00 B = 0.29800-01 C = 0.31700-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000 05	0.242000 05	0.157000 05	0.514813D 05	0.958187D 00	0.147089D 01
0.598000 05	0.370000 05	0.270000 05	0.896783D 05	0.166913D 01	0.149964D 01
0.883000 05	0.541000 05	0.422000 05	0.135223D 06	0.251682D 01	0.153140D 01
0.125000 06	0.792000 05	0.675000 05	0.197278D 06	0.367181D 01	0.157822D 01
0.150000 06	0.909000 05	0.700000 05	0.228373D 06	0.425055D 01	0.152248D 01
0.900000 05	0.450000 05	0.344520D 05	0.132106D 06	0.245881D 01	0.146785D 01

STRESS ANALYSIS
 RMAX = 0.407275D 05 B = 0.886778D 00 P = 0.850967D 05

TOTAL FORCE AT B2 X = 0.0

Y	SIGMA X
0.0	0.4073D 05
0.4434D 00	0.3055D 05
0.8868D 00	-0.0

TOTAL FORCE AT B2 X = 0.8868D-01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.4053D 05	-0.3319D 05	0.0
0.4434D 00	-0.3497D 05	-0.3285D 05	-0.2290D 04
0.8868D 00	-0.6273D 04	-0.3247D 05	-0.5967D 04
0.1330D 01	-0.3367D 02	-0.1681D 05	-0.2824D 03
0.1774D 01	-0.5171D 01	-0.1151D 05	-0.7765D 02

TOTAL FORCE AT B2 X = 0.1774D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3994D 05	-0.2684D 05	0.0
0.4434D 00	-0.3414D 05	-0.2666D 05	-0.4254D 04
0.8868D 00	-0.8621D 04	-0.2824D 05	-0.7801D 04
0.1330D 01	-0.2422D 03	-0.1765D 05	-0.1034D 04
0.1774D 01	-0.4010D 02	-0.1203D 05	-0.3021D 03

TOTAL FORCE AT B2 X = 0.4434D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3643D 05	-0.1391D 05	0.0
0.4434D 00	-0.3033D 05	-0.1518D 05	-0.7159D 04
0.8868D 00	-0.1234D 05	-0.1946D 05	-0.9638D 04
0.1330D 01	-0.2167D 04	-0.1725D 05	-0.4049D 04
0.1774D 01	-0.5135D 03	-0.1278D 05	-0.1579D 04

TOTAL FORCE AT B2 X = 0.6917D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.3211D 05	-0.7655D 04	0.0
0.4434D 00	-0.2685D 05	-0.9552D 04	-0.7161D 04
0.8868D 00	-0.1385D 05	-0.1398D 05	-0.9465D 04
0.1330D 01	-0.4503D 04	-0.1479D 05	-0.5904D 04
0.1774D 01	-0.1467D 04	-0.1237D 05	-0.2973D 04

TOTAL FORCE AT B2

X = 0.8868D 00

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2880D 05	-0.4941D 04	0.0
0.4434D 00	-0.2448D 05	-0.6812D 04	-0.6500D 04
0.8868D 00	-0.1432D 05	-0.1085D 05	-0.9850D 04
0.1330D 01	-0.6043D 04	-0.1262D 05	-0.6567D 04
0.1774D 01	-0.2390D 04	-0.1153D 05	-0.3867D 04

TOTAL FORCE AT B2

X = 0.1064D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2607D 05	-0.3418D 04	0.0
0.4434D 00	-0.2256D 05	-0.5092D 04	-0.5776D 04
0.8868D 00	-0.1439D 05	-0.8666D 04	-0.8149D 04
0.1330D 01	-0.7120D 04	-0.1080D 05	-0.6754D 04
0.1774D 01	-0.3235D 04	-0.1057D 05	-0.4452D 04

TOTAL FORCE AT B2

X = 0.1330D 01

Y	SIGMA X	SIGMA Y	TAU XY
0.0	-0.2259D 05	-0.2071D 04	0.0
0.4434D 00	-0.2006D 05	-0.3385D 04	-0.4737D 04
0.8868D 00	-0.1411D 05	-0.6255D 04	-0.7054D 04
0.1330D 01	-0.8210D 04	-0.8464D 04	-0.6586D 04
0.1774D 01	-0.4366D 04	-0.9041D 04	-0.4946D 04

X = 0.0

A = 0.2560D 01

B = 0.6000D 00

C = 0.0

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.306386D 05	0.752284D 00	0.875389D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.600193D 05	0.147368D 01	0.100367D 01
0.883000D 05	0.541000D 05	0.422000D 05	0.500445D 05	0.221091D 01	0.101976D 01
0.125000D 06	0.792000D 05	0.675000D 05	0.121102D 06	0.297347D 01	0.968815D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.155864D 06	0.332699D 01	0.103909D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.225000D 06	0.552453D 01	0.250000D 01

X = 0.8868D-01

A = 0.2365D 01

B = 0.5400D 00

C = 0.2130D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302205D 05	0.742017D 00	0.863442D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.581125D 05	0.142686D 01	0.971780D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.874420D 05	0.214700D 01	0.990283D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119568D 06	0.293582D 01	0.956547D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.150576D 06	0.365717D 01	0.100384D 01
0.900000D 05	0.450000D 05	0.344520D 05	0.152050D 06	0.373336D 01	0.168945D 01

X = 0.1774D 00

A = 0.2161D 01

B = 0.4820D 00

C = 0.3800D-01

SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K
0.350000D 05	0.242000D 05	0.157000D 05	0.302169D 05	0.741930D 00	0.863341D 00
0.598000D 05	0.370000D 05	0.270000D 05	0.573215D 05	0.140744D 01	0.958554D 00
0.883000D 05	0.541000D 05	0.422000D 05	0.864463D 05	0.212256D 01	0.979007D 00
0.125000D 06	0.792000D 05	0.675000D 05	0.119692D 06	0.293885D 01	0.957534D 00
0.150000D 06	0.909000D 05	0.700000D 05	0.148305D 06	0.364141D 01	0.988703D 00
0.900000D 05	0.450000D 05	0.344520D 05	0.128268D 06	0.314942D 01	0.142520D 01

X = 0.44340 00		A = 0.15280 01		B = 0.30600 00		C = 0.65500-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.3177290 05	0.7801350 00	0.9077970 00		
0.5930000 05	0.3700000 05	0.2700000 05	0.5835930 05	0.1432920 01	0.9759070 00		
0.8830000 05	0.5410000 05	0.4220000 05	0.8831760 05	0.2168500 01	0.1000200 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1256050 06	0.3084050 01	0.1004840 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1503380 06	0.3691310 01	0.1002250 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1038550 06	0.2549990 01	0.1153940 01		
X = 0.59170 00		A = 0.95300 00		B = 0.14820 00		C = 0.54300-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.3663240 05	0.8994510 00	0.1046640 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.6555050 05	0.1609490 01	0.1096160 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.9897400 05	0.2430150 01	0.1120880 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1424460 06	0.3497540 01	0.1139570 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1678330 06	0.4120880 01	0.1118890 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1052820 06	0.2585050 01	0.1169800 01		
X = 0.88680 00		A = 0.68560 00		B = 0.85500-01		C = 0.47500-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.4060930 05	0.9971000 00	0.1160270 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.7171750 05	0.1760910 01	0.1199290 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1082160 06	0.2657070 01	0.1225540 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1568000 06	0.3849990 01	0.1254400 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1831320 06	0.4496530 01	0.1220880 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1101370 06	0.2704250 01	0.1223750 01		
X = 0.10640 01		A = 0.52420 00		B = 0.53800-01		C = 0.42000-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.4443590 05	0.1091050 01	0.1269600 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.7787320 05	0.1912060 01	0.1302230 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1174970 06	0.2884960 01	0.1330660 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1710210 06	0.4199170 01	0.1368170 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.1985830 06	0.4875890 01	0.1323890 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1166160 06	0.2863330 01	0.1295730 01		
X = 0.13300 01		A = 0.36700 00		B = 0.29800-01		C = 0.31700-01	
SIGMA S	TAU S	TAU N	SIGMA G	MARGIN OF SAFETY	K		
0.3500000 05	0.2420000 05	0.1570000 05	0.5148130 05	0.1264040 01	0.1470890 01		
0.5980000 05	0.3700000 05	0.2700000 05	0.8967830 05	0.2201910 01	0.1499640 01		
0.8830000 05	0.5410000 05	0.4220000 05	0.1352230 06	0.3320190 01	0.1531400 01		
0.1250000 06	0.7920000 05	0.6750000 05	0.1972780 06	0.4843850 01	0.1578220 01		
0.1500000 06	0.9090000 05	0.7000000 05	0.2283730 06	0.5607340 01	0.1522480 01		
0.9000000 05	0.4500000 05	0.3445200 05	0.1321060 06	0.3243660 01	0.1467850 01		

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IEF285I  SYS69227.T134234.RV000.WJSV#H04.G0SET  PASSED
IEF285I  VOL SER NOS= DSK003.
IEF285I  SYS69227.T134234.RV000.WJSV#H04.S0000719  SYSIN
IEF285I  VOL SER NOS= SPOL04.
IEF285I  SYS69227.T134234.RV000.WJSV#H04.S0000719  DELETED
IEF285I  VOL SER NOS= SPOL04.
IEF285I  SYS69227.T134234.SV000.WJSV#H04.R0000718  SYSOUT
IEF285I  VOL SER NOS= SPOL01.
STP=03 * 69/227 TOD= 16/38/59.22 CCR=01:2400 REL= 1 JCPU=*****.39 WAIT=*****1.08 ICR=
IEF285I  SYS69227.T134234.RV000.WJSV#H04.G0SET  DELETED
IEF285I  VOL SER NOS= DSK003.
WJSV#H04 69/227 TOD= 16/39/00.50 REL= 1 JCPU=*****.60 WAIT=*****1.59

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APPENDIX A

CRITERION FOR $\lambda(t)$

The criterion for $\lambda(t)$ may be seen by an examination of the numerator of equation (75) which is equal to "A" and is used in the determination of both "B" and "C" for use in equation (114).

$$F_A = \frac{+W_2[c \cos\beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + [F_{\Delta p} - F_{I2} \cos\Gamma][\bar{y} \sin(\beta+\Delta) - c \sin\beta] + F_{I2} \sin\Gamma[c \cos\beta - \bar{y} \cos(\beta+\Delta)]}{c[\sin\lambda \cos\beta + \cos\lambda \sin\beta]}$$

and

$$A = +W_2[c \cos\beta - \sqrt{g^2+h^2} \cos(\beta+\Delta)] + [F_{\Delta p} - F_{I2} \cos\Gamma][\bar{y} \sin(\beta+\Delta) - c \sin\beta] + F_{I2} \sin\Gamma[c \cos\beta - \bar{y} \cos(\beta+\Delta)]$$

In the solution of $\lambda(t)$ the right hand side of equation (114)

$$\left\{ + \mu \left(\frac{2\bar{e}+\ell}{\ell} \right) [F_{\Delta p} + F_{I2x} - F_{I3x}] - F_p + F_{Ity} + W_t - F_s \right\}$$

is inherently positive due to the predominance of the

$$+ \mu \left(\frac{2\bar{e}+\ell}{\ell} \right) F_{\Delta p}$$

term. The remaining terms may be neglected with only minor effect, and therefore, the right hand side becomes

$$\left\{ + \mu \left(\frac{2\bar{e}+\ell}{\ell} \right) [F_{\Delta p} - F_{I2x} + F_{I3x}] - F_p - F_{Ity} + W_t + F_s \right\} \approx + \mu \left(\frac{2\bar{e}+\ell}{\ell} \right) F_{\Delta p} \quad (1)$$

The same is true of the left hand side of equation (114). The first term

$$\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda| - \sin|\lambda| \right\} \quad (2)$$

is very large compared to

$$\mu^2 R_c \left[-\frac{1}{e} + \left(\frac{2\bar{e} + \ell}{\ell} \right) \right] \sqrt{\left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \cos(\lambda) - F_{I2} \cos \Gamma + F_{\Delta p} + F_{I3} \cos \theta \right\}^2 + \left\{ \left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \sin(\lambda) + W_2 + F_{I2} \sin \Gamma + W_3 - F_{I3} \sin \theta \right\}^2}$$

and the second term may be neglected with minor effect on the numerical value. Hence equation (114) may be approximated by

$$\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right] \left\{ \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos(\lambda) - \sin(\lambda) \right\} \approx + \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) F_{\Delta p} \quad (3)$$

For this to be true then the left hand side must be positive. The left hand side is positive unless

$$\sin[|\lambda(t)|] > \mu \left(\frac{2\bar{e} + \ell}{\ell} \right) \cos|\lambda(t)| \quad (4)$$

The inequality of equation (4) occurs when

$$|c \sin \beta| > |\bar{y} \sin(\beta + \Delta)|$$

($t=1.5$ sec. approximately) and to maintain equality in equation (3) then the sign of the coefficient

$$\left[\frac{B}{2} + \sqrt{\left(\frac{B}{2}\right)^2 - C} \right]$$

must be reversed. This happens when there is a sign change in the value of A. This sign change occurs due to the reversal of moment of F_A around point B. The criterion is thus established.

If $|\bar{y} \sin(\beta+\Delta)| \geq |c \sin(\beta)|$ use equations for case I

If $|c \sin(\beta)| < |\bar{y} \sin(\beta+\Delta)|$ use equations for case II

APPENDIX B

I. LOCATION OF THE CENTER OF GRAVITY OF THE DISC

The disc was suspended from a knife edge and the vertical direction drawn on the disc. It was suspended from a second point, and again a vertical line was drawn. The intersection of these two vertical lines located the c.g. for the disc.

Calculation of the c.g. of the disc.

Time (seconds) required for 20 cycles of the link:

15.0
14.9
15.0
15.1

From this data it is possible to compute the center of mass of the disc, its center of percussion, and its moment of inertia. This information is imperative in the calculation of the forces in the bearings due to the initial forces caused during the closing of the valve.

Method used to find the center of gravity of the disc.

The disc was suspended on a set of balancing rollers by pins through the hinge bosses. Vertical measurements from two points directly opposite hinge bosses; vertical measurements from two points directly opposite each other on the disc were taken and recorded. The horizontal distance between the two points from which vertical measurements were taken was measured and recorded. These measurements provided enough information to determine the angle the disc made with the floor. It is known that the center of mass is on the same line, perpendicular to the floor, and acting through the hinge axis. The disc was then suspended by a pin through the clevis. The same set of measurements was taken for the disc hanging in this position. The center of mass is now on the new line perpendicular to the floor and through the clevis axis, the angle at which the disc hangs with respect to the floor when suspended from the clevis axis. The data taken was superimposed on a drawing of the disc and the point at which the line of action of the center of gravity through the hinge axis crossed the line of action of the c.g. through the clevis was found. This is the required center of mass of the disc.

II. LOCATION OF THE CENTER OF PERCUSSION

The equivalent length of a compound pendulum with the end point lying on the line connecting the center of rotation and the center of gravity is the center of percussion. The period of oscillation for a simple pendulum (to which the compound pendulum is reduced) is given by

$$\tau = 2\pi \sqrt{\frac{\ell}{g}} \quad (1)$$

where ℓ is the distance from the center of rotation to the center of percussion. In order to find this point experimentally, all that is needed is to suspend the object and time its oscillations, then substituting for τ in equation (1), the period of oscillation, ℓ may be calculated. This locates the center of percussion of the object.^[5] This was carried out experimentally for the disc. τ_c was averaged over several oscillations and was found as

$$\tau_c = 0.75 \text{ seconds}$$

From equation (1)

$$\ell = \frac{\tau^2 g}{4\pi^2}$$

$$\ell = \frac{(0.75)^2 (32.2)}{4\pi^2} = 0.45879 \text{ Ft}$$

$$\ell = 5.5055 \text{ in.}$$

F_{ID} , which is the force due to the inertia of the link.

$$F_{IDx} = \frac{W_D}{g} | (A_{CGD}) |_x$$

$$F_{IDx} = \frac{W_D}{g} [C(W_C^2 \cos \beta - \alpha_C \sin \beta) - \frac{d}{2} (W_D^2 \sin \gamma + \alpha_D \cos \gamma)] \quad (43)$$

FIGURE B-1

$$\delta = 180 - \text{ABC} - \text{CBE} - \text{EBH}$$

$$\begin{aligned} \text{LABC} &= \tan^{-1} 8.25/5.156 \\ \text{LABC} &= \tan^{-1} 1.6001 \\ \text{LABC} &= 58^\circ \end{aligned}$$

$$\begin{aligned} \text{LEBD} &= \tan^{-1} 1.75/22.23 \\ \text{LEBD} &= \tan^{-1} .07872 \\ \text{LEBD} &= 4^\circ 30' \end{aligned}$$

$$\begin{aligned} \text{LCBE} &= 90 - \text{ABC} - \text{EBD} \\ \text{LCBE} &= 90^\circ - 58^\circ - 4^\circ 30' \\ \text{LCBE} &= 27^\circ 30' \end{aligned}$$

$$\begin{aligned} \text{LEBH} &= \tan^{-1} 16.69/16.25 \\ \text{LEBH} &= \tan^{-1} 1.0271 \\ \text{LEBH} &= 45^\circ 46' \end{aligned}$$

$$\begin{aligned} \delta &= 180 - 58^\circ - 27^\circ 30' - 45^\circ 46' \\ \delta &= 180^\circ - 131^\circ 16' \\ \delta &= 48^\circ 44' \end{aligned}$$

$$\alpha = 180 - \text{GDF} - \text{GDL} - \text{LDJ}$$

$$\begin{aligned} \text{LGDF} &= \tan^{-1} 8.00/7.125 \\ \text{LGDF} &= \tan^{-1} 1.1123 \\ \text{LGDF} &= 48^\circ 3' \end{aligned}$$

$$\begin{aligned} \text{LBDL} &= \tan^{-1} 1.70/22.23 \\ \text{LBDL} &= \tan^{-1} .0765 \\ \text{LBDL} &= 4^\circ 22' \end{aligned}$$

$$\begin{aligned} \text{LGDL} &= 90^\circ - \text{GDF} - \text{BDL} \\ \text{LGDL} &= 90^\circ - 48^\circ 3' - 4^\circ 22' \\ \text{LGDL} &= 37^\circ 35' \end{aligned}$$

$$\begin{aligned} \text{LJDL} &= \tan^{-1} 19.56/11.75 \\ \text{LJDL} &= \tan^{-1} 1.6647 \\ \text{LJDL} &= 59^\circ \end{aligned}$$

$$\begin{aligned} \alpha &= 180 - 48^\circ 3' - 37^\circ 35' - 59^\circ \\ \alpha &= 180^\circ - 144^\circ 38' \\ \alpha &= 35^\circ 22' \end{aligned}$$

CALCULATION OF THE CENTER OF MASS OF THE DISC

FIGURE B-2

Calculation of the Center of Mass of the Disc

FIGURE B-3

Calculation of the Center of Mass of the Disc

$$F_{IDy} = \frac{W_D}{g} |(A_{CGD})|_y$$

$$F_{IDy} = \frac{W_D}{g} [c(W_C^2 \sin\beta + \alpha_C \cos\beta) - \frac{d}{2}(W_D^2 \cos\gamma + \alpha_D \sin\gamma)] \quad (44)$$

The expressions for the x and y components of the acceleration of the center of gravity of the link were developed in equations (27) and (28).

The components of F_{IC} and F_{ID} act through points called the center of percussion of the respective links. Values for the distance L can be computed from data taken to determine the period of free oscillation of the disc and the link.

$$\tau_C = 1.142667 \text{ seconds}$$

$$L = \frac{\tau^2 g}{4\pi^2} \quad L_C = \frac{(1.142667)^2 (32.2)}{4\pi^2}$$

$$L_C = 1.0649 \text{ ft} = 12.7788 \text{ in}$$

$$\tau_D = 0.75 \text{ seconds}$$

$$L_D = \frac{(.75)^2 (32.2)}{4\pi^2}$$

$$L_D = 0.45879 \text{ ft} = 5.5055 \text{ in}$$

III. CALCULATION OF Z(t)

The sixth order polynomial Z(t) was derived from experimentally obtained data. At time t=0 Z=0 and the disc subtended an angle of 6° with (below) the horizontal. At t=1.94 seconds the disc subtended an

angle of 38.75° with (below) the horizontal. These were the open and closed positions respectively. The experimental data is given in the following table.

Time	Z(t)	Time	Z(t)
.001	0.0	1.0	.6325
.100	0.0	1.1	.8050
.2	0.0	1.2	.9775
.3	0.0	1.3	1.0925
.4	0.0	1.4	1.265
.5	0.0	1.5	1.495
.6	0.0	1.6	1.6675
.7	.1725	1.7	1.955
.8	.2875	1.8	2.300
.9	.4600	1.9	2.645
		1.94	2.8750

IV. CALCULATION OF WEIGHTS OF LINKS

Link 3 is the floating link connecting the disc and the piston rod.

FIGURE B-1

Clevis (Anchor No. 38)

Since link 3 is symmetric about the x and y axis the center of mass will be at the origin of these axis which is the center of the part. The pins

connecting Link 3 to Link 2 (disc) and the clevis at the bottom of Link 4 (piston rod) will not change the center of mass of Link 3 so they will be included in the weight of this link.

FIGURE B-5

Pins (link) Anchor No. 39

$$V = [\pi R_1^2 - \pi r_2^2](1.5) + (4.5)(3.5)(1.5) - (\pi r_2^2)(1.5)$$

$$+ 2[(\pi r_3^2)(5.125) - (\pi r_3^2 - \pi r_4^2)(1.20(2))]$$

$$V = (1.5)(\pi)[(1.75)^2 - (0.75)^2] + (4.5)(3.5)(1.5) - \pi[(1.5)(0.75)^2]$$

$$+ 2[(\pi)(0.75)^2(5.125) - (\pi)(.75^2 - .703^2)(.240)]$$

$$V = 50.738$$

$$W = \rho V$$

$$W = (50.738)(.281)$$

$$W = 14.257$$

Weight of link 3 including pins (#38 and 2 = #39).

FIGURE B-6

Clevis (Anchor No. 37)

$$V = \frac{\pi}{4}(D_1^2)(2.375) + (2.625)(4.562)(4.00) + (\pi)(r_2^2)(1.5)$$

$$= (1.875)(1.562)(4.00) - 2\left(\frac{\pi}{4}\right)(1.5^2)(1.5) - \left(\frac{\pi}{4}\right)(D_3^2)(2.50)$$

$$V = 69.0846$$

$$W = 69.0846 (2.81)$$

$$W = 19.413$$

FIGURE B-7

Piston Rod End

$$\begin{aligned}
 V\bar{y} &= \left(\frac{\pi}{4}\right) \frac{(D^2)(2.375)(2.375)}{2} = \left(\frac{\pi}{4}\right) \frac{(2.312)^2(2.5)(2.5)}{2} \\
 &+ (2.625)(1.5)(4.00)(2)(3.6875) + (1.562)(4.0)(.75)(2.750) \\
 &+ (2)\left(\frac{\pi}{2}\right)(2.0)^2(1.5)\left(5.0 + \frac{4(2)}{3\pi}\right) - \left(\frac{\pi}{4}\right)(1.5)^2(1.5)(2)(5) \\
 V\bar{y} &= 235.105
 \end{aligned}$$

Since $V = 69.0846$ Then

$$\bar{y} = 235.105/69.0846$$

$$\bar{y} = 3.403$$

The clevis (part 37) has a weight of 19.413 pounds acting through a center of mass located on the vertical centerline of the part 3.403 inches below the top of the part.

FIGURE B-8

INC-A-14820

Piston Rod (Anchor Part No. 36)

$$V = \left(\frac{\pi}{4}\right) (2.25)^2 (2.25) + \left(\frac{\pi}{4}\right) (2.50)^2 (20.875) + \left(\frac{\pi}{4}\right) (2.25)^2 (4.375)$$

$$V = 197.895$$

$$W = \rho V = (128.81) (.281)$$

$$W = 36.1956$$

$$V\bar{y} = (8.9462) (26.375) + (102.4702) (14.812) + (17.3954) (2.1875)$$

$$+ (69.0846) (28.653)$$

$$V\bar{y} = 235.956 + 1517.789 + 38.052 + 1979.481$$

$$V\bar{y} = 3771.278$$

$$\bar{y} = 3771.278 / 197.895$$

$$\bar{y} = 19.957$$

The piston rod and clevis have a weight of 55.6085 pounds vs acting through a center of gravity on the centerline of the part 19.057 inches below the top of the rod.

Calculation of the location through which the force due to the ΔP across the disc acts with respect to the hinge axis.

FIGURE B-9

Valve Disc

Assume there is an even pressure distribution over the disc.

$F_{\Delta P}$ will denote a force due to the pressure drop across the disc acting on the y -axis at a distance $\bar{y}$ from the hinge axis (x -axis)

$$F_{\Delta P} \bar{y} = \Delta P [(\text{Area below } x\text{-axis})(\bar{y}_1) - (\text{area above } x\text{-axis})(\bar{y}_2)]$$

$$r^2 = x^2 + (y-a)^2 \quad x = \sqrt{r^2 - (y-a)^2}$$

$$\text{Moment below } x\text{-axis} = \int_0^{(r+a)} 2\Delta P x dy y$$

$$= 2\Delta P \int_0^{(r+a)} xy \, dy$$

$$\text{Moment above x-axis} = \int_0^{-(r-a)} 2\Delta P x \, dy \, y$$

$$= 2\Delta P \int_0^{-(r-a)} xy \, dy$$

$$F_{\Delta P} \bar{y} = \Delta P \left[\int_0^{(r+a)} 2xy \, dy - \int_0^{-(r-a)} 2xy \, dy \right]$$

$$F_{\Delta P} \bar{y} = 2\Delta P \left[\int_0^{(r+a)} 2xy \, dy - \int_0^{-(r-a)} 2xy \, dy \right]$$

$$F_{\Delta P} \bar{y} = 2\Delta P \left[\int_{-(r-a)}^{(r+a)} xy \, dy \right]$$

$$\Delta P A \bar{y} = 2\Delta P \left[\int_{-(r-a)}^{(r+a)} y \sqrt{r^2 - (y-a)^2} \, dy \right]$$

$$\frac{A\bar{y}}{2} = \int_{-(r-a)}^{(r+a)} y \sqrt{r^2 - (y-a)^2} \, dy$$

For

$$y \sqrt{r^2 - (y-a)^2} \, dy$$

Use integration by parts

$$\int u \, dv = uv - \int v \, du$$

Let $u = y$

$$dv = \sqrt{r^2 - (y-a)^2} \, dy$$

Let $du = dy$

$$v = \int [r^2 - (y-a)^2]^{\frac{1}{2}} \, dy$$

$$v = \frac{1}{2} \left[(y-a) \sqrt{r^2 - (y-a)^2} + r^2 \sin^{-1} \left(\frac{y-a}{r} \right) \right]$$

$$\int u \, dv = uv - \int v \, du = y \left[\left(\frac{y-a}{2} \right) \sqrt{r^2 - (y-a)^2} + \frac{r^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) \right]$$

$$- \int \left[\left(\frac{y-a}{2} \right) \sqrt{r^2 - (y-a)^2} + \frac{r^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) \right] dy$$

(1.)

$$y \left[\left(\frac{y-a}{2} \right) \sqrt{r^2 - (y-a)^2} + \frac{r^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) \right]$$

(2.)

$$- \int_{-(r-a)}^{(r+a)} \left(\frac{y-a}{2} \right) [r^2 - (y-a)^2]^{\frac{1}{2}} \, dy - \int_{-(r-a)}^{(r+a)} \frac{r^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) \, dy$$

Integrate (2):

$$\frac{1}{4} \int_{-(r-a)}^{(r+a)} [r^2 - (y-a)^2]^{\frac{1}{2}} - \left(\frac{y-a}{2}\right) 4dy - \frac{r^2}{2} (r) \int_{-(r-a)}^{(r+a)} \sin^{-1} \left(\frac{y-a}{r}\right) \left(\frac{1}{r}\right) dy$$

$$\frac{1}{4} \left[\frac{[r^2 - (y-a)^2]^{\frac{3}{2}}}{\frac{3}{2}} \right]_{-(r-a)}^{(r+a)} - \frac{r^3}{2} \left[\left(\frac{y-a}{r}\right) \sin^{-1} \left(\frac{y-a}{r}\right) + \sqrt{1 - \left(\frac{y-a}{r}\right)^2} \right]_{-(r-a)}^{(r+a)}$$

$$\frac{1}{6} [r^2 - (y-a)^2]^{\frac{3}{2}} \left|_{-(r-a)}^{(r+a)} - \frac{r^2(y-a)}{2} \sin^{-1} \left(\frac{y-a}{r}\right) \right|_{-(r-a)}^{(r+a)} + \frac{r^2}{2} \sqrt{r^2 - (y-a)^2} \left|_{-(r-a)}^{(r+a)}\right.$$

$$\int u \, dv = \frac{y(y-a)}{2} \sqrt{r^2 - (y-a)^2} + \frac{yr^2}{2} \sin^{-1} \left(\frac{y-a}{r}\right)$$

$$+ \frac{1}{6} [r^2 - (y-a)^2]^{\frac{3}{2}} - \frac{r^2(y-a)}{2} \sin^{-1} \left(\frac{y-a}{r}\right) - \frac{r^2}{2} \sqrt{r^2 - (y-a)^2} = A$$

Differentiate to check:

$$dA = \frac{1}{2} \frac{y(y-a)}{2} [r^2 - (y-a)^2]^{-\frac{1}{2}} (-2y-a) + r^2 - (y-a)^2]^{\frac{1}{2}} \frac{2y-a}{2}$$

$$+ \frac{yr^2}{2} \frac{1}{[1 - (y-a/r)^2]^{\frac{1}{2}}} \left(\frac{1}{r}\right) + \frac{r^2}{2} \sin \left(\frac{y-a}{r}\right)$$

$$+ \frac{1}{6} \left(\frac{3}{2}\right) [r^2 - (y-a)^2]^{\frac{1}{2}} (-2y-a) - \frac{r^2(y-a)}{2} \frac{1}{[1 - (y-a/r)^2]^{\frac{1}{2}}} \left(\frac{1}{r}\right)$$

$$- \sin^{-1} \left(\frac{y-a}{r} \right) \left(\frac{r^2}{2} \right) - \frac{1}{2} \frac{r^2}{2} [r^2 - (y-a)^2]^{-\frac{1}{2}} (-a)(y-a)$$

$$dA = \frac{-y(y-a)^2}{2} [r^2 - (y-a)^2]^{\frac{1}{2}} + \frac{2y-a}{2} [r^2 - (y-a)^2]^{\frac{1}{2}}$$

$$+ \frac{yr^2}{2} [r^2 - (y-a)^2]^{\frac{1}{2}} + \frac{r^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) - \frac{(y-a)}{2} [r^2 - (y-a)^2]^{\frac{1}{2}}$$

$$- \frac{r^2(y-a)}{2} [r^2 - (y-a)^2]^{\frac{1}{2}} - \frac{r^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) + \frac{r^2}{2} (y-a) [r^2 - (y-a)^2]^{-\frac{1}{2}}$$

$$dA = \frac{-\frac{y(y-a)^2}{2} + \frac{yr^2}{2} + y[r^2 - (y-a)^2] - \frac{a}{2}[r^2 - (y-a)^2] - \frac{y}{2}[r^2 - (y-a)^2] + \frac{a}{2}[r^2 - (y-a)^2]}{\sqrt{r^2 - (y-a)^2}}$$

$$dA = \frac{-y(y-a)^2 + yr^2 + 2y[r^2 - (y-a)^2] - y[r^2 - (y-a)^2]}{2 \sqrt{r^2 - (y-a)^2}}$$

$$dA = \frac{-y(y-a)^2 + yr^2 + y[r^2 - (y-a)^2]}{2 \sqrt{r^2 - (y-a)^2}}$$

$$dA = \frac{y[r^2 - (y-a)^2] + y[r^2 - (y-a)^2]}{2[r^2 - (y-a)^2]^{\frac{1}{2}}}$$

$$dA = y \sqrt{r^2 - (y-a)^2}$$

which checks

$$\frac{A_t \bar{y}}{2} = \frac{y(y-a)}{2} \sqrt{r^2 - (y-a)^2} + \frac{yr^2}{2} \sin^{-1} \left(\frac{y-a}{r} \right) + \frac{1}{6} [r^2 - (y-a)^2]^{3/2}$$

$$- \frac{r^2(y-a)}{2} \sin^{-1} \left(\frac{y-a}{r} \right) - \frac{r^2}{2} \sqrt{r^2 - (y-a)^2} \Bigg|_{-(r-a)}^{(r+a)}$$

$$\frac{A_t \bar{y}}{2} = \frac{(r+a)(r+a-a)}{2} \sqrt{r^2 - (r+a-a)^2} - \frac{(-r+a)(-r+a-a)}{2} \sqrt{r^2 - (-r+a-a)^2}$$

$$+ \frac{(r+a)r^2}{2} \sin^{-1} \left(\frac{r+a-a}{r} \right) - \frac{(-r+a)r^2}{2} \sin^{-1} \left(\frac{-r+a-a}{r} \right)$$

$$+ \frac{1}{6} [r^2 - (r+a-a)^2]^{3/2} - \frac{1}{6} [r^2 - (-r+a-a)^2]^{3/2}$$

$$- \frac{r^2(r+a-a)}{2} \sin^{-1} \left(\frac{r+a-a}{r} \right) + \frac{r^2(-r+a-a)}{2} \sin^{-1} \left(\frac{-r+a-a}{r} \right)$$

$$- \frac{r^2}{2} \sqrt{r^2 - (r+a-a)^2} + \frac{r^2}{2} \sqrt{r^2 - (-r+a-a)^2}$$

$$\frac{A_t \bar{y}}{2} = \frac{(r+a)r^2}{2} \sin^{-1}(1) + \frac{r^2(r-a)}{2} \sin^{-1}(-1) - \frac{r^2(r)}{2} \sin^{-1}(1) - \frac{r^2(r)}{2} \sin^{-1}(-1)$$

$$\frac{A_t \bar{y}}{2} = \frac{\pi r^2}{2} (r+a-a-r)$$

$$\frac{A_t \bar{y}}{2} = \frac{\pi r^2}{2} (a)$$

FIGURE B-10

Cross Section Valve Disc

FIGURE B-11

Link

[illegible]

B-19

FIGURE B-13

Pin

FIGURE B-14

Geometry of Disc Motion

FIGURE B-15

Piston Rod End

FIGURE B-16

Hinge Pin

Valve Disc

$$\frac{\pi r^2 \bar{y}}{2} = \frac{\pi r^2 a}{2}$$

$$\bar{y} = a$$

$$\bar{y} = 3.25$$

V. MOMENT OF INERTIA OF THE DISC ABOUT THE HINGE PINS

The moment of inertia may be determined experimentally by timing the period of oscillation of the disc around the hinge pins and using the equation for the period of oscillation of a compound pendulum.

FIGURE B-18

Disc equivalent

By Newton's Second Law

$$\Sigma T = I \alpha$$

$$- r_c mg \sin \theta = (mr_e^2 + I_c) \theta$$

But

$$(mr_c^2 + I_c) = I_0 \text{ (about point 0)}$$

$$\ddot{\theta} + \frac{r_c mg}{I_0} \theta = 0$$

Then

$$\tau = 2\sqrt{\frac{r_c mg}{I_0}}$$

and with

r_c = known distance to the c.g.

$mg = w$ = known weight

τ = timed period of oscillation

Then equation (2) may be solved for I_0 which is the need value.

IDENTIFICATION

1. Title: LSPF, LEAST SQUARES POLYNOMIAL FIT
2. Authors: L. E. Reese, F. H. Tyler, L. C. Richardson
3. Date: February, 1969
4. Programming Language: FORTRAN IV

PURPOSE

This program was written to provide a general polynomial fitting program. It has the capability of fitting the given data with polynomials of varying degrees in one run on the computer. This option is completely controlled by the user. It also has optional plotting of the data and calculated polynomial. Another option is the calculation, plotting, and printing of confidence limits of the derived polynomial.

For a given set of data points and control cards, the following are computed:

1. Fitting polynomial co-efficients for each degree specified. (n)
2. Data Information
 - (a) Input Abcissa x_i , $i = 1, 2, 3, \dots, m$
 - (b) Input Ordinate y_i , $i = 1, 2, 3, \dots, m$
 - (c) Calculated Ordinate for each data point x_i , $\hat{y}_i$
 - (d) Residual, $r_i = y_i - \hat{y}_i$
 - (e) Residual Squared, r_i^2
 - (f) Sum of Residual, $\sum r_i$
 - (g) Sum of Residuals Squared, $\sum r_i^2$
3. Degrees of freedom for the fit, $D = (m - n - 1)$
4. Variance
5. Standard Deviation

6. Variance and standard deviation of the polynomial coefficients
7. Inverse matrix of the normal equations
8. Identity matrix
- * 9. Evaluation of polynomial at each increment
- *10. Confidence limits for the fitting polynomial
- *11. Plot of data points, fitting polynomial and optional confidence interval

* Optional Output

METHOD

To determine

$$Y = a_0 + a_1x + a_2x^2 + a_3x^3 + \dots + a_nx^n.$$

Let

$$\Psi = \sum_{i=1}^m (y_i - Y_i)^2 \quad \text{where } m = \text{number of data points}$$

$$\therefore \frac{\partial \Psi}{\partial a_k} = 2 \sum_{i=1}^m (y_i - Y_i) (-x_i^k)$$

$$= \sum x_i^k y_i - a_0 \sum x_i^k - a_1 \sum x_i^{k+1} - \dots - a_n \sum x_i^{k+n}$$

Equating each of the $n+1$ equations thus obtained to zero (minimizing Ψ) gives:

$$a_0 \sum 1 + a_1 \sum x_i + a_2 \sum x_i^2 + \dots + a_n \sum x_i^n = \sum y_i$$

$$\vdots$$

$$a_0 \sum x_i^n + a_1 \sum x_i^{n+1} + \dots + a_n \sum x_i^{2n} = \sum x_i^n y_i$$

This system (called the normal equations) is solved for the a_k values by scaling and inversion, thus obtaining the desired best fit Y .

The statistical values are obtained by use of formulae found in Experimental Statistics, M. G. Natrella, NBS Handbook 91.

INPUT

The input parameters are read in on 4 - 6 different types of input cards depending on what options are used. If all options are asked for, the input parameters are as follows:

Card 1:

Column	Contents
4-5	Degree of first fit desired
9-10	Degree of last fit desired
14-15	Increment (see sample problem)
19-20	Number of points to be evaluated
26-40	Beginning value of x
41-55	Increments of x
60	The use of the plotters
	0 = No plots
	1 = Small plotter
	2 = Large plotter

Card 2: (Optional)

1-15	Beginning plot value of x
16-30	Ending plot value of x
31-46	The label on the Y-Axis
47-62	The label on the X-Axis
65	Confidence limits
	0 = None
	1 = Plotted and printed
	2 = Plotted, but not printed

Card 3: (Optional)

1-40	The confidence limits taken from a standard t - Distribution table for the proper degree of freedom on each fit desired.
------	--

Card 4:

1-15	The x values
16-30	The y values

Card 5:

40 = 1	Control card
--------	--------------

Card 6:

65 = 1	Control card (last card of data)
--------	----------------------------------

If no incremental polynomial evaluation is desired columns 19-20 on card type 1 should be left blank.

If there are to be no plots, then card type 2 and card type 3 are omitted.

If there are to be plots, but no confidence limits, the column 57 on card type 2 must be zero or blank and card type 3 is to be omitted.

This program is capable of recycling and of using any number of data points up to 1000.

RESTRICTIONS

If the normal equations generate a singular matrix, a message stating this fact is printed out and the program is terminated for that set of data.

COMPILER OPTIONS - NAME= MAIN,OPT=02,LINECNT=58,SOURCE,EBCDIC,NOLIST,NODECK,

```

C *****
C *
C * LEAST SQUARES POLYNOMIAL FIT
C * AUTHOR L. E. REESE
C *
C * FOLLOWING IS A LIST OF FIELDS THAT ARE USED AS INPUT.
C *
C * CARD 1
C *   N1 = DEGREE OF FIRST FIT
C *       COL. 4-5
C *   N2 = DEGREE OF LAST FIT
C *       COL. 9-10
C *   K = INCREMENTS BY WHICH FITS WILL TRIED
C *       COL. 14-15
C *   NPE = NUMBER OF POINTS TO BE EVALUATED
C *       COL. 19-20
C *   BOX = BEGINNING VALUE OF X
C *       COL. 26-40
C *   DEX = INCREMENTS OF X
C *       COL. 41-55
C *   NPLT = 0 IF NO PLOT IS DESIRED
C *          = 1 IF THE SMALL PLOTTER IS TO BE USED
C *          = 2 IF THE LARGE PLOTTER IS TO BE USED
C *       COL. 60
C *
C * IF PLOTS ARE CALLED FOR, THE FOLLOWING FIELDS ARE READ IN ON
C * THE SECOND DATA CARD.
C *
C * CARD 2
C *
C *   BPVX = BEGINNING PLOT VALUE OF X
C *       COL. 1-15
C *   EPVX = ENDING PLOT VALUE OF X
C *       COL. 16-30
C *   YLAB = THE LABEL ON THE Y-AXIS
C *       COL. 31-42
C *   XLAB = THE LABEL ON THE X-AXIS
C *       COL. 43-54
C *   NCONF = 0 IF NO CONFIDENCE LIMITS ARE DESIRED
C *           = 1 IF CONFIDENCE LIMITS ARE DESIRED
C *           = 2 IF CONFIDENCE LIMITS ARE DESIRED, BUT IF NO
C *             PRINTOUT OF THEM IS DESIRED
C *       COL. 57
C *
C * IF CONFIDENCE LIMITS ARE DESIRED, THEN N3 CONFIDENCE
C * LIMITS MUST BE READ IN.
C *
C * CARD 3
C *
C *   TR(I) = THE CONFIDENCE LIMITS
C *       COL. 1-40
C *
C * THE X, Y, AND END CHECK VALUES ARE READ IN
C *
C * CARD 4
C *

```

```

C      *      X(I) = THE X VALUES
C      *      COL. 1-15
C      *      Y(I) = THE Y VALUES
C      *      COL. 16-30
C      *      CARD 5
C      *      NCKKK = THE CHECK FOR THE LAST SET OF X AND Y VALUES
C      *      COL. 40 =1
C      *
C      *****
ISN 0002      DIMENSION X(1000),Y(1000),SUM(100),SUMY(16),A(16,16),AM(16)
ISN 0003      DIMENSION YHAB(802),XSAVEB(802)
ISN 0004      DIMENSION B(16,16),SCALE(16),ABI(16,16),SDVP(16),VARP(16)
ISN 0005      DIMENSION YHB(802),YHA(802),TR(50),XSAVE(802),DCRXV(16)
ISN 0006      REAL*8 YLAB(2), XLAB(2)
ISN 0007      DOUBLE PRECISION A,B,SUM,SUMY,DET,SCALE,FX,AM,C
ISN 0008      DOUBLE PRECISION XO,XOS,XON,XS,XY
ISN 0009      DATA DIA/7300000000/

C
C      ALL SQUARE ROOT AND ABSOLUTE VALUE STATEMENTS MUST BE CHANGED
C      TO RUN ON 1604
C
C      READ DATA CARDS
C
ISN 0010      99 READ (5,101) N1,N2,K,NPE,BGX,DEX,NPLOT,NPROG
ISN 0011      101 FORMAT(4I5,5X,2E15.8,2I5)
ISN 0012      IF(NPROG)5555,5555,8888
ISN 0013      5555 IF (NPLOT) 1000,402,1000
ISN 0014      1000 READ (5,1011)BPVX,FPVX,YLAB,XLAB,NCONF
ISN 0015      1011 FORMAT(2E15.8,4A8,I3)
ISN 0016      NCCON = NCONF
ISN 0017      N3 = (N2 - N1)/K + 1
ISN 0018      IF (NCONF) 9999,402,9999
ISN 0019      9999 READ (5,1012) (TR(I), I = 1, N3)
ISN 0020      1012 FORMAT (E40.8)
ISN 0021      N3 = 0
ISN 0022      402 II = 2*N2
ISN 0023      DO 1 I=1,II
ISN 0024      1 SUM(I)=0.0
ISN 0025      IN=N2+1
ISN 0026      DO 4 I=1,IN
ISN 0027      4 SUMY(I)=0.0
ISN 0028      M=0
ISN 0029      I=1
ISN 0030      2 READ (5,102) X(I),Y(I),NCKKK
ISN 0031      102 FORMAT ( 2E15.8,I10)
ISN 0032      IF (NCKKK) 9998,9998,3
ISN 0033      9998 M=M + 1
ISN 0034      I = I + 1
ISN 0035      GO TO 2

C
C      FORM THE SUMS
C
ISN 0036      3 DO 6 I=1,M
ISN 0037      XO=X(I)
ISN 0038      XS=XO*XO

```

```

ISN 0039      XDN=1.0/XD
ISN 0040      XDS=1.0
ISN 0041      XY=1.0
ISN 0042      SUMY(1)=SUMY(1)+Y(1)
ISN 0043      DO 5 J=1,N2
ISN 0044      NS=2*J
ISN 0045      XY=XY*X(1)
ISN 0046      XDN=XDN*XS
ISN 0047      XDS=XDS*XS
ISN 0048      SUM(NS-1)=SUM(NS-1)+XDN
ISN 0049      SUM(NS)=SUM(NS)+XDS
ISN 0050      5 SUMY(J+1)=SUMY(J+1)+XY*Y(1)
ISN 0051      6 CONTINUE

C
C      BUILD B MATRIX
C
ISN 0052      C=M
ISN 0053      7 B(1,1)=C
ISN 0054      DO 10 I=1,11
ISN 0055      IF(N2-I) 9,8,8
ISN 0056      8 B(1,1+I)=SUM(1)
ISN 0057      GO TO 10
ISN 0058      9 NSK=I+1-N2
ISN 0059      B(NSK,1N)=SUM(1)
ISN 0060      10 CONTINUE
ISN 0061      DO 13 I=1,N2
ISN 0062      DO 12 J=1,N2
ISN 0063      12 B(1+I,J)=B(1,J+1)
ISN 0064      13 CONTINUE

C
C      SCALE SUMY AND B MATRIX
C
ISN 0065      DO 14 I=2,1N
ISN 0066      J=2*(I-1)
ISN 0067      SCALE(I)=DSQRT(SUM(J))
ISN 0068      14 SUMY(I)=SUMY(I)/SCALE(I)
ISN 0069      SCALE(1)=DSQRT(C)
ISN 0070      SUMY(1)=SUMY(1)/SCALE(1)
ISN 0071      DO 15 I=1,1N
ISN 0072      DO 15 J=1,1N
ISN 0073      15 B(I,J)=B(I,J)/(SCALE(I)*SCALE(J))

C
C      IF NPLOT IS NOT EQUAL TO 0, CALL PLOT SUBROUTINES.
C
ISN 0074      IF (NPLOT) 9997,192,9997
ISN 0075      9997 SF = 9.
ISN 0076      IF (NPLOT-2) 9995,9996,9995
ISN 0077      9996 CALL PLOT1 (5.0,-18.0,-3)
ISN 0078      9995 CALL PLOT2 (5.0,-11.0,-3)
ISN 0079      192 IN1=N1+1

C
C      INITIALIZE YMAX AND YMIN.
C
ISN 0080      YMAX=Y(1)
ISN 0081      YMIN=Y(1)
ISN 0082      NCONF = NCCON

```

```

C
C      COPY B MATRIX INTO A MATRIX
C
0083      IN1 = N1 + 1
0084      DO 16 I=1,IN1
0085      DO 16 J=1,IN1
0086      16  A(I,J)=B(I,J)
0087      DO 17 I=1,IN1
0088      17  AM(I)=SUMY(I)
C
C      INVERT A MATRIX
C
0089      CALL DMAINV (A,IN1,AM,DET,IFS)
0090      IF (IFS) 19,18,19
0091      18  WRITE (6,103) N1,N2,K,M
0092      103  FORMAT(45H1NORMAL EQUATIONS GENERATED A SINGULAR MATRIX4I5)
0093      GO TO 99
C
C      MULTIPLY A INVERSE MATRIX TIMES B MATRIX
C      ABI = IDENTITY MATRIX
C
0094      19  DO 191 I=1,IN1
0095      DO 191 J=1,IN1
0096      ABI(I,J)=0.0
0097      DO 191 L=1,IN1
0098      191  ABI(I,J)=ABI(I,J)+A(I,L)*B(L,J)
C
C      UNSCALE AM MATRIX AND A MATRIX
C      WRITE AM MATRIX
C
0099      DO 20 I=1,IN1
0100      AM(I)=AM(I)/SCALE(I)
0101      DO 20 J=1,IN1
0102      20  A(I,J)=A(I,J)/(SCALE(J)*SCALE(I))
0103      WRITE (6,104) N1
0104      104  FORMAT(40H1LEAST SQUARES POLYNOMIAL FIT FOR DEGREE13,1H.)
0105      WRITE (6,105) AM(1)
0106      105  FORMAT(18HOPOLYNOMIAL F(X) =/1H01PE15.7)
0107      DO 21 I=2,IN1
0108      KO=I-1
0109      21  WRITE (6,106) AM(I),KO
0110      106  FORMAT(1H 1PE15.7,5H X **I2)
C
C      FORM RESIDUALS, SQUARE RESIDUALS, AND THEIR SUMS AND WRITE
C      THEM OUT.
C
0111      WRITE (6,107)
0112      1070  FORMAT(20H1DATA INFORMATION.../1H012X11HINPUT  DATA14X10HCALCULAT
0113      1071E07X8HRESIDUAL8X8HRESIDUAL/1H 9X1HX15X1HY14X4HF(X)11X6HY-F(X)10X7H
0114      1072SQUARED//)
0115      SSR=0.0
0116      SR=0.0
0117      DO 23 I=1,M
0118      FX=AM(IN1)
0119      DO 22 J=1,N1
0120      KU=IN1-J

```

```

N 0119      22  FX=FX*X(I)+AM(KO)
N 0120      R=Y(I)-FX
N 0121      RS=R*R
N 0122      SSR=SSR+RS
N 0123      SR=SR+K
N 0124      23  WRITE (6,108) X(I),Y(I),FX,R,RS
N 0125      108  FORMAT(1H 1P5E16.6)

C
C      FORM DEGREES OF FREEDOM, VARIANCES, AND STANDARD DEVIATIONS.
C
N 0126      NDF=M-IN1
N 0127      SD=NDF
N 0128      VAR=SSR/SD
N 0129      SDV=SQRT(VAR)
N 0130      DO 24 I=1,IN1
N 0131      VARP(I)=A(I,I)*VAR
N 0132      24  SDVP(I)=SQRT(VARP(I))
N 0133      WRITE (6,109) SR,SSR,NDF,VAR,SDV,(AM(I),VARP(I),SDVP(I),I=1,IN1)
N 0134      1090 FORMAT(19H0SUM OF RESIDUALS =1PE14.6,5X29H0SUM OF SQUARES OF RESID
1091UALS =1PE14.6/30H1DEGRFES OF FREEDOM -(M-(N+1))=13/11H0VARIANCE =1P
1092F14.6/21H0STANDARD DEVIATION =1PE14.6/1H05X9HPARAMETERBX8HVARIANCE
10938X9HSTD. DEV./ (1P3E16.6))

C
C      WRITE OUT THE A MATRIX AND THE ABI MATRIX.
C
SN 0135      NET=IN1
SN 0136      NP=0
SN 0137      DO 25 I=1,7
SN 0138      NET=NET-7
SN 0139      NP=NP+1
SN 0140      IF (NET) 26,26,25
SN 0141      25  CONTINUE
SN 0142      26  NPL=NP-1
SN 0143      IF (NPL) 99,30,27
SN 0144      27  DO 29 I=1,NPL
SN 0145      WRITE (6,110) I
SN 0146      110  FORMAT(21H1INVERSE MATRIX (PAGE12,1H)//)
SN 0147      NET=7*I
SN 0148      NST = NET - 6
SN 0149      DO 28 J=1,IN1
SN 0150      28  WRITE (6,111) (A(J,L),L=NST,NET)
SN 0151      111  FORMAT(1P8E16.7)
SN 0152      29  CONTINUE
SN 0153      30  NST = NPL*7+1
SN 0154      NET=IN1
SN 0155      WRITE (6,110)NP
SN 0156      DO 31 J=1,IN1
SN 0157      31  WRITE (6,111) (A(J,L),L=NST,NET)
SN 0158      IF (NPL) 99,35,32
SN 0159      32  DO 34 I=1,NPL
SN 0160      WRITE (6,112) I
SN 0161      112  FORMAT(22H1IDENTITY MATRIX (PAGE12,1H)//)
SN 0162      NET = 7*I
SN 0163      NST = NET - 6
SN 0164      DO 33 J=1,IN1
SN 0165      33  WRITE (6,111) (ABI(J,L),L=NST,NET)

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SN 0166      34 CONTINUE
SN 0167      35 NST = NPL * 7 + 1
SN 0168      NET=IN1
SN 0169      WRITE (6,112) NP
SN 0170      DO 36 J=1,IN1
SN 0171      36 WRITE (6,111) (ABI(J,L),L=NST,NET)
SN 0172      IF (NPE) 99,390,38
C
C      EVALUATION OF THE POLYNOMIAL AT EACH POINT.
C
SN 0173      38 WRITE (6,113)
SN 0174      113 FORMAT(25H1EVALUATION OF POLYNOMIAL/1H08X1HX13X4HF(X))
SN 0175      BVX=BOX
SN 0176      DO 40 I=1,NPE
SN 0177      FX=AM(IN1)
SN 0178      DO 39 J=1,N1
SN 0179      KO=IN1-J
SN 0180      39 FX=FX*BVX+AM(KO)
C
C      SET YMAX AND YMIN.
C
SN 0181      IF (FX - YMAX) 9993,9993,9994
SN 0182      9994 YMAX = FX
SN 0183      9993 IF (FX - YMIN) 9992,400,400
SN 0184      9992 YMIN = FX
SN 0185      400 WRITE (6,111) BVX,FX
SN 0186      40 BVX=BVX+DEX
C
C      PLOTTING PART OF PROGRAM
C
SN 0187      390 IF (NPLOT) 9991,37,9991
SN 0188      9991 FN1 =N1
C
C      PUT ALL X'S IN ASCENDING ORDER
C
SN 0189      DO 392 J = 2,M
SN 0190      IF (X(J) - X(J-1)) 9990,392,392
SN 0191      9990 L=J
SN 0192      391 TEMP = X(L)
SN 0193      X(L) = X(L-1)
SN 0194      X(L-1) = TEMP
SN 0195      TEMP = Y(L)
SN 0196      Y(L) = Y(L-1)
SN 0197      Y(L-1) = TEMP
SN 0198      L=L-1
SN 0199      IF (L-2) 392,9989,9989
SN 0200      9989 IF (X(L)-X(L-1)) 391,392,392
SN 0201      392 CONTINUE
C
C      MAKE CORRECTIONS ON YMAX AND YMIN
C
SN 0202      DO 9887 I = 1, M
SN 0203      IF (Y(I) - YMAX) 393,393,9988
SN 0204      9988 YMAX = Y(I)
SN 0205      393 IF (Y(I) - YMIN) 9987,9887,9887
SN 0206      9987 YMIN = Y(I)

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SN 0207      9887 CONTINUE
C
C      IF LARGE PLOTTER TO BE USED, GO TO 399. OTHERWISE COMPUTE
C      THE DIVISION OF Y (DVY) AND THE DIVISIONS OF X (DVX), THEN
C      PLOT THE AXES AND HEADING.
C
SN 0208      9986 IF (NPLOT - 2) 9985,399,9985
SN 0209      9985 DVY = (YMAX - YMIN)/8.0
SN 0210      DVX = (FPVX - BPVX)/20.0
SN 0211      CALL PLOT (2.0,1.50,-3)
SN 0212      CALL AXIS (0.,-1.,YLAB,16,10.,90.,YMIN,DVY,-2)
SN 0213      CALL AXIS (0.0,-1.0,XLAB,16,20.0,00.0,BPVX,DVX,-2)
SN 0214      CALL SYMBL4 (-.75,0.,.2,23HPOLYNOMIAL IS OF DEGREE,90.,23)
SN 0215      CALL NUMBER (-.75,5.5,.3;FN1,90.,0)
C
C      CALCULATE AND PLOT THE F(X) VALUES.
C
SN 0216      394 DELTA = DVX/20.0
SN 0217      DCRX = .BPVX
SN 0218      FX = AM(IN1)
SN 0219      DO 396 J=1,N1
SN 0220      KO = IN1 - J
SN 0221      396 FX = FX*DCRX + AM(KO)
C
C      MAKE SURE F(X) VALUES FALL WITHIN DESIRED RANGE.
C
SN 0222      YT = (FX - YMIN)/DVY
SN 0223      IF (YT - SF) 9983,9983,9984
SN 0224      9984 YT = SF
SN 0225      9983 IF (YT - (-1.0)) 9982,9981,9981
SN 0226      9982 YT = -1.0
SN 0227      9981 CALL PLOT (0.0,YT,3)
SN 0228      L = 1
C
C      CALCULATE CONFIDENCE LEVELS.
C
SN 0229      IF (NCONF - 1) 388,9979,387
SN 0230      9979 WRITE (6,409)
SN 0231      409 FORMAT (33H1CALCULATION OF CONFIDENCE LEVELS/8X1HX13X4HF(X)11X6HF
      1(X)-C10X6HF(X)+C13X1HC)
      LIN=0
SN 0232      387 N3 = N3 + 1
SN 0233      388 JCHECK=1
SN 0234      389 XT1=(X(JCHECK)-BPVX)/DVX
SN 0235      YT1=(Y(JCHECK)-YMIN)/DVY
SN 0236      397 DCRX = DCRX + DELTA
SN 0237      FX = AM(IN1)
SN 0238      DO 398 J=1,N1
SN 0239      KO = IN1-J
SN 0240      398 FX = FX*DCRX + AM(KO)
SN 0241      IF (NCONF) 9978,3981,9978
SN 0242
C
C      CONFIDENCE LEVELS CALCULATED FROM TABLE OF CONFIDENCE LIMITS.
C
SN 0243      9978 DCRXV(1) = 1.
SN 0244      DO 405 IH = 2, IN1

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SN 0145      405 DCRXV(IH) = DCRX**(IH - 1)
SN 0146      VAL = 0.
SN 0147      DO 406 IH = 1,INI
SN 0248      DO 406 JH = 1,INI
SN 0249      406 VAL = VAL + DCRXV(IH) * DCRXV(JH) * A(IH,JH)
SN 0250      IF (VAL) 600,9977,9977
SN 0251      9977 TRT = TR(N3) * SDV * SQRT(VAL)
C
C      YHA = UPPER CONFIDENCE LEVEL
C      YHB = LOWER CONFIDENCE LEVEL
C
SN 0252      YHA(L) = FX + TRT
SN 0253      YHB(L) = FX - TRT
SN 0254      XSAVE(L) = DCRX
SN 0255      IF (NCONF - 2) 9976,408,9976
C
C      PRINT X VALUES, F(X), LOWER CONFIDENCE LEVEL, UPPER CONFIDENCE
C      LEVEL, AND THE CONFIDENCE VALUE.
C
SN 0256      9976 WRITE (6,407) XSAVE(L),FX,YHB(L),YHA(L),TRT
SN 0257      407 FORMAT (5E16.6)
SN 0258      LIN=LIN+1
SN 0259      IF (LIN - 55) 408,408,488
SN 0260      488 LIN=0
SN 0261      PRINT 409
SN 0262      408 L = L+1
C
C      MAKE SURE F(X) FITS WITHIN DESIRED LIMITS AND PLOT ALL F(X)'S.
C
SN 0263      3981 YT = (FX - YMIN)/DVY
SN 0264      IF (YT-SF) 9974,9974,9975
SN 0265      9975 YT=SF
SN 0266      9974 IF (YT-(-1.0)) 9973,9972,9972
SN 0267      9973 YT = -1.0
SN 0268      9972 XT = (DCRX -BPVX)/DVX
SN 0269      CALL PLOT (XT,YT,2)
SN 0270      IF(JCHECK-M) 369,369,371
SN 0271      369 IF(XT1-XT) 370,370,371
SN 0272      370 CALL SYMBL4 (XT1,YT1,.28,DIA,0.0,1)
SN 0273      CALL PLOT (XT,YT,3)
SN 0274      JCHECK=JCHECK+1
SN 0275      IF(JCHECK-M) 389,389,371
SN 0276      371 IF(EPVX-DCRX) 401,401,397
SN 0277      401 IF (NCONF)9971,4011,9971
SN 0278      9971 L = L - 1
C
C      SCALE XSAVE, YHA, AND YHB AND MAKE SURE THEY FIT IN DESIRED
C      LIMITS.
C
SN 0279      DO 4012 I = 1,L
SN 0280      J=L+1-I
SN 0281      XSAVEB(J) = (XSAVE(I)-BPVX)/DVX
SN 0282      XSAVEF(I) = (XSAVE(I) - BPVX)/DVX
SN 0283      YHAB(J) = (YHA(I)-YMIN)/DVY
SN 0284      YHBF(I) = (YHB(I) - YMIN)/DVY
SN 0285      IF(YHAB(J)-SF) 9769,9769,9970

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SN 0286      9970  YHAB(J)=SF
SN 0287      9769  IF(YHAB(J)+1.) 9771,9772,9772
SN 0288      9771  YHAB(J)=-1.
SN 0289      9772  IF(YHAB(I)-SF) 9969,9969,9773
SN 0290      9773  YHB(I) = SF
SN 0291      9969  IF ( YHB(I)-(-1.0)) 9968,4012,4012
SN 0292      9968  YHB(I) = -1.0
SN 0293      4012  CONTINUE

C
C      PLOT CONFIDENCE LEVELS
C
SN 0294      CALL LINE (XSAVEB,YHAB,L,1)
SN 0295      CALL LINE (XSAVE,YHB,L,1)
SN 0296      4011 IF (NPLOT-2) 9966,9967,9966
SN 0297      9967 CALL PLOT (20.0,-10.0,-3)
SN 0298      9966 CALL PLOTS (24.0,-10.0,-3)
SN 0299      GO TO 37

C
C      THIS IS PLOTTING PART OF PROGRAM FOR LARGE PLOTTER.
C
SN 0300      399 DVY = (YMAX -YMIN)/18.0
SN 0301      DVX = (EPVX -BPVX)/40.0
SN 0302      SF = 19.
SN 0303      CALL PLOT (2.0,1.75,-3)
SN 0304      CALL AXIS (0.,-1.,YLAB,16,20.,90.,YMIN,DVY,-2)
SN 0305      CALL AXIS (0.0,-1.0,XLAB,16,40.0,00.0,BPVX,DVX,-2)
SN 0306      CALL SYMBL4 (-1.5,5.0,.3,23HPOLYNOMIAL IS OF DEGREE,90.0,23)
SN 0307      CALL NUMBER (-1.5,13.0,0.4,FN1,90.0,0)
SN 0308      GO TO 394

C
C      CHECK TO SEE IF LAST DEGREE OF EQUATIONS HAVE BEEN CALCULATED.
C
SN 0309      37 IF (N2-N1) 9965,99,9965
SN 0310      9965 N1 = N1 +K
SN 0311      GO TO 192
SN 0312      600 VAL = SDV*SDV*VAL
SN 0313      WRITE (6,700)DCRX,FX,VAL
SN 0314      700 FORMAT (46H0THE VARIANCE OF A PREDICTED POINT IS NEGATIVE/1H07X1HX
          113X4HF(X)11X4HC**2/1H03E16.6)
SN 0315      NCCON = NCONF
SN 0316      NCONF = 0
SN 0317      GO TO 3981
SN 0318      8888 STOP
SN 0319      END
NS FOR EXTERNAL REFERENCES

ND OF COMPILATION 16 FUP **

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JULY 68)

OS/360 FORTRAN H

COMPILER OPTIONS - NAME= MAIN,OPT=02,LINECNT=58,SOURCE,FBCDIC,NOLIST,NODECK,LOAD,NOMA
SUBROUTINE DMAINV (A, M, B, DET, IFS)

C	DOUBLE PRECISION DOUBLE PIVOTAL MATRIX INVERSION SUBROUTINE	DMV00010
C	D.H. GIPSON PHILLIPS PETROLEUM CO. JUNE, 1962	DMV00020
C		DMV00030
C		DMV00050
	DIMENSION IROW(100), JCOL(100)	
	DIMENSION A(16,16), B(16)	
	DOUBLE PRECISION A,TEMP,ALPHA,PIVOT,B,Z,DET	
1	DO 2 I=1,M	DMV00160
	IROW(I)=0	DMV00170
2	JCOL(I)=0	DMV00180
	DET=1.0	DMV00190
	IFS=1	DMV00200
	DO 23 K=1,M	DMV00210
C		DMV00220
C	FIND THE PIVOT ELEMENT	PART (2) DMV00230
C		DMV00240
3	PIVOT = 0.0	DMV00250
	DO 8 J=1,M	DMV00260
	IF(JCOL(J))8,4,8	DMV00270
4	DO 7 I=1,M	DMV00280
	IF(IROW(I))7,5,7	DMV00290
5	Z=DABS(A(I,J))	
	IF(Z-PIVOT)7,6,6	DMV00310
6	PIVOT=Z	DMV00320
	JP=J	DMV00330
	IP=I	DMV00340
7	CONTINUE	DMV00350
8	CONTINUE	DMV00360
C		DMV00370
C	TEST TO SEE IF MATRIX IS SINGULAR	PART (2) DMV00380
C		DMV00390
	PIVOT=A(IP,JP)	DMV00400
	DET=DET*PIVOT	DMV00410
	IF(PIVOT)10,9,10	DMV00420
9	IFS=0	DMV00430
	RETURN	DMV00440
C		DMV00450
C	REMEMBER LOCATION OF THE PIVOT ELEMENT	PART (2) DMV00460
C		DMV00470
10	IROW(IP)=JP	DMV00480
	JCOL(JP)=IP	DMV00490
C		DMV00500
C	ARITHMETIC OPERATIONS ON PIVOTAL COLUMN	PART (3) DMV00510
C		DMV00520
	A(IP,JP)=1.0/PIVOT	DMV00530
	DO 12 I=1,M	DMV00540
	IF(I-IP)11,12,11	DMV00550
11	A(I,JP)=-A(I,JP)/PIVOT	DMV00560
12	CONTINUE	DMV00570
C		DMV00580
C	ARITHMETIC OPERATIONS ON OTHER COLUMNS OF (A)	PART (4) DMV00590
C		DMV00600
	DO 17 J=1,M	DMV00610

	IF(J-JP)13,17,13	DMV00620
13	IF(A(IP,J))14,17,14	DMV00630
14	ALPHA=A(IP,J)	DMV00640
	A(IP,J)=ALPHA/PIVOT	DMV00650
	DO 16 I=1,M	DMV00660
	IF(I-IP)15,16,15	DMV00670
15	A(I,J)=A(I,J)+ALPHA*A(I,JP)	DMV00680
16	CONTINUE	DMV00690
17	CONTINUE	DMV00700
C		DMV00710
C	ARITHMETIC OPERATIONS ON THE COLUMNS OF (B)	PART (4) DMV00720
C		DMV00730
	IF(B(IP)) 19,23,19	DMV00740
19	ALPHA=B(IP)	DMV00750
	B(IP)=ALPHA/PIVOT	DMV00760
	DO 21 I=1,M	DMV00770
	IF(I-IP)20,21,20	DMV00780
20	B(I)=B(I)+ALPHA*A(I,JP)	DMV00790
21	CONTINUE	DMV00800
23	CONTINUE	DMV00810
C		DMV00820
C	ROW PERMUTATIONS	PART (5) DMV00830
C		DMV00840
	DO 30 K=1,M	DMV00850
24	I=IROW(K)	DMV00860
	IF(I-K)25,30,25	DMV00870
25	DET=-DET	DMV00880
	DO 26 J=1,M	DMV00890
	TEMP=A(I,J)	DMV00900
	A(I,J)=A(K,J)	DMV00910
26	A(K,J)=TEMP	DMV00920
	TEMP=B(I)	DMV00930
	B(I)=B(K)	DMV00940
	B(K)=TEMP	DMV00950
29	IROW(K)=IROW(I)	DMV00960
	IROW(I)=I	DMV00970
	GO TO 24	DMV00980
30	CONTINUE	DMV00990
C		DMV01000
C	COLUMN PERMUTATIONS	PART (6) DMV01010
C		DMV01020
	DO 34 K=1,M	DMV01030
31	J=JCOL(K)	DMV01040
	IF(J-K)32,34,32	DMV01050
32	DO 33 I=1,M	DMV01060
	TEMP=A(I,J)	DMV01070
	A(I,J)=A(I,K)	DMV01080
33	A(I,K)=TEMP	DMV01090
	JCOL(K)=JCOL(J)	DMV01100
	JCOL(J)=J	DMV01110
	GO TO 31	DMV01120
34	CONTINUE	DMV01130
	RETURN	DMV01140
	END	DMV01150

COMPILATION 16 FUP **

F88-LEVEL LINKAGE EDITOR OPTIONS SPECIFIED MAP,LET,LIST
 VARIABLE OPTIONS USED - SIZE=(92160,8192)

DEFAULT OPTION(S)

MODULE MAP

CONTROL SECTION

NAME	ORIGIN	LENGTH
MAIN	00	96CC
DMAINV	9600	954
AXIS *	A028	700
IHCLSORT*	A7F8	142
IHCFRXPI*	A940	141
IHCFCOMH*	AA88	FF1
IHCFCOMH2*	BA80	3FD
LINE *	BE80	246
NUMBER *	C0C8	612
PLOT *	C6E0	72C
PLOTL *	CE10	1BF
PLOTS *	CFD0	1BE
IHCSSQRT*	D190	149
IHCFCVTH*	D2E0	116D
IHCFCNTH*	E450	512
IHCSSCN *	E968	1ED
IHCFCIOS*	EB58	1104
IHCERRM *	FC60	59C
IHCUMPT *	10200	318
SYMBL4 *	10518	886
IHCSLOG *	10DA0	1BA
BCDBYT *	10F60	4C
IHCETRCH*	10F80	28E
IHCUTABL*	11240	238
NORMAL *	11478	66A
PLTSEP *	11AE8	2E6
WRTPLT *	11DD0	308
PLTJOB *	120D8	1AF
AXSD05	12288	8

ENTRY

NAME	LOCATION	NAME	LOCATION	NAME
DSQRT	A7F8			
FRXPI#	A940			
IHCOM#	AA88	FDIOCS#	AB44	INTSWT
SEQDASD	BB98			
SQRT	D190			
ADCON#	D2E0	FCVAOUTP	D38A	FCVLOU
FCVIOUTP	D8F6	FCVEOUTP	DDF8	FCVCOU
ARITH#	F450	ADJSWTH	E7BC	
COS	E968	SIN	E984	
FIOCS/	EB58	FIOCSBEP	EB5E	
FRRMON	FC60	IHCERRR	PCT8	
SYMBLJ	10518	SYMTAB	107FC	
ALOG10	10DA0	ALOG	10DBC	
IHCETRCH	10F80	ERRTRA	10F88	

NAME	ORIGIN	LENGTH	NAME	LOCATION	NAME	LOCATION	NAME
ENTRY ADDRESS		00					
TOTAL LENGTH		12290 =		74,384(10)			
****MAIN DOES NOT EXIST BUT HAS BEEN ADDED TO DATA SET							

LEAST SQUARES POLYNOMIAL FIT FOR DEGREE 3.

POLYNOMIAL F(X) =

3.3628494D 02
-1.6730187D 01 X ** 1
-1.3023830D 01 X ** 2
7.4510309D 00 X ** 3

DATA INFORMATION...

INPUT X	DATA Y	CALCULATED F(X)	RESIDUAL Y-F(X)	RESIDUAL SQUARED
9.999996E-02	3.360000E 02	3.344891D 02	1.510860E 00	2.282699E 00
4.000000E-01	3.250000E 02	3.279959D 02	-2.985923E 00	8.915734E 00
1.000000E 00	3.160000E 02	3.139820D 02	2.018042E 00	4.072492E 00
1.500000E 00	3.070000E 02	3.070333D 02	-3.327576E-02	1.107276E-03
2.219999E 00	3.160000E 02	3.164793D 02	-4.793484E-01	2.297749E-01
2.440000E 00	3.240000E 02	3.261641D 02	-2.164108E 00	4.683364E 00
2.540000E 00	3.340000E 02	3.318662D 02	2.133753E 00	4.552900E 00

SUM OF RESIDUALS = 0.0

SUM OF SQUARES OF RESIDUALS = 2.473805E 01

DEGREES OF FREEDOM (M-(N+1))= 3

VARIANCE = 8.246017E 00

STANDARD DEVIATION = 2.871508E 00

PARAMETER	VARIANCE	STD. DEV.
3.362849D 02	1.391689E 01	3.730535E 00
-1.673019D 01	2.282373E 02	1.510752E 01
-1.302383D 01	2.032910E 02	1.425802E 01
7.451031D 00	1.292121E 01	3.594608E 00

INVERSE MATRIX (PAGE 1)

1.6877103D 00	-5.6679529D 00	4.6281621D 00	-1.0595526D 00
-5.6679529D 00	2.7678492D 01	-2.5393178D 01	6.1422520D 00
4.6281621D 00	-2.5393178D 01	2.4653236D 01	-6.1568371D 00
-1.0595526D 00	6.1422520D 00	-6.1568371D 00	1.5669640D 00

IDENTITY MATRIX (PAGE 1)

1.0000048E 00	-2.6740208E-06	-8.2047109E-06	-8.2594934E-06
5.3737152E-05	9.9998510E-01	-1.9372228E-04	5.5541750E-05
-6.3435757E-05	5.5830824E-05	1.0000324E 00	-1.1987046E-04
1.0960908E-05	3.3967633E-05	-8.8182234E-05	1.0000830E 00

EVALUATION OF POLYNOMIAL

X	F(X)
0.0	3.3628494D 02
9.9999964E-02	3.3448914D 02
1.9999993E-01	3.3247756D 02
2.9999989E-01	3.3029492D 02
3.9999986E-01	3.2798593D 02
4.9999982E-01	3.2559528D 02
5.9999979E-01	3.2316768D 02
6.9999975E-01	3.2074785D 02
7.9999971E-01	3.1838048D 02
8.9999968E-01	3.1611028D 02
9.9999964E-01	3.1398197D 02
1.0999994E 00	3.1204024D 02
1.1999989E 00	3.1032980D 02
1.2999983E 00	3.0889537D 02
1.3999977E 00	3.0770163D 02
1.4999971E 00	3.0703329D 02
1.5999966E 00	3.0669507D 02
1.6999960E 00	3.0681166D 02
1.7999954E 00	3.0742777D 02
1.8999949E 00	3.0858811D 02
1.9999943E 00	3.1033738D 02
2.0999937E 00	3.1272029D 02
2.1999931E 00	3.1578154D 02
2.2999926E 00	3.1956584D 02
2.3999920E 00	3.2411789D 02
2.4999914E 00	3.2948240D 02
2.5999908E 00	3.3570408D 02
2.6999903E 00	3.4282762D 02
2.7999897E 00	3.5089774D 02
2.8999891E 00	3.5995915D 02
2.9999886E 00	3.7005653D 02

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.100000E-01	0.336116D 03	0.324638E 03	0.347594E 03	0.114782E 02
0.200000E-01	0.335945D 03	0.324846E 03	0.347044E 03	0.110986E 02
0.300000E-01	0.335772D 03	0.325040E 03	0.346503E 03	0.107319E 02
0.400000E-01	0.335595D 03	0.325217E 03	0.345974E 03	0.103783E 02
0.500000E-01	0.335417D 03	0.325379E 03	0.345455E 03	0.100381E 02
0.600000E-01	0.335236D 03	0.325524E 03	0.344947E 03	0.971126E 01
0.699999E-01	0.335053D 03	0.325654E 03	0.344451E 03	0.939815E 01
0.799999E-01	0.334867D 03	0.325768E 03	0.343966E 03	0.909895E 01
0.899999E-01	0.334679D 03	0.325865E 03	0.343493E 03	0.881383E 01
0.999999E-01	0.334489D 03	0.325946E 03	0.343032E 03	0.854300E 01
0.110000E 00	0.334297D 03	0.326010E 03	0.342583E 03	0.828668E 01
0.120000E 00	0.334103D 03	0.326057E 03	0.342147E 03	0.804505E 01
0.130000E 00	0.333906D 03	0.326088E 03	0.341724E 03	0.781824E 01
0.140000E 00	0.333708D 03	0.326101E 03	0.341314E 03	0.760641E 01
0.150000E 00	0.333504D 03	0.326098E 03	0.340917E 03	0.740965E 01
0.160000E 00	0.333305D 03	0.326077E 03	0.340533E 03	0.722800E 01
0.170000E 00	0.333101D 03	0.326040E 03	0.340162E 03	0.706148E 01
0.180000E 00	0.332895D 03	0.325985E 03	0.339805E 03	0.691002E 01
0.190000E 00	0.332687D 03	0.325914E 03	0.339460E 03	0.677350E 01
0.200000E 00	0.332478D 03	0.325826E 03	0.339129E 03	0.665173E 01
0.210000E 00	0.332266D 03	0.325722E 03	0.338811E 03	0.654443E 01
0.220000E 00	0.332053D 03	0.325602E 03	0.338504E 03	0.645127E 01
0.230000E 00	0.331839D 03	0.325467E 03	0.338210E 03	0.637182E 01
0.240000E 00	0.331623D 03	0.325317E 03	0.337928E 03	0.630558E 01
0.250000E 00	0.331405D 03	0.325153E 03	0.337657E 03	0.625198E 01
0.260000E 00	0.331186D 03	0.324975E 03	0.337396E 03	0.621040E 01
0.270000E 00	0.330965D 03	0.324785E 03	0.337145E 03	0.618018E 01
0.280000E 00	0.330743D 03	0.324582E 03	0.336904E 03	0.616057E 01
0.290000E 00	0.330520D 03	0.324369E 03	0.336670E 03	0.615084E 01
0.300000E 00	0.330295D 03	0.324145E 03	0.336445E 03	0.615021E 01
0.310000E 00	0.330069D 03	0.323911E 03	0.336227E 03	0.615790E 01
0.320000E 00	0.329842D 03	0.323668E 03	0.336015E 03	0.617313E 01
0.330000E 00	0.329613D 03	0.323418E 03	0.335809E 03	0.619515E 01
0.340000E 00	0.329384D 03	0.323161E 03	0.335607E 03	0.622318E 01
0.350000E 00	0.329153D 03	0.322997E 03	0.335410E 03	0.625653E 01
0.360000E 00	0.328922D 03	0.322827E 03	0.335216E 03	0.629449E 01
0.370000E 00	0.328690D 03	0.322653E 03	0.335025E 03	0.633640E 01
0.380000E 00	0.328456D 03	0.322474E 03	0.334837E 03	0.638164E 01
0.390000E 00	0.328221D 03	0.321792E 03	0.334651E 03	0.642963E 01
0.400000E 00	0.327986D 03	0.321506E 03	0.334466E 03	0.647983E 01
0.410000E 00	0.327750D 03	0.321218E 03	0.334281E 03	0.653172E 01
0.420000E 00	0.327513D 03	0.320928E 03	0.334098E 03	0.658485E 01
0.430000E 00	0.327275D 03	0.320636E 03	0.333914E 03	0.663877E 01
0.440000E 00	0.327037D 03	0.320344E 03	0.333730E 03	0.669312E 01
0.450000E 00	0.326798D 03	0.320050E 03	0.333545E 03	0.674751E 01
0.460000E 00	0.326558D 03	0.319757E 03	0.333360E 03	0.680165E 01
0.470000E 00	0.326318D 03	0.319463E 03	0.333174E 03	0.685521E 01
0.480000E 00	0.326078D 03	0.319170E 03	0.332986E 03	0.690797E 01
0.490000E 00	0.325837D 03	0.318877E 03	0.332796E 03	0.695963E 01
0.500000E 00	0.325595D 03	0.318585E 03	0.332605E 03	0.701003E 01
0.510000E 00	0.325353D 03	0.318294E 03	0.332412E 03	0.705897E 01
0.520000E 00	0.325111D 03	0.318005E 03	0.332218E 03	0.710626E 01
0.529999E 00	0.324869D 03	0.317717E 03	0.332021E 03	0.715177E 01
0.539999E 00	0.324626D 03	0.317431E 03	0.331821E 03	0.719534E 01
0.549999E 00	0.324383D 03	0.317146E 03	0.331620E 03	0.723689E 01
0.559999E 00	0.324140D 03	0.316864E 03	0.331417E 03	0.727630E 01

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.569999E 00	0.3238970 03	0.316583E 03	0.331211E 03	0.731351E 01
0.579999E 00	0.3236540 03	0.316305E 03	0.331002E 03	0.734842E 01
0.589999E 00	0.3234110 03	0.316030E 03	0.330792E 03	0.738097E 01
0.599999E 00	0.3231680 03	0.315756E 03	0.330579E 03	0.741113E 01
0.609999E 00	0.3229250 03	0.315486E 03	0.330363E 03	0.743887E 01
0.619999E 00	0.3226820 03	0.315218E 03	0.330146E 03	0.746413E 01
0.629999E 00	0.3224390 03	0.314952E 03	0.329926E 03	0.748691E 01
0.639999E 00	0.3221960 03	0.314689E 03	0.329703E 03	0.750721E 01
0.649999E 00	0.3219540 03	0.314420E 03	0.329479E 03	0.752501E 01
0.659999E 00	0.3217120 03	0.314172E 03	0.329252E 03	0.754031E 01
0.669999E 00	0.3214700 03	0.313917E 03	0.329023E 03	0.755314E 01
0.679999E 00	0.3212290 03	0.313666E 03	0.328792E 03	0.756350E 01
0.689999E 00	0.3209880 03	0.313417E 03	0.328560E 03	0.757141E 01
0.699999E 00	0.3207480 03	0.313171E 03	0.328325E 03	0.757691E 01
0.709999E 00	0.3205080 03	0.312928E 03	0.328088E 03	0.758001E 01
0.719999E 00	0.3202670 03	0.312688E 03	0.327849E 03	0.758077E 01
0.729999E 00	0.3200300 03	0.312451E 03	0.327609E 03	0.757923E 01
0.739999E 00	0.3197920 03	0.312217E 03	0.327367E 03	0.757543E 01
0.749999E 00	0.3195550 03	0.311985E 03	0.327124E 03	0.756941E 01
0.759999E 00	0.3193180 03	0.311757E 03	0.326879E 03	0.756126E 01
0.769999E 00	0.3190830 03	0.311531E 03	0.326633E 03	0.755099E 01
0.779999E 00	0.3188480 03	0.311309E 03	0.326386E 03	0.753867E 01
0.789999E 00	0.3186140 03	0.311089E 03	0.326138E 03	0.752440E 01
0.799999E 00	0.3183800 03	0.310872E 03	0.325889E 03	0.750821E 01
0.809999E 00	0.3181480 03	0.310658E 03	0.325638E 03	0.749020E 01
0.819999E 00	0.3179170 03	0.310447E 03	0.325387E 03	0.747040E 01
0.829999E 00	0.3176870 03	0.310238E 03	0.325136E 03	0.744895E 01
0.839999E 00	0.3174580 03	0.310032E 03	0.324884E 03	0.742587E 01
0.849999E 00	0.3172300 03	0.309829E 03	0.324632E 03	0.740127E 01
0.859999E 00	0.3170040 03	0.309628E 03	0.324379E 03	0.737521E 01
0.869999E 00	0.3167780 03	0.309430E 03	0.324126E 03	0.734783E 01
0.879999E 00	0.3165540 03	0.309235E 03	0.323874E 03	0.731913E 01
0.889999E 00	0.3163320 03	0.309042E 03	0.323621E 03	0.728932E 01
0.899999E 00	0.3161100 03	0.308852E 03	0.323369E 03	0.725841E 01
0.909999E 00	0.3158900 03	0.308664E 03	0.323117E 03	0.722643E 01
0.919999E 00	0.3156720 03	0.308478E 03	0.322865E 03	0.719370E 01
0.929999E 00	0.3154550 03	0.308295E 03	0.322615E 03	0.716007E 01
0.939999E 00	0.3152390 03	0.308114E 03	0.322365E 03	0.712579E 01
0.949999E 00	0.3150260 03	0.307935E 03	0.322116E 03	0.709100E 01
0.959999E 00	0.3148130 03	0.307750E 03	0.321869E 03	0.705564E 01
0.969999E 00	0.3146030 03	0.307583E 03	0.321623E 03	0.701998E 01
0.979999E 00	0.3143940 03	0.307410E 03	0.321378E 03	0.698410E 01
0.989999E 00	0.3141870 03	0.307239E 03	0.321135E 03	0.694797E 01
0.999999E 00	0.3139820 03	0.307070E 03	0.320894E 03	0.691178E 01
0.101000E 01	0.3137790 03	0.306903E 03	0.320654E 03	0.687575E 01
0.102000E 01	0.3135770 03	0.306737E 03	0.320417E 03	0.683976E 01
0.103000E 01	0.3133780 03	0.306573E 03	0.320182E 03	0.680422E 01
0.104000E 01	0.3131800 03	0.306411E 03	0.319949E 03	0.676915E 01
0.105000E 01	0.3129850 03	0.306250E 03	0.319719E 03	0.673446E 01
0.105999E 01	0.3127920 03	0.306091E 03	0.319492E 03	0.670055E 01
0.106999E 01	0.3126010 03	0.305933E 03	0.319268E 03	0.666707E 01
0.107999E 01	0.3124120 03	0.305777E 03	0.319046E 03	0.663439E 01
0.108999E 01	0.3122250 03	0.305622E 03	0.318828E 03	0.660291E 01
0.109999E 01	0.3120400 03	0.305468E 03	0.318613E 03	0.657255E 01
0.110999E 01	0.3118580 03	0.305315E 03	0.318401E 03	0.654329E 01
0.111999E 01	0.3116780 03	0.305163E 03	0.318194E 03	0.651535E 01

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.112999E 01	0.311501D 03	0.305012E 03	0.317990E 03	0.648878E 01
0.113999E 01	0.311326D 03	0.304863E 03	0.317789E 03	0.646339E 01
0.114999E 01	0.311154D 03	0.304713E 03	0.317594E 03	0.644009E 01
0.115999E 01	0.310984D 03	0.304565E 03	0.317402E 03	0.641824E 01
0.116999E 01	0.310816D 03	0.304418E 03	0.317214E 03	0.639815E 01
0.117999E 01	0.310651D 03	0.304271E 03	0.317031E 03	0.637978E 01
0.118999E 01	0.310489D 03	0.304126E 03	0.316853E 03	0.636349E 01
0.119998E 01	0.310330D 03	0.303981E 03	0.316679E 03	0.634901E 01
0.120998E 01	0.310173D 03	0.303837E 03	0.316510E 03	0.633663E 01
0.121998E 01	0.310020D 03	0.303693E 03	0.316346E 03	0.632619E 01
0.122998E 01	0.309869D 03	0.303551E 03	0.316187E 03	0.631816E 01
0.123998E 01	0.309721D 03	0.303408E 03	0.316033E 03	0.631226E 01
0.124998E 01	0.309576D 03	0.303267E 03	0.315884E 03	0.630849E 01
0.125998E 01	0.309433D 03	0.303126E 03	0.315740E 03	0.630703E 01
0.126998E 01	0.309294D 03	0.302986E 03	0.315602E 03	0.630790E 01
0.127998E 01	0.309158D 03	0.302847E 03	0.315469E 03	0.631115E 01
0.128998E 01	0.309025D 03	0.302708E 03	0.315342E 03	0.631666E 01
0.129998E 01	0.308896D 03	0.302571E 03	0.315220E 03	0.632433E 01
0.130998E 01	0.308769D 03	0.302434E 03	0.315104E 03	0.633458E 01
0.131998E 01	0.308646D 03	0.302299E 03	0.314993E 03	0.634700E 01
0.132998E 01	0.308526D 03	0.302164E 03	0.314887E 03	0.636146E 01
0.133997E 01	0.308409D 03	0.302031E 03	0.314787E 03	0.637843E 01
0.134997E 01	0.308296D 03	0.301898E 03	0.314693E 03	0.639754E 01
0.135997E 01	0.308186D 03	0.301767E 03	0.314604E 03	0.641859E 01
0.136997E 01	0.308080D 03	0.301638E 03	0.314521E 03	0.644177E 01
0.137997E 01	0.307977D 03	0.301510E 03	0.314444E 03	0.646726E 01
0.138997E 01	0.307878D 03	0.301383E 03	0.314372E 03	0.649438E 01
0.139997E 01	0.307782D 03	0.301258E 03	0.314305E 03	0.652374E 01
0.140997E 01	0.307690D 03	0.301135E 03	0.314244E 03	0.655452E 01
0.141997E 01	0.307602D 03	0.301014E 03	0.314189E 03	0.658733E 01
0.142997E 01	0.307517D 03	0.300895E 03	0.314138E 03	0.662153E 01
0.143997E 01	0.307436D 03	0.300778E 03	0.314094E 03	0.665765E 01
0.144997E 01	0.307359D 03	0.300664E 03	0.314054E 03	0.669473E 01
0.145997E 01	0.307286D 03	0.300552E 03	0.314020E 03	0.673353E 01
0.146996E 01	0.307217D 03	0.300443E 03	0.313990E 03	0.677347E 01
0.147996E 01	0.307152D 03	0.300337E 03	0.313966E 03	0.681467E 01
0.148996E 01	0.307091D 03	0.300234E 03	0.313947E 03	0.685686E 01
0.149996E 01	0.307033D 03	0.300133E 03	0.313934E 03	0.690036E 01
0.150996E 01	0.306980D 03	0.300036E 03	0.313925E 03	0.694440E 01
0.151996E 01	0.306932D 03	0.299942E 03	0.313920E 03	0.698897E 01
0.152996E 01	0.306887D 03	0.299853E 03	0.313921E 03	0.703428E 01
0.153996E 01	0.306846D 03	0.299766E 03	0.313927E 03	0.708047E 01
0.154996E 01	0.306810D 03	0.299684E 03	0.313937E 03	0.712648E 01
0.155996E 01	0.306778D 03	0.299605E 03	0.313951E 03	0.717311E 01
0.156996E 01	0.306751D 03	0.299531E 03	0.313971E 03	0.721995E 01
0.157996E 01	0.306728D 03	0.299461E 03	0.313994E 03	0.726660E 01
0.158996E 01	0.306709D 03	0.299396E 03	0.314023E 03	0.731350E 01
0.159996E 01	0.306695D 03	0.299335E 03	0.314055E 03	0.736000E 01
0.160995E 01	0.306686D 03	0.299279E 03	0.314092E 03	0.740646E 01
0.161995E 01	0.306681D 03	0.299228E 03	0.314133E 03	0.745244E 01
0.162995E 01	0.306680D 03	0.299182E 03	0.314178E 03	0.749787E 01
0.163995E 01	0.306685D 03	0.299142E 03	0.314227E 03	0.754264E 01
0.164995E 01	0.306694D 03	0.299107E 03	0.314281E 03	0.758686E 01
0.165995E 01	0.306708D 03	0.299077E 03	0.314338E 03	0.763049E 01
0.166995E 01	0.306726D 03	0.299053E 03	0.314399E 03	0.767281E 01
0.167995E 01	0.306750D 03	0.299035E 03	0.314464E 03	0.771441E 01

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.168995E 01	0.306778D 03	0.299023E 03	0.314533E 03	0.775476E 01
0.169995E 01	0.306811D 03	0.299013E 03	0.314605E 03	0.779379E 01
0.170995E 01	0.306850D 03	0.299018E 03	0.314682E 03	0.783188E 01
0.171995E 01	0.306893D 03	0.299025E 03	0.314761E 03	0.786838E 01
0.172995E 01	0.306942D 03	0.299039E 03	0.314845E 03	0.790307E 01
0.173995E 01	0.306995D 03	0.299059E 03	0.314932E 03	0.793647E 01
0.174994E 01	0.307054D 03	0.299085E 03	0.315023E 03	0.796904E 01
0.175994E 01	0.307118D 03	0.299119E 03	0.315117E 03	0.799876E 01
0.176994E 01	0.307187D 03	0.299160E 03	0.315215E 03	0.802728E 01
0.177994E 01	0.307262D 03	0.299209E 03	0.315314E 03	0.805263E 01
0.178994E 01	0.307342D 03	0.299265E 03	0.315418E 03	0.807657E 01
0.179994E 01	0.307427D 03	0.299328E 03	0.315526E 03	0.809915E 01
0.180994E 01	0.307518D 03	0.299399E 03	0.315637E 03	0.811909E 01
0.181994E 01	0.307614D 03	0.299478E 03	0.315750E 03	0.813624E 01
0.182994E 01	0.307716D 03	0.299565E 03	0.315867E 03	0.815098E 01
0.183994E 01	0.307823D 03	0.299659E 03	0.315987E 03	0.816397E 01
0.184994E 01	0.307936D 03	0.299762E 03	0.316110E 03	0.817411E 01
0.185994E 01	0.308055D 03	0.299873E 03	0.316237E 03	0.818172E 01
0.186994E 01	0.308179D 03	0.299992E 03	0.316366E 03	0.818704E 01
0.187994E 01	0.308310D 03	0.300120E 03	0.316499E 03	0.818916E 01
0.188993E 01	0.308445D 03	0.300257E 03	0.316634E 03	0.818839E 01
0.189993E 01	0.308587D 03	0.300401E 03	0.316773E 03	0.818568E 01
0.190993E 01	0.308735D 03	0.300555E 03	0.316914E 03	0.817943E 01
0.191993E 01	0.308888D 03	0.300718E 03	0.317059E 03	0.817049E 01
0.192993E 01	0.309048D 03	0.300891E 03	0.317205E 03	0.815732E 01
0.193993E 01	0.309214D 03	0.301071E 03	0.317356E 03	0.814250E 01
0.194993E 01	0.309385D 03	0.301261E 03	0.317509E 03	0.812371E 01
0.195993E 01	0.309563D 03	0.301460E 03	0.317665E 03	0.810256E 01
0.196993E 01	0.309747D 03	0.301669E 03	0.317824E 03	0.807755E 01
0.197993E 01	0.309937D 03	0.301887E 03	0.317987E 03	0.805015E 01
0.198993E 01	0.310133D 03	0.302114E 03	0.318152E 03	0.801921E 01
0.199993E 01	0.310336D 03	0.302352E 03	0.318320E 03	0.798402E 01
0.200993E 01	0.310545D 03	0.302599E 03	0.318491E 03	0.794598E 01
0.201993E 01	0.310760D 03	0.302855E 03	0.318665E 03	0.790475E 01
0.202992E 01	0.310982D 03	0.303121E 03	0.318843E 03	0.786081E 01
0.203992E 01	0.311210D 03	0.303398E 03	0.319022E 03	0.781229E 01
0.204992E 01	0.311445D 03	0.303684E 03	0.319206E 03	0.776086E 01
0.205992E 01	0.311686D 03	0.303979E 03	0.319394E 03	0.770739E 01
0.206992E 01	0.311934D 03	0.304285E 03	0.319583E 03	0.764909E 01
0.207992E 01	0.312190D 03	0.304602E 03	0.319776E 03	0.758125E 01
0.208992E 01	0.312450D 03	0.304928E 03	0.319972E 03	0.752180E 01
0.209992E 01	0.312718D 03	0.305264E 03	0.320172E 03	0.745421E 01
0.210992E 01	0.312993D 03	0.305609E 03	0.320376E 03	0.738354E 01
0.211992E 01	0.313275D 03	0.305964E 03	0.320585E 03	0.731069E 01
0.212992E 01	0.313563D 03	0.306330E 03	0.320796E 03	0.723297E 01
0.213992E 01	0.313859D 03	0.306705E 03	0.321012E 03	0.715341E 01
0.214992E 01	0.314161D 03	0.307088E 03	0.321234E 03	0.707287E 01
0.215991E 01	0.314470D 03	0.307485E 03	0.321455E 03	0.698520E 01
0.216991E 01	0.314787D 03	0.307888E 03	0.321686E 03	0.689902E 01
0.217991E 01	0.315110D 03	0.308303E 03	0.321918E 03	0.680749E 01
0.218991E 01	0.315441D 03	0.308724E 03	0.322157E 03	0.671634E 01
0.219991E 01	0.315779D 03	0.309158E 03	0.322399E 03	0.662047E 01
0.220991E 01	0.316124D 03	0.309595E 03	0.322652E 03	0.652849E 01
0.221991E 01	0.316476D 03	0.310044E 03	0.322908E 03	0.643170E 01
0.222991E 01	0.316836D 03	0.310502E 03	0.323169E 03	0.633339E 01
0.223991E 01	0.317203D 03	0.310968E 03	0.323438E 03	0.623473E 01

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.224991E 01	0.317577D 03	0.311441E 03	0.323713E 03	0.613625E 01
0.225991E 01	0.317959D 03	0.311916E 03	0.324002E 03	0.604318E 01
0.226991E 01	0.318349D 03	0.312402E 03	0.324295E 03	0.594631E 01
0.227991E 01	0.318748D 03	0.312895E 03	0.324596E 03	0.585072E 01
0.228991E 01	0.319150D 03	0.313390E 03	0.324910E 03	0.575990E 01
0.229990E 01	0.319562D 03	0.313889E 03	0.325235E 03	0.567297E 01
0.230990E 01	0.319982D 03	0.314391E 03	0.325573E 03	0.559090E 01
0.231990E 01	0.320410D 03	0.314897E 03	0.325922E 03	0.551212E 01
0.232990E 01	0.320845D 03	0.315405E 03	0.326285E 03	0.543993E 01
0.233990E 01	0.321288D 03	0.315910E 03	0.326666E 03	0.537777E 01
0.234990E 01	0.321739D 03	0.316416E 03	0.327062E 03	0.532335E 01
0.235990E 01	0.322198D 03	0.316924E 03	0.327472E 03	0.527402E 01
0.236990E 01	0.322665D 03	0.317420E 03	0.327909E 03	0.524430E 01
0.237990E 01	0.323139D 03	0.317917E 03	0.328361E 03	0.522185E 01
0.238990E 01	0.323622D 03	0.318409E 03	0.328836E 03	0.521352E 01
0.239990E 01	0.324113D 03	0.318895E 03	0.329332E 03	0.521860E 01
0.240990E 01	0.324612D 03	0.319371E 03	0.329854E 03	0.524148E 01
0.241990E 01	0.325119D 03	0.319835E 03	0.330403E 03	0.528378E 01
0.242990E 01	0.325635D 03	0.320290E 03	0.330979E 03	0.534444E 01
0.243989E 01	0.326159D 03	0.320738E 03	0.331579E 03	0.542032E 01
0.244989E 01	0.326691D 03	0.321172E 03	0.332209E 03	0.551889E 01
0.245989E 01	0.327231D 03	0.321597E 03	0.332864E 03	0.563344E 01
0.246989E 01	0.327780D 03	0.322099E 03	0.333550E 03	0.577072E 01
0.247989E 01	0.328337D 03	0.322411E 03	0.334262E 03	0.592566E 01
0.248989E 01	0.328902D 03	0.322798E 03	0.335007E 03	0.610466E 01
0.249989E 01	0.329477D 03	0.323179E 03	0.335774E 03	0.629721E 01
0.250989E 01	0.330059D 03	0.323547E 03	0.336571E 03	0.651189E 01
0.251989E 01	0.330651D 03	0.323903E 03	0.337398E 03	0.674757E 01
0.252989E 01	0.331251D 03	0.324252E 03	0.338249E 03	0.699838E 01
0.253989E 01	0.331859D 03	0.324591E 03	0.339127E 03	0.726806E 01
0.254989E 01	0.332477D 03	0.324925E 03	0.340028E 03	0.755163E 01
0.255989E 01	0.333103D 03	0.325248E 03	0.340958E 03	0.785499E 01
0.256989E 01	0.333738D 03	0.325562E 03	0.341914E 03	0.817569E 01
0.257988E 01	0.334382D 03	0.325875E 03	0.342888E 03	0.850642E 01
0.258988E 01	0.335035D 03	0.326175E 03	0.343895E 03	0.885968E 01
0.259988E 01	0.335697D 03	0.326475E 03	0.344918E 03	0.922162E 01
0.260988E 01	0.336368D 03	0.326766E 03	0.345969E 03	0.960126E 01
0.261988E 01	0.337048D 03	0.327056E 03	0.347040E 03	0.999184E 01
0.262988E 01	0.337737D 03	0.327337E 03	0.348136E 03	0.103997E 02
0.263988E 01	0.338435D 03	0.327619E 03	0.349250E 03	0.108157E 02
0.264988E 01	0.339142D 03	0.327893E 03	0.350392E 03	0.112492E 02
0.265988E 01	0.339859D 03	0.328166E 03	0.351552E 03	0.116926E 02
0.266988E 01	0.340585D 03	0.328431E 03	0.352738E 03	0.121534E 02
0.267988E 01	0.341320D 03	0.328699E 03	0.353941E 03	0.126208E 02
0.268988E 01	0.342065D 03	0.328961E 03	0.355169E 03	0.131040E 02
0.269988E 01	0.342819D 03	0.329219E 03	0.356413E 03	0.135996E 02
0.270988E 01	0.343582D 03	0.329477E 03	0.357688E 03	0.141053E 02
0.271987E 01	0.344355D 03	0.329733E 03	0.358978E 03	0.146222E 02
0.272987E 01	0.345138D 03	0.329985E 03	0.360291E 03	0.151532E 02
0.273987E 01	0.345930D 03	0.330235E 03	0.361625E 03	0.156951E 02
0.274987E 01	0.346732D 03	0.330484E 03	0.362980E 03	0.162481E 02
0.275987E 01	0.347544D 03	0.330733E 03	0.364354E 03	0.168107E 02
0.276987E 01	0.348365D 03	0.330976E 03	0.365753E 03	0.173886E 02
0.277987E 01	0.349196D 03	0.331221E 03	0.367170E 03	0.179748E 02
0.278987E 01	0.350037D 03	0.331463E 03	0.368610E 03	0.185732E 02
0.279987E 01	0.350887D 03	0.331702E 03	0.370072E 03	0.191850E 02

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.280987E 01	0.351748D 03	0.331942E 03	0.371554E 03	0.198060E 02
0.281987E 01	0.352619D 03	0.332179E 03	0.373058E 03	0.204397E 02
0.282987E 01	0.353490D 03	0.332415E 03	0.374583E 03	0.210843E 02
0.283987E 01	0.354390D 03	0.332649E 03	0.376130E 03	0.217401E 02
0.284986E 01	0.355290D 03	0.332883E 03	0.377698E 03	0.224073E 02
0.285986E 01	0.356201D 03	0.333115E 03	0.379287E 03	0.230858E 02
0.286986E 01	0.357122D 03	0.333345E 03	0.380899E 03	0.237768E 02
0.287986E 01	0.358054D 03	0.333575E 03	0.382532E 03	0.244785E 02
0.288986E 01	0.358995D 03	0.333803E 03	0.384187E 03	0.251916E 02
0.289986E 01	0.359947D 03	0.334030E 03	0.385863E 03	0.259165E 02
0.290986E 01	0.360909D 03	0.334256E 03	0.387562E 03	0.266525E 02
0.291986E 01	0.361882D 03	0.334481E 03	0.389282E 03	0.274005E 02
0.292986E 01	0.362865D 03	0.334704E 03	0.391026E 03	0.281611E 02
0.293986E 01	0.363858D 03	0.334927E 03	0.392789E 03	0.289313E 02
0.294986E 01	0.364862D 03	0.335148E 03	0.394576E 03	0.297137E 02
0.295986E 01	0.365877D 03	0.335369E 03	0.396385E 03	0.305079E 02
0.296986E 01	0.366902D 03	0.335587E 03	0.398217E 03	0.313150E 02
0.297986E 01	0.367933D 03	0.335805E 03	0.400071E 03	0.321326E 02
0.298985E 01	0.368985D 03	0.336022E 03	0.401947E 03	0.329622E 02
0.299985E 01	0.370042D 03	0.336238E 03	0.403846E 03	0.338042E 02
0.300985E 01	0.371110D 03	0.336452E 03	0.405769E 03	0.346585E 02
0.301985E 01	0.372190D 03	0.336666E 03	0.407713E 03	0.355236E 02
0.302985E 01	0.373279D 03	0.336878E 03	0.409681E 03	0.364017E 02
0.303985E 01	0.374380D 03	0.337085E 03	0.411675E 03	0.372949E 02
0.304985E 01	0.375492D 03	0.337296E 03	0.413689E 03	0.381964E 02
0.305985E 01	0.376615D 03	0.337506E 03	0.415725E 03	0.391096E 02
0.306985E 01	0.377749D 03	0.337713E 03	0.417785E 03	0.400361E 02
0.307985E 01	0.378894D 03	0.337918E 03	0.419871E 03	0.409766E 02
0.308985E 01	0.380051D 03	0.338123E 03	0.421978E 03	0.419279E 02
0.309985E 01	0.381219D 03	0.338326E 03	0.424110E 03	0.428921E 02
0.310985E 01	0.382397D 03	0.338531E 03	0.426262E 03	0.438659E 02
0.311985E 01	0.383587D 03	0.338732E 03	0.428442E 03	0.448551E 02
0.312984E 01	0.384788D 03	0.338931E 03	0.430645E 03	0.458569E 02
0.313984E 01	0.386001D 03	0.339129E 03	0.432872E 03	0.468713E 02
0.314984E 01	0.387225D 03	0.339327E 03	0.435123E 03	0.478981E 02
0.315984E 01	0.388461D 03	0.339523E 03	0.437398E 03	0.489371E 02
0.316984E 01	0.389708D 03	0.339718E 03	0.439698E 03	0.499899E 02
0.317984E 01	0.390967D 03	0.339911E 03	0.442022E 03	0.510552E 02
0.318984E 01	0.392237D 03	0.340103E 03	0.444371E 03	0.521345E 02
0.319984E 01	0.393519D 03	0.340293E 03	0.446745E 03	0.532263E 02
0.320984E 01	0.394813D 03	0.340482E 03	0.449143E 03	0.543302E 02
0.321984E 01	0.396118D 03	0.340668E 03	0.451568E 03	0.554500E 02
0.322984E 01	0.397435D 03	0.340855E 03	0.454016E 03	0.565807E 02
0.323984E 01	0.398765D 03	0.341041E 03	0.456488E 03	0.577236E 02
0.324984E 01	0.400105D 03	0.341222E 03	0.458989E 03	0.588832E 02
0.325984E 01	0.401458D 03	0.341405E 03	0.461511E 03	0.600532E 02
0.326983E 01	0.402823D 03	0.341584E 03	0.464062E 03	0.612386E 02
0.327983E 01	0.404200D 03	0.341763C 03	0.466636E 03	0.624364E 02
0.328983E 01	0.405589D 03	0.341941E 03	0.469237E 03	0.636477E 02
0.329983E 01	0.406990D 03	0.342116E 03	0.471864E 03	0.648742E 02
0.330983E 01	0.408403D 03	0.342289E 03	0.474517E 03	0.661136E 02
0.331983E 01	0.409828D 03	0.342460E 03	0.477196E 03	0.673678E 02
0.332983E 01	0.411266D 03	0.342632E 03	0.479900E 03	0.686340E 02
0.333983E 01	0.412716D 03	0.342800E 03	0.482632E 03	0.699158E 02
0.334983E 01	0.414178D 03	0.342967E 03	0.485398E 03	0.712105E 02
0.335983E 01	0.415653D 03	0.343134E 03	0.488171E 03	0.725190E 02

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.336983E 01	0.417140D 03	0.343297E 03	0.490981E 03	0.738420E 02
0.337983E 01	0.418639D 03	0.343458E 03	0.493819E 03	0.751804E 02
0.338983E 01	0.420151D 03	0.343619E 03	0.496683E 03	0.765322E 02
0.339983E 01	0.421675D 03	0.343777E 03	0.499573E 03	0.778981E 02
0.340982E 01	0.423212D 03	0.343935E 03	0.502490E 03	0.792774E 02
0.341982E 01	0.424762D 03	0.344089E 03	0.505435E 03	0.806729E 02
0.342982E 01	0.426325D 03	0.344241E 03	0.508408E 03	0.820836E 02
0.343982E 01	0.427900D 03	0.344393E 03	0.511406E 03	0.835070E 02
0.344982E 01	0.429488D 03	0.344542E 03	0.514433E 03	0.849458E 02
0.345982E 01	0.431088D 03	0.344688E 03	0.517488E 03	0.863999E 02
0.346982E 01	0.432702D 03	0.344834E 03	0.520569E 03	0.878672E 02
0.347982E 01	0.434328D 03	0.344977E 03	0.523679E 03	0.893511E 02
0.348982E 01	0.435968D 03	0.345118E 03	0.526817E 03	0.908493E 02
0.349982E 01	0.437620D 03	0.345259E 03	0.529981E 03	0.923615E 02
0.350982E 01	0.439286D 03	0.345396E 03	0.533175E 03	0.938899E 02
0.351982E 01	0.440964D 03	0.345530E 03	0.536397E 03	0.954336E 02
0.352982E 01	0.442656D 03	0.345663E 03	0.539648E 03	0.969929E 02
0.353981E 01	0.444361D 03	0.345795E 03	0.542927E 03	0.985659E 02
0.354981E 01	0.446079D 03	0.345922E 03	0.546235E 03	0.100156E 03
0.355981E 01	0.447810D 03	0.346050E 03	0.549570E 03	0.101760E 03
0.356981E 01	0.449555D 03	0.346174E 03	0.552935E 03	0.103380E 03
0.357981E 01	0.451313D 03	0.346296E 03	0.556329E 03	0.105017E 03
0.358981E 01	0.453084D 03	0.346416E 03	0.559752E 03	0.106668E 03
0.359981E 01	0.454869D 03	0.346534E 03	0.563203E 03	0.108334E 03
0.360981E 01	0.456667D 03	0.346649E 03	0.566685E 03	0.110018E 03
0.361981E 01	0.458479D 03	0.346763E 03	0.570195E 03	0.111716E 03
0.362981E 01	0.460304D 03	0.346874E 03	0.573735E 03	0.113431E 03
0.363981E 01	0.462143D 03	0.346983E 03	0.577304E 03	0.115161E 03
0.364981E 01	0.463996D 03	0.347089E 03	0.580903E 03	0.116907E 03
0.365981E 01	0.465863D 03	0.347193E 03	0.584532E 03	0.118670E 03
0.366981E 01	0.467743D 03	0.347294E 03	0.588191E 03	0.120449E 03
0.367980E 01	0.469637D 03	0.347393E 03	0.591880E 03	0.122243E 03
0.368980E 01	0.471544D 03	0.347490E 03	0.595598E 03	0.124054E 03
0.369980E 01	0.473466D 03	0.347585E 03	0.599347E 03	0.125881E 03
0.370980E 01	0.475402D 03	0.347676E 03	0.603127E 03	0.127725E 03
0.371980E 01	0.477351D 03	0.347765E 03	0.606938E 03	0.129586E 03
0.372980E 01	0.479315D 03	0.347851E 03	0.610778E 03	0.131463E 03
0.373980E 01	0.481293D 03	0.347936E 03	0.614649E 03	0.133357E 03
0.374980E 01	0.483285D 03	0.348016E 03	0.618552E 03	0.135268E 03
0.375980E 01	0.485291D 03	0.348095E 03	0.622486E 03	0.137195E 03
0.376980E 01	0.487311D 03	0.348171E 03	0.626450E 03	0.139139E 03
0.377980E 01	0.489345D 03	0.348245E 03	0.630445E 03	0.141100E 03
0.378980E 01	0.491394D 03	0.348317E 03	0.634471E 03	0.143077E 03
0.379980E 01	0.493457D 03	0.348385E 03	0.638529E 03	0.145072E 03
0.380980E 01	0.495534D 03	0.348452E 03	0.642617E 03	0.147083E 03
0.381979E 01	0.497626D 03	0.348513E 03	0.646739E 03	0.149113E 03
0.382979E 01	0.499732D 03	0.348573E 03	0.650892E 03	0.151160E 03
0.383979E 01	0.501853D 03	0.348630E 03	0.655076E 03	0.153223E 03
0.384979E 01	0.503989D 03	0.348685E 03	0.659292E 03	0.155304E 03
0.385979E 01	0.506139D 03	0.348736E 03	0.663541E 03	0.157403E 03
0.386979E 01	0.508303D 03	0.348784E 03	0.667822E 03	0.159519E 03
0.387979E 01	0.510483D 03	0.348831E 03	0.672135E 03	0.161652E 03
0.388979E 01	0.512677D 03	0.348873E 03	0.676480E 03	0.163804E 03
0.389979E 01	0.514886D 03	0.348914E 03	0.680857E 03	0.165972E 03
0.390979E 01	0.517109D 03	0.348949E 03	0.685269E 03	0.168160E 03
0.391979E 01	0.519348D 03	0.348985E 03	0.689711E 03	0.170363E 03

CALCULATION OF CONFIDENCE LEVELS

X	F(X)	F(X)-C	F(X)+C	C
0.392979E 01	0.521601D 03	0.349015E 03	0.694188E 03	0.172586E 03
0.393979E 01	0.523870D 03	0.349043E 03	0.698696E 03	0.174826E 03
0.394979E 01	0.526153D 03	0.349067E 03	0.703240E 03	0.177086E 03
0.395978E 01	0.528452D 03	0.349090E 03	0.707813E 03	0.179362E 03
0.396978E 01	0.530765D 03	0.349108E 03	0.712422E 03	0.181657E 03
0.397978E 01	0.533094D 03	0.349124E 03	0.717064E 03	0.183970E 03
0.398978E 01	0.535438D 03	0.349136E 03	0.721740E 03	0.186302E 03
0.399978E 01	0.537797D 03	0.349145E 03	0.726449E 03	0.188652E 03
0.400978E 01	0.540172D 03	0.349153E 03	0.731190E 03	0.191019E 03

LEAST SQUARES POLYNOMIAL FIT FOR DEGREE 6.

POLYNOMIAL F(X) =

```
2.8899855D 00
-1.1356435D 00 X ** 1
7.9835913D 00 X ** 2
-1.7827573D 01 X ** 3
1.5612873D 01 X ** 4
-6.1676084D 00 X ** 5
8.9679823D-01 X ** 6
```

DATA INFORMATION...

	INPUT DATA		CALCULATED	RESIDUAL	RESIDUAL
X	Y		F(X)	Y-F(X)	SQUARED
9.999999E-04	2.875000E 00		2.888858D 00	-1.385784E-02	1.920398E-04
9.999998E-03	2.875000E 00		2.879410D 00	-4.409775E-03	1.944610E-05
9.999996E-02	2.875000E 00		2.839930D 00	3.506998E-02	1.229903E-03
2.000000E-01	2.875000E 00		2.862644D 00	1.235575E-02	1.526646E-04
3.000000E-01	2.875000E 00		2.898602D 00	-2.360195E-02	5.570520E-04
4.000000E-01	2.875000E 00		2.912345D 00	-3.734459E-02	1.394618E-03
5.000000E-01	2.875000E 00		2.886694D 00	-1.169425E-02	1.367555E-04
6.000000E-01	2.875000E 00		2.817613D 00	5.738729E-02	3.293301E-03
7.000000E-01	2.702499E 00		2.709706D 00	-7.206209E-03	5.192944E-05
8.000000E-01	2.587500E 00		2.572373D 00	1.512657E-02	2.288132E-04
9.000000E-01	2.415000E 00		2.416605D 00	-1.605019E-03	2.576086E-06
1.000000E 00	2.242499E 00		2.252423D 00	-9.923942E-03	9.848463E-05
1.099999E 00	2.070000E 00		2.086970D 00	-1.697006E-02	2.879826E-04
1.200000E 00	1.897499E 00		1.923235D 00	-2.573545E-02	6.623131E-04
1.299999E 00	1.782499E 00		1.759444D 00	2.305518E-02	5.315414E-04
1.400000E 00	1.610000E 00		1.589074D 00	2.092593E-02	4.378946E-04
1.500000E 00	1.379999E 00		1.401528D 00	-2.152894E-02	4.634953E-04
1.599999E 00	1.207500E 00		1.183454D 00	2.404599E-02	5.782098E-04
1.700000E 00	9.200000E-01		9.206920D-01	-6.920872E-04	4.789847E-07
1.799999E 00	5.750000E-01		6.009045D-01	-2.590451E-02	6.710435E-04
1.900000E 00	2.300000E-01		2.168026D-01	1.319737E-02	1.741706E-04
1.950000E 00	0.0		6.894444D-04	-6.894441E-04	4.753332E-07
SUM OF RESIDUALS =		2.793968E-09	SUM OF SQUARES OF RESIDUALS =		1.116516E-02

DEGREES OF FREEDOM (M-(N+1))= 15

VARIANCE = 7.443437E-04

STANDARD DEVIATION = 2.728266E-02

PARAMETER	VARIANCE	STD. DEV.
2.889986D 00	4.021388E-04	2.005340E-02
-1.135643D 00	1.521328E-01	3.900421E-01
7.983591D 00	4.026686E 00	2.006660E 00
-1.782757D 01	1.683260E 01	4.102755E 00
1.561287D 01	1.548529E 01	3.935135E 00
-6.167608D 00	3.146892E 00	1.773948E 00
8.967982D-01	9.191829E-02	3.031803E-01

INVERSE MATRIX (PAGE 1)

5.4025970D-01	-6.6882533D 00	2.5615906D 01	-4.3424088D 01	3.6359156D 01	-1.4740845D 01	2.3101174D 00
-6.6882533D 00	2.0438516D 02	-1.0087172D 03	1.9358487D 03	-1.7454689D 03	7.4338372D 02	-1.2066358D 02
2.5615906D 01	-1.0087172D 03	5.4097127D 03	-1.0891766D 04	1.0138215D 04	-4.4172604D 03	7.2937265D 02
-4.3424088D 01	1.9358487D 03	-1.0891766D 04	2.2614016D 04	-2.1514455D 04	9.5289096D 03	-1.5936161D 03
3.6359156D 01	-1.7454689D 03	1.0138215D 04	-2.1514455D 04	2.0803956D 04	-9.3313095D 03	1.5763941D 03
-1.4740845D 01	7.4338372D 02	-4.4172604D 03	9.5289096D 03	-9.3313095D 03	4.2277402D 03	-7.2009980D 02
2.3101174D 00	-1.2066358D 02	7.2937265D 02	-1.5936161D 03	1.5763941D 03	-7.2009980D 02	1.2348908D 02

IDENTITY MATRIX (PAGE 1)

9.9989289E-01	-2.5668507E-04	-2.1283857E-04	9.9632874E-05	2.1901216E-04	3.5971496E-04	1.4980554E-04
-3.6191314E-02	1.0156393E 00	9.9913105E-C3	3.3142969E-02	2.4804384E-02	-9.2185512E-03	3.6465503E-02
-2.2838887E-02	-6.6196918E-03	4.7061682E-C1	-6.0114086E-01	-9.0719551E-01	-4.6013463E-02	-3.9995104E-01
5.5685733E-02	1.2748361E-01	-8.2490063E-C1	1.5452232E 00	1.4062811E-02	9.4838500E-02	7.6418400E-01
4.0645868E-01	-2.1826649E-01	-6.7665637E-C2	2.2538674E-01	3.9348602E-01	3.7366503E-01	-3.7407154E-01
2.3174691E-01	3.4039462E-01	6.1067730E-C1	9.2502159E-01	5.9920764E-01	1.3299198E 00	-7.3709190E-01
-9.2951518E-01	-1.7134535E-01	-5.2857406E-C2	-1.9074476E-01	-5.0851554E-02	-3.4727114E-01	8.3677256E-01

IHC900I EXECUTION TERMINATING DUE TO ERROR COUNT FOR ERROR NUMBER 217

IHC217I FIOCS - END OF DATA SET ON UNIT 5

TRACEBACK FOLLOWS-	ROUTINE	ISN	REG. 14	REG. 15	REG. 0	REG. 1
	IBCOM		0002F6E4	00031FD8	00000000	404CA301
	MAIN		0000C462	01027548	FD000006	0003F7F8

ENTRY POINT= 01027548

SUMMARY OF ERRORS FOR THIS JOB	ERROR NUMBER	NUMBER OF ERRORS
	217	1

LEAST SQUARES POLYNOMIAL FIT FOR DEGREE 5.

POLYNOMIAL F(X) =

-4.6419216D 02
2.0503788D 03 X ** 1
-3.6262470D 03 X ** 2
3.2228236D 03 X ** 3
-1.4325599D 03 X ** 4
2.5403216D 02 X ** 5

DATA INFORMATION...

X	INPUT DATA Y	CALCULATED F(X)	RESIDUAL Y-F(X)	RESIDUAL SQUARED	
8.000000E-01	2.000000E 00	1.863153D 00	1.368466E-01	1.872699E-02	
9.000000E-01	3.000000E 00	3.427927D 00	-4.279265E-01	1.831210E-01	
1.000000E 00	4.500000E 00	4.235414D 00	2.645864E-01	7.000595E-02	
1.099999E 00	5.000000E 00	4.754134D 00	2.458662E-01	6.045018E-02	
1.200000E 00	5.000000E 00	5.062858D 00	-6.285810E-02	3.951140E-03	
1.299999E 00	5.000000E 00	5.155425D 00	-1.554247E-01	2.415682E-02	
1.400000E 00	5.000000E 00	5.245598D 00	-2.455977E-01	6.031824E-02	
1.500000E 00	6.000000E 00	6.071902D 00	-7.190180E-02	5.169868E-03	
1.599999E 00	1.000000E 01	9.202423D 00	7.975771E-01	6.361293E-01	
1.700000E 00	1.700000E 01	1.733978D 01	-3.397791E-01	1.154498E-01	
1.750000E 00	2.400000E 01	2.451579D 01	-5.157905E-01	2.660398E-01	
1.799999E 00	3.500000E 01	3.462560D 01	3.744021E-01	1.401769E-01	
SUM OF RESIDUALS =		5.960464E-08	SUM OF SQUARES OF RESIDUALS =		1.583694E 00

DEGREES OF FREEDOM (M-(N+1))= 6

VARIANCE = 2.639490E-01

STANDARD DEVIATION = 5.137597E-01

PARAMETER	VARIANCE	STD. DEV.
-4.641922D 02	9.470081E 04	3.077349E 02
2.050379D 03	1.618795E 06	1.272319E 03
-3.626247D 03	4.254775E 06	2.062710E 03
3.222824D 03	2.690986E 06	1.640422E 03
-1.432560D 03	4.103273E 05	6.405679E 02
2.540322D 02	9.674594E 03	9.835951E 01

INVERSE MATRIX (PAGE 1)

3.5878454D 05	-1.4820043D 06	2.3960672D 06	-1.8971006D 06	7.3641552D 05	-1.1226408D 05
-1.4820043D 06	6.1329869D 06	-9.9338471D 06	7.8791331D 06	-3.0636845D 06	4.6779175D 05
2.3960672D 06	-9.9338471D 06	1.6119685D 07	-1.2808324D 07	4.9888678D 06	-7.6298598D 05
-1.8971006D 06	7.8791331D 06	-1.2808324D 07	1.0195098D 07	-3.9777754D 06	6.0934220D 05
7.3641552D 05	-3.0636845D 06	4.9888678D 06	-3.9777754D 06	1.5545704D 06	-2.3852037D 05
-1.1226408D 05	4.6779175D 05	-7.6298598D 05	6.0934220D 05	-2.3852037D 05	3.6653266D 04

IDENTITY MATRIX (PAGE 1)

1.2715229E 01	1.0234880E 01	1.9686157E 01	2.5762207E 01	2.4305634E 01	2.2029104E 00
2.6613495E 01	1.1543673E 01	7.2077112E 00	1.3696870E 01	2.5401169E 01	6.4182148E 00
4.4465876E 00	2.4861324E 02	1.6564349E 02	2.1360339E 02	-4.3774796E 01	1.3318759E C2
3.2946442E 01	-2.5336916E 02	-9.7879456E 01	-3.2236084E 02	1.0079413E 01	9.7237457E 01
-1.2493280E 02	1.6639465E 01	-1.0006387E 02	-3.6946228E 01	-4.9208511E 01	6.0970459E 01
-7.6388187E 00	1.5299826E 00	2.2030655E 01	1.9635010E 01	3.4832983E 00	-7.3328638E 00

IHC900I EXECUTION TERMINATING DUE TO ERROR COUNT FOR ERROR NUMBER 217

IHC217I FIOCS - END OF DATA SET ON UNIT 5

TRACEBACK FOLLOWS-	ROUTINE	ISN	REG. 14	REG. 15	REG. 0	REG. 1
	IBCOM		00076EE4	000797D8	00000000	426026B8
	MAIN		0000C462	0106ED48	FD000006	00086FF8

ENTRY POINT= 0106ED48

SUMMARY OF ERRORS FOR THIS JOB	ERROR NUMBER	NUMBER OF ERRORS
	217	1

LEAST SQUARES POLYNOMIAL FIT FOR DEGREE 3.

POLYNOMIAL F(X) =

6.3645724D 05
-1.0152962D 06 X ** 1
5.3888379D 05 X ** 2
-9.5143515D 04 X ** 3

DATA INFORMATION...

X	INPUT DATA Y	CALCULATED F(X)	RESIDUAL Y-F(X)	RESIDUAL SQUARED
1.809999E 00	4.000000E 01	4.192104D 01	-1.921037E 00	3.690382E 00
1.820000E 00	5.000000E 01	4.769254D 01	2.307461E 00	5.324375E 00
1.830000E 00	6.000000E 01	5.734427D 01	2.655725E 00	7.052873E 00
1.839999E 00	7.000000E 01	7.030397D 01	-3.039692E-01	9.239727E-02
1.849999E 00	8.000000E 01	8.600324D 01	-6.003239E 00	3.603886E 01
1.860000E 00	1.050000E 02	1.038701D 02	1.129902E 00	1.276678E 00
1.870000E 00	1.250000E 02	1.233336D 02	1.666356E 00	2.776742E 00
1.879999E 00	1.450000E 02	1.438210D 02	1.179007E 00	1.390056E 00
1.889999E 00	1.650000E 02	1.647652D 02	2.348028E-01	5.513234E-02
1.900000E 00	1.850000E 02	1.855934D 02	-5.934432E-01	3.521748E-01
1.910000E 00	2.050000E 02	2.057348D 02	-7.348303E-01	5.399756E-01
1.919999E 00	2.250000E 02	2.246167D 02	3.832644E-01	1.468916E-01

SUM OF RESIDUALS = -1.251698E-06

SUM OF SQUARES OF RESIDUALS = 5.873648E 01

DEGREES OF FREEDOM (M-(N+1))= 8

VARIANCE = 7.342060E 00

STANDARD DEVIATION = 2.709623E 00

PARAMETER	VARIANCE	STD. DEV.
6.364672D 05	2.663725E 10	1.632092E 05
-1.015296D 06	6.897120E 10	2.626237E 05
5.388338D 05	1.983538E 10	1.408399E 05
-9.514352D 04	6.336356E 08	2.517212E 04

INVERSE MATRIX (PAGE 1)

3.6280349D 09	-5.8378753D 09	3.1306061D 09	-5.5949003D 08
-5.8378753D 09	9.3939932D 09	-5.0377418D 09	9.0035106D 08
3.1306061D 09	-5.0377418D 09	2.7016783D 09	-4.8286047D 08
-5.5949003D 08	9.0035106D 08	-4.8286047D 08	8.6302170D 07

IDENTITY MATRIX (PAGE 1)

2.8187016E 04	4.3869687E 04	4.4600301E 04	5.0158871E 04
1.1032787E 05	7.0725137E 04	2.9519750E 04	4.6227898E 04
-1.4905156E 04	-2.8438133E 04	-5.8319945E 04	-3.3127496E 04
-2.3077078E 04	2.0652981E 03	-1.3196050E 03	-4.4687273E 04

IHC900I EXECUTION TERMINATING DUE TO ERROR COUNT FOR ERROR NUMBER 217

IHC217I FIOCS - END OF DATA SET ON UNIT 5

TRACEBACK FOLLOWS-	ROUTINE	ISN	REG. 14	REG. 15	REG. 0	REG. 1
	IBCOM		000946E4	00096FD8	00000000	44601ED1
	MAIN		0000C462	0108C548	FD000006	000A47F8

ENTRY POINT= 0108C548

SUMMARY OF ERRORS FOR THIS JOB	ERROR NUMBER	NUMBER OF ERRORS
	217	1