NUMERICAL RESULTS FOR EGCR MODERATOR-
ELEMENT STRESS PROBLEMS

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NUMERICAL RESULTS FOR EGCR MODERATOR-
ELEMENT STRESS PROBLEMS

by

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July 3, 1961

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NUMERICAL RESULTS FOR EGCR MODERATOR- ELEMENT STRESS PROBLEMS

Lewis E. Hulbert and Robert F. Redmond

A detailed presentation is made of the thermal stresses calculated for the moderator elements in the Experimental Gas-Cooled Reactor. These results are discussed and some conclusions are presented. This report complements a previous report, BMI-1503, which defines the problems and discusses the methods of solution.

INTRODUCTION

A recent report⁽¹⁾ (hereinafter referred to as the previous report) describes the development of a general program for the IBM Type 7090 electronic computer for calculating plane thermal stresses. This program was used to calculate the stresses in three different problems related to the Experimental Gas-Cooled Reactor (EGCR) moderator elements. The results of these calculations were mentioned briefly in the previous report. The present report gives in detail the final results of the calculations of the three problems. A brief discussion of some of the implications of these results is also included.

NUMERICAL RESULTS

The results of the application of the computer program to three problems are presented in the form of tables and graphs. The three problems considered were discussed in the previous report. The moderator-element designs that were studied involved long prisms with (a) a square cross section with four symmetrically located longitudinal cylindrical holes, and a "temperature function"* symmetric about one diagonal of the square; (b) a square cross section with one centrally located circular hole with a temperature function symmetric about one diagonal of the square; (c) same as (b) but with no symmetry of the temperature function.

The computer solution of these problems used a method analogous to that of finite differences to calculate the stresses at the nodes of a lattice network covering the cross section of each shape. In addition, the program calculated the relative displacement of selected points on the boundaries of the circular holes and the bending moments required to maintain a plane-strain condition.

(1) Reference at end.

*As explained in the previous report (page 1) the straining due to neutron flux in the present problem is entirely analogous to the thermal strain in the usual thermal-stress problem. The units used for the temperature function are given on page 24 of the previous report.

As discussed in the previous report, the technique of solving these problems involved calculating the stress function for relatively coarse meshes and then improving on this approximation by going to a progressively finer mesh spacing. Only the results of the final mesh spacing are included for Cases (a) and (b), but the results of the calculations for the two finest meshes are included for Case (c).

Figures 1, 10, 19, and 28 show these four mesh configurations. Each point is identified both by its sequence number shown and by its (M, N) mesh coordinates. Solid dots are used to denote mesh points interior to each region and open circles denote points exterior to the regions. The initial and final boundary points on the circular boundaries are indicated by the encircled numbers in these figures. (The initial point on each boundary is numbered zero.) For circles cut by a symmetry axis the initial boundary point was chosen to be the upper intersection of the circle and the symmetry axis. The final point is the lower intersection of the circle and symmetry axis. The intermediate points are equally spaced along each semicircle. For circles not on the symmetry axis, the initial and final points coincide. These points are at the right end of the horizontal diameter. The intermediate boundary points are equally spaced around the full circle. The points are numbered in sequence as the circle is traversed in a counter-clockwise direction.

The values of the temperature function used in the calculations are shown in Figures 2, 11, 20, and 29. The various components of the stresses calculated at the mesh points are shown in Figures 3 through 9, 12 through 18, 21 through 27, and 30 through 36.

These stresses are also given in tabular form in Tables 1 through 4. Table 5 gives the bending moments and maximum stresses calculated. The values of the stress functions are listed in Tables 6 through 9. Tables 10 through 14 give the x- and y-components and the normal and tangential components of the relative displacements of the boundary points of the circles. These displacements differ from those listed by the computer program. In the computer program one of the boundary points on each circle is assumed fixed. The displacements of the remaining boundary points on the circle were then calculated relative to the fixed point. However, it is difficult to determine the shape of the deformed boundary with the displacements in this form. To give a better indication of the shape of the deformed boundary, a crude guess was made of the "center" of the deformed "circle" and the entire deformed boundary was then rigidly translated so that this center was coincident with the center of the undeformed circle. With the deformed boundary in this position the displacements of its points from the corresponding points of the undeformed circle were then calculated. The results are given in Tables 10 through 14. On examination of the normal displacements, it is readily seen that the boundaries remain nearly circular. The total decrease (δD) in the lengths of the diameters through opposing boundary points is also tabulated. The variation in these values is another indication of the noncircularity of the deformed boundary.

DISCUSSION OF THE RESULTS

Aside from the shape of the deformed holes discussed above, the principal question of interest concerns the stress distributions calculated for the three cases. As mentioned above, Case (a) involves a square cross section with four holes. It was desired to determine what stress relief would be obtained if this block were cut into

quarters by cuts normal to the sides of the square at their midpoints. Cases (b) and (c) represent the lower right and lower left quarters of the configuration of Case (a) if these cuts are made. In order to completely determine the stresses after cutting, a calculation would have to be made of the stresses in the quarter corresponding to the upper left quadrant of Figure 1. However, preliminary calculations showed that the stress distribution in this case was very similar to that of Case (b).

In-Plane Stress Distributions

The most interesting features of the stress distributions shown in the figures are the various regions of stress concentration along the boundaries of the regions.

The stress concentrations along the outer boundary of Case (a) are the result of normal stresses in the direction tangential to the boundary. (The boundary conditions along these edges imply vanishing of the shear stresses and the normal stresses normal to these boundaries.) It is seen from Figures 3 and 4 that the tangential normal stress along each boundary goes through a positive maximum near each hole on the symmetry axis and through a negative minimum near the hole not on the symmetry axis. In contrast, the tangential stresses on the edges of Cases (b) and (c) show a fairly smooth variation from tensile stress near the corners to compressive stress near the holes.

Although it would appear that there is a definite stress concentration along the edges of Case (a), there remains some uncertainty in the results because the boundary conditions have not been well satisfied. Since the boundaries of each problem are free of external loads, both the shear stress and the normal stress normal to each boundary should vanish. From a study of the figures showing σ_x and σ_y for each problem, it is seen that the normal stress is essentially zero normal to the outside boundaries. However, from Figure 5 it is seen that there is a considerable variation in the shear stress along the exterior boundaries of Case (a). This stress reaches 1,014 psi on the vertical boundary and 782 psi on the horizontal boundary. Figures 14 and 32 show maximum shears of 173 psi and 99 psi on the boundaries of Cases (b) and (c), respectively. The reduction of the boundary shear stresses in Cases (b) and (c) over those of Case (a) resulted, in part, from the fact that the mesh spacing is twice as fine in Cases (b) and (c) as it is in Case (a). However, the large shear stresses on the boundaries of Case (a) must be regarded as unsatisfactory.

Obtaining reasonable satisfaction of the boundary condition was one of the most difficult problems encountered. This problem is very complex and may be solved only after more experience is gained in application of the method. However, the following remarks can be made at this time.

In setting up the numerical solution of a given problem, it is necessary to write one independent equation for each mesh point at which the stress function is to be calculated. For a point interior to the region of the problems considered, this equation was the nonhomogeneous biharmonic equation, based on a 13-point array centered at the point. For an exterior point, the equation written was the numerical analogue of one of the boundary conditions of the problem on the boundary adjacent to the point.

As mentioned above, if a boundary is free of external loads, the boundary conditions are that the shear stress and the normal components of the normal stress are zero on the boundary. It is shown in the previous report that these conditions are mathematically equivalent to the condition that the two derivatives $\frac{\partial \phi}{\partial x}$ and $\frac{\partial \phi}{\partial y}$ are constant on the boundary. These latter conditions were used in the program. However, it is noted that the numerical analogues of the two alternative statements of the boundary conditions are not strictly equivalent. In particular, if the boundary conditions are expressed in terms of the stresses along the straight sides, the resulting equations will involve the values of the stress function at the mesh points on the boundary and on a single layer of mesh points on either side of the boundary. If the alternative boundary conditions are used, the resulting equations involve the values of the stress function of these points plus the second layer of mesh points on either side of the boundary. The alternative boundary conditions were chosen in order to obtain boundary equations that would involve the second layer of exterior points. However, this choice involves the shear stresses only indirectly and may have contributed to the variability of the boundary shear stress.

In the numerical procedure used, one boundary equation is written for each exterior mesh point. As explained in the previous report, each boundary condition is related to a point on the boundary of the region. These boundary points need not be mesh points of the lattice. Since the stress function satisfies two boundary conditions everywhere on the boundary, it is usually possible to write two independent equations at each boundary point chosen.

It was customary to choose boundary points equally spaced along each boundary so that the number of boundary points at least exceeded one-half the number of exterior mesh points adjacent to that boundary. In some cases, for convenience in spacing, boundary points were selected along the straight sides of the regions in excess of the number needed for writing boundary conditions on those sides. In these cases there were boundary points at which one or both boundary conditions were missing. It was found that local discontinuities of the stress functions would arise in the neighborhood of these boundary points. As a result of this experience, it appeared desirable to apply the boundary conditions on the sides of the region as uniformly as possible. Two different boundary-point configurations have been tried. In Cases (a) and (b) there are uniformly spaced boundary points on each side equal in number to the greatest integer in $\frac{1}{2}(j + 1)$ where j is the number of boundary conditions to be met on that side. Then if j was odd, there was one point on the side at which the normal derivative of ϕ was omitted. In Case (c) there are uniformly spaced boundary points on each side equal in number to the greatest integer in $\frac{1}{2}j$. In this case, when j was odd, the extra boundary condition was written at a boundary point inserted halfway between a corner boundary point and the adjacent boundary point along the side. There is no clear evidence, as yet, whether one of these configurations is better than the other.

It was felt that the uniform application of the boundary conditions on the hole boundaries was not necessary. Because the boundaries are concave outward, every exterior point in the circle could be involved in more than one boundary equation. In addition to this, there are usually either two or three integral equations to be satisfied on the hole boundary. These equations will involve all of the exterior points. The method of numerical integration used for the integral equations requires a set of equally spaced

points on the hole boundary. This set need not correspond to the set of points at which the remaining boundary conditions are calculated for the hole. However, for convenience, the practice has been to choose a set of points equally spaced around the hole boundary somewhat greater in number than needed to satisfy all of the boundary conditions. The integral equations and the boundary conditions are then written on the same set of boundary points. This resulted in some gaps in the application of the boundary conditions for Cases (a) and (c). By coincidence in Case (b), the boundary-point set chosen for the hole exactly matched the number needed and the spacing of the boundary equations was completely uniform.

When the figures showing the stresses were prepared for this report, it was found that the stress concentrations around the holes in Cases (a) and (c) were all in the neighborhood of points at which less than two boundary equations had been written. It was found, moreover, that Case (b) had a relatively uniform stress distribution near the hole.

Some of the variation in the stress levels at the points near the holes is undoubtedly a result of the variation in the distance between these mesh points and the adjacent hole boundaries. This is especially true for Case (a) where the mesh spacing is twice that of Cases (b) and (c). However, the differences in the stress variations between Cases (b) and (c) would seem to indicate that the nonuniformity of the boundary-condition assignment also has an effect on the stress concentrations. This question can be clarified by a recalculation of Cases (a) and (b) with a more uniformly assigned set of boundary conditions on the holes.

Axial Stress Distributions

Under the condition of plane strain assumed in this study, the axial stress depends linearly on the in-plane normal stresses and the temperature function according to the following relation:

$$\sigma_z = E_z \alpha_z \left[\frac{\lambda_1}{D} (\sigma_x + \sigma_y) + (\bar{t} - t) \right],$$

where $\bar{t}$ is the average of the temperature function over the cross section of the body.

For the values of the constants assumed in this study:

$$\sigma_z = 0.35 (\sigma_x + \sigma_y) + 10,200 (\bar{t} - t).$$

The axial stresses calculated by the program were:

$$\sigma_z^* = \frac{D}{E_z \alpha_z} \sigma_z = \sigma_z / 1.676.$$

Figures 9, 18, 27, and 36 give the true values of σ_z .

As seen from an examination of Figures 9, 18, and 36, the variation in the temperature, t , has a dominant effect on the variation of σ_z . In general, these stresses are compressive along the edges of the regions and tensile near the holes. Case (b)

shows a fairly even distribution of tensile stresses near the holes with a maximum of 3730 psi. Case (c) shows a somewhat variable tensile stress near the hole with a maximum of 3570 psi. Case (a) shows a highly varying tensile stress near each hole with a maximum stress of 4420 psi. It would thus appear that the axial stresses are critical in every case studied.

The variation of the stresses for Case (a) is caused partly by the large variation of the temperature with distance from the holes. The mesh spacing of Case (a) is twice that of Cases (b) and (c). There is thus a wider variation in the distances between the holes and the neighboring mesh points in Case (a) than in Cases (b) and (c).

However, some of the peaking of the axial stresses in Case (a) is a result of the in-plane stress concentrations discussed earlier. If the in-plane stress concentrations calculated were reduced as a result of improving the boundary-point assignment, then the axial stress peaks for Case (a) would also be reduced. If this is the case, the stress relief obtained on sectioning (only 16 per cent as it now stands) would largely disappear.

Bending Moments

As mentioned previously, the bending moments for each case are given in Table 5. For the cases with symmetry, these moments differ from those calculated by the computer program (and given in the previous report) in the following way.

The formulas used in the computer program for calculating the bending moments were:

$$M'_x = \sum \sigma_j N_j ,$$

and

$$M'_y = - \sum \sigma_j M_j ,$$

where the summation is taken over the set of interior mesh points of each problem. For Cases (a) and (b), this summation was thus taken over one-half of the element. For the type of symmetry shown by these two cases, the over-all bending moments are given by:

$$M_x = M'_x - M'_y$$

$$M_y = -M_x .$$

For Case (a), the reported moments were $M'_x = -116,000$ in-lb and $M'_y = 92,200$ in-lb. The over-all moments are thus for Case (a):

$$M_x = -13,800$$

$$M_y = 13,800.$$

(These are based on σ_z^* and to get true moments, these must be multiplied by 1.676.) The moments calculated for elements without symmetry need no adjustment since the area of integration includes the whole region of the problem.

It is noted that the base dimensions of Case (a) are twice those of Cases (b) and (c). Thus the moment arm of forces applied to maintain plane stress for Case (a) is twice that of Cases (b) and (c). Thus, from Table 5 it is apparent that smaller forces are needed to maintain plane strain in Case (a) than in Cases (b) and (c).

CONCLUSIONS

The principal result of sectioning the fuel element is the reduction of the large in-plane normal stresses tangential to the outer boundaries of the fuel element. It is felt that the stress concentrations near the holes of the element due to the thermal peaking are not radically changed. The form of the axial stress distribution does not change greatly since it is chiefly dependent on the variation of the "temperature" function. Thus, it is felt that sectioning does not provide a significant reduction in the thermal stresses.

As discussed in the report, it would seem that the stress concentrations calculated near the holes of Cases (a) and (c) may be too high. A recalculation of Cases (a) and (c) with the suggested modification in the application of the boundary conditions on the circular holes may clarify this point.

REFERENCE

- (1) Redmond, R. F., Hulbert, L. E., and Clark, R. W., "Numerical Solution of Reactor Stress Problems", BMI-1503 (February 28, 1961).

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TABLE 1. STRESS DISTRIBUTION FOR 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
	M	N				Max, psi	Min, psi		
7	3	3	-324	-326	-313	-12	-638	313	-1036
12	4	3	-44	475	-385	680	-249	464	-744
13	4	4	166	168	203	370	-36	203	-691
18	5	3	1	1108	156	1130	-21	575	-407
19	5	4	-8	264	272	432	-176	304	-500
20	5	5	-153	-141	228	82	-376	229	-366
25	6	3	-1	1110	84	1116	-8	562	-121
26	6	4	-183	309	185	371	-245	308	-211
27	6	5	-259	-355	107	-190	-424	117	-43
28	6	6	-367	-355	-52	-309	-413	52	458
33	7	3	-2	1744	-452	1854	-112	983	358
34	7	4	-17	375	141	420	-63	242	209
35	7	5	57	-598	120	78	-619	349	453
36	7	6	244	-579	42	246	-581	414	1202
37	7	7	1011	990	1265	2266	-265	1265	2639
42	8	3	-2	2754	-70	2755	-4	1379	909
43	8	4	234	444	205	570	109	230	653
44	8	5	248	-762	185	281	-795	538	952
45	8	6	281	-712	-231	332	-763	548	1900
50	9	3	-5	2357	875	2646	-293	1470	1094
51	9	4	-13	442	213	527	-97	312	905
52	9	5	-259	-709	170	-202	-766	282	1271
57	10	3	-7	1424	71	1428	-11	719	1045
58	10	4	-96	338	280	475	-233	354	1030
59	10	5	583	-1091	15	583	-1091	837	1592
64	11	3	5	3042	-1014	3350	-302	1826	1373
65	11	4	-400	744	204	779	-436	607	1040
66	11	5	-896	-1487	240	-811	-1572	380	1188
71	12	3	5	4299	-194	4308	-4	2156	1465
72	12	4	182	983	-2	983	182	401	1022
73	12	5	-28	-1279	418	99	-1405	752	1157
79	13	3	2	3612	539	3691	-77	1884	1023
80	13	4	90	1074	-0	1074	90	492	694
81	13	5	102	-836	167	131	-865	498	845
82	13	6	-237	-1346	696	99	-1682	890	1593
90	14	3	1	2859	128	2865	-5	1435	506
91	14	4	-86	1084	28	1085	-86	586	257
92	14	5	40	-593	167	81	-634	358	365
93	14	6	317	-1283	325	380	-1347	863	979
94	14	7	1523	-405	-656	1725	-607	1166	2364
101	14	14	962	959	1174	2134	-213	1174	2434
106	15	3	-4	3084	-239	3102	-22	1562	187
107	15	4	-35	1167	7	1167	-35	601	-110
108	15	5	-124	-301	181	-11	-414	202	-113
109	15	6	-309	-864	459	-50	-1122	536	248
110	15	7	-755	-374	661	123	-1253	688	921
111	15	8	-2064	-139	1474	659	-2862	1761	1409
116	15	13	567	491	561	1092	-33	563	2023
117	15	14	157	507	479	841	-178	510	1204
118	15	15	-21	-20	298	278	-318	298	375
123	16	3	-2	3253	4	3253	-2	1627	-88

TABLE 1. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
	M	N				Max, psi	Min, psi		
124	16	4	-12	1216	-72	1221	-16	619	-430
125	16	5	-209	-87	-0	-87	-209	61	-494
126	16	6	-517	-621	152	-408	-730	161	-286
127	16	7	-952	-488	183	-424	-1015	295	126
128	16	8	-1328	-458	36	-456	-1330	437	546
129	16	9	-1102	-1097	-147	-952	-1247	147	868
130	16	10	-904	903	-28	903	-904	904	1552
131	16	11	-677	-285	108	-257	-704	223	1339
132	16	12	-633	333	174	364	-663	513	1222
133	16	13	-556	545	319	631	-642	636	850
134	16	14	-582	392	295	474	-665	570	301
135	16	15	-583	-62	241	32	-677	355	-293
136	16	16	-577	-574	222	-354	-798	222	-806
141	17	3	4	2810	162	2819	-6	1412	-392
142	17	4	-87	1152	-182	1178	-113	645	-690
143	17	5	-241	27	-215	146	-360	253	-751
144	17	6	-473	-515	-149	-344	-645	151	-602
145	17	7	-737	-580	-125	-511	-806	147	-299
146	17	8	-886	-568	-128	-523	-931	204	43
147	17	9	-851	-586	56	-574	-862	144	351
148	17	10	-1042	424	109	432	-1050	741	687
149	17	11	-848	102	103	113	-859	486	648
150	17	12	-905	410	255	458	-953	705	511
151	17	13	-959	522	289	577	-1014	795	195
152	17	14	-983	336	270	389	-1037	713	-245
153	17	15	-973	-89	243	-26	-1035	504	-727
154	17	16	-956	-579	224	-475	-1061	293	-1154
155	17	17	-959	-955	208	-749	-1165	208	-1458
160	18	3	-3	2302	43	2302	-3	1153	-591
161	18	4	-58	1009	-278	1077	-126	601	-805
162	18	5	-157	58	-370	336	-435	385	-836
163	18	6	-296	-454	-341	-25	-725	350	-686
164	18	7	-431	-562	-285	-204	-789	292	-396
165	18	8	-513	-467	-193	-295	-685	195	-58
166	18	9	-564	-246	-4	-246	-564	159	245
167	18	10	-696	238	89	246	-705	475	464
168	18	11	-691	283	102	294	-702	498	463
169	18	12	-808	468	169	490	-830	660	306
170	18	13	-952	525	205	553	-980	766	-4
171	18	14	-1052	321	225	356	-1088	722	-427
172	18	15	-1097	-107	231	-55	-1149	547	-884
173	18	16	-1113	-602	218	-521	-1194	336	-1301
174	18	17	-1128	-994	187	-863	-1259	198	-1599
175	18	18	-1152	-1151	147	-1005	-1298	147	-1722
180	19	3	-2	1869	14	1869	-2	936	-639
181	19	4	3	802	-327	919	-114	517	-787
182	19	5	-42	46	-450	454	-450	452	-754
183	19	6	-79	-388	-417	212	-678	445	-542
184	19	7	-78	-486	-330	106	-669	388	-191
185	19	8	-53	-316	-205	59	-428	244	221
186	19	9	-33	-15	-33	10	-59	35	593

TABLE 1. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_x^* , psi
	M	N				Max, psi	Min, psi		
187	19	10	-44	221	51	231	-54	143	798
188	19	11	-91	309	17	310	-92	201	794
189	19	12	-285	497	-13	497	-286	392	604
190	19	13	-551	573	14	573	-551	562	242
191	19	14	-779	366	92	373	-786	580	-244
192	19	15	-916	-94	161	-63	-947	442	-758
193	19	16	-987	-624	181	-549	-1062	257	-1219
194	19	17	-1028	-1041	158	-877	-1192	158	-1540
195	19	18	-1060	-1214	109	-1003	-1271	134	-1674
196	19	19	-1084	-1085	66	-1019	-1150	66	-1603
201	20	3	4	1340	55	1342	2	670	-583
202	20	4	-5	555	-338	714	-163	438	-664
203	20	5	11	44	-448	476	-421	448	-518
204	20	6	91	-278	-363	314	-501	408	-185
205	20	7	266	-381	-222	335	-449	392	305
206	20	8	497	-155	-40	500	-157	328	887
207	20	9	809	174	137	837	146	346	1429
208	20	10	1047	168	94	1057	158	450	1702
209	20	11	1027	173	-115	1042	158	442	1687
210	20	12	763	442	-305	947	258	344	1432
211	20	13	300	660	-354	878	83	397	949
212	20	14	-157	515	-198	569	-211	390	318
213	20	15	-439	-10	-3	-10	-439	215	-343
214	20	16	-587	-617	96	-505	-699	97	-909
215	20	17	-665	-1080	110	-637	-1107	235	-1289
216	20	18	-704	-1269	82	-692	-1281	294	-1447
217	20	19	-715	-1132	48	-710	-1138	214	-1359
218	20	20	-696	-699	51	-646	-749	51	-1046
223	21	3	0	777	81	786	-8	397	-440
224	21	4	-1	328	-331	533	-206	370	-425
225	21	5	27	107	-386	455	-321	388	-142
226	21	6	169	-65	-190	275	-171	223	369
227	21	7	486	-236	36	487	-238	362	1050
228	21	8	915	176	523	1186	-95	641	1938
233	21	13	1749	738	-1076	2432	55	1188	2163
234	21	14	766	883	-798	1625	24	800	1258
235	21	15	236	215	-307	533	-82	307	326
236	21	16	-15	-542	-53	-10	-547	269	-414
237	21	17	-139	-1082	38	-137	-1084	473	-900
238	21	18	-186	-1297	62	-182	-1300	559	-1088
239	21	19	-170	-1150	73	-165	-1156	496	-969
240	21	20	-93	-658	127	-66	-686	310	-552
241	21	21	77	76	313	390	-236	313	117
246	22	3	-3	132	125	206	-77	142	-259
247	22	4	-13	132	-328	395	-276	335	-121
248	22	5	-12	284	-315	484	-212	348	337
249	22	6	108	339	44	347	100	123	1067
250	22	7	409	-169	87	422	-182	302	1961
257	22	14	1753	1906	-2163	3994	-335	2164	2578
258	22	15	849	713	-776	1560	3	779	1185
259	22	16	523	-350	-258	594	-421	508	176

TABLE 1. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
	M	N				Max,	Min,		
						psi	psi		
260	22	17	367	-1012	-55	369	-1014	692	-439
261	22	18	314	-1263	50	316	-1265	790	-661
262	22	19	356	-1110	138	368	-1123	746	-504
263	22	20	489	-536	281	561	-608	585	33
264	22	21	763	465	692	1322	-94	708	962
265	22	22	1559	1559	1813	3372	-254	1813	2246
270	22	3	-1	-574	65	7	-581	294	-95
271	23	4	-45	-50	-339	292	-386	339	181
272	23	5	-53	574	-263	670	-149	410	845
273	23	6	32	1122	497	1315	-161	738	1896
278	23	15	800	1588	-993	2262	126	1068	2033
279	23	16	747	-33	-407	920	-206	563	746
280	23	17	641	-848	-142	654	-861	758	-0
281	23	18	592	-1139	43	594	-1140	867	-272
282	23	19	630	-985	210	656	-1012	834	-86
283	23	20	728	-319	401	864	-455	660	585
284	23	21	770	1234	942	1972	32	970	1794
289	24	3	-0	-1134	-4	-0	-1134	567	31
290	24	4	33	-215	-316	249	-431	340	437
291	24	5	169	866	-199	919	116	402	1330
296	24	16	551	239	-355	783	8	388	1139
297	24	17	564	-623	-182	591	-651	621	298
298	24	18	533	-930	26	534	-930	732	-4
299	24	19	512	-793	224	550	-830	690	203
300	24	20	480	-195	285	585	-300	442	930
305	25	3	0	-1750	159	15	-1764	890	18
306	25	4	-53	-287	-339	189	-529	359	538
307	25	5	-319	1478	-66	1480	-321	900	1557
312	25	16	62	323	-190	423	-38	231	1249
313	25	17	240	-423	-144	270	-453	362	455
314	25	18	250	-713	-20	251	-713	482	98
315	25	19	87	-578	103	103	-594	348	293
316	25	20	-245	-172	203	-2	-414	206	978
321	26	3	1	-2642	215	18	-2660	1339	-205
322	26	4	330	-567	-231	386	-623	504	523
323	26	5	758	1884	-270	1946	696	625	1824
328	26	16	103	236	-39	246	93	77	1203
329	26	17	156	-385	-84	168	-398	283	360
330	26	18	186	-642	-34	187	-643	415	63
331	26	19	258	-585	34	259	-587	423	291
332	26	20	397	-122	96	414	-139	276	1080
337	27	3	-1	-2863	-65	-0	-2864	1432	-446
338	27	4	55	-674	-8	55	-674	365	230
339	27	5	208	1526	-447	1663	71	796	1360
344	27	16	62	64	-0	64	62	1	885
345	27	17	6	-367	-83	23	-385	204	119
346	27	18	-28	-543	-32	-26	-545	260	-150
347	27	19	-82	-471	39	-78	-475	199	31
348	27	20	-188	-153	-17	-146	-195	24	684
354	28	3	4	-2341	-240	28	-2365	1196	-646

TABLE 1. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_x^* , psi
	M	N				Max, psi	Min, psi		
355	28	4	42	-754	103	55	-767	411	-130
356	28	5	201	842	-199	898	144	377	766
357	28	6	563	2137	-1088	2693	7	1343	2019
362	28	15	-10	247	197	353	-117	235	1382
363	28	16	-148	-68	-75	-23	-193	85	363
364	28	17	-177	-329	-110	-119	-386	134	-252
365	28	18	-178	-459	-46	-171	-466	147	-474
366	28	19	-155	-434	28	-152	-437	142	-318
367	28	20	-90	-258	44	-79	-269	95	232
368	28	21	-193	162	200	252	-283	268	1168
376	29	3	3	-1679	-109	10	-1686	848	-885
377	29	4	90	-718	217	145	-773	459	-527
378	29	5	264	342	70	383	223	80	145
379	29	6	662	1140	-519	1473	330	572	1082
380	29	7	1397	1395	-1380	2776	16	1380	2208
387	29	14	-25	30	-40	51	-46	48	1529
388	29	15	-156	14	-60	33	-175	104	561
389	29	16	-237	-126	-143	-28	-335	153	-191
390	29	17	-261	-270	-125	-141	-390	125	-665
391	29	18	-259	-353	-34	-249	-364	58	-846
392	29	19	-219	-343	92	-170	-392	111	-720
393	29	20	-47	-283	209	75	-405	240	-282
394	29	21	546	-256	174	583	-292	437	499
395	29	22	2898	-455	-1172	3267	-824	2046	1825
402	29	29	662	663	822	1484	-160	822	1311
407	30	3	3	-1202	29	4	-1203	603	-1169
408	30	4	56	-572	317	188	-704	446	-917
409	30	5	168	63	307	427	-196	311	-445
410	30	6	464	503	-17	509	458	26	214
411	30	7	1087	613	-539	1438	261	589	1006
412	30	8	2172	579	-1187	2805	-54	1429	1920
417	30	13	415	55	135	460	10	225	1376
418	30	14	101	-67	-116	160	-126	143	567
419	30	15	-78	-84	-185	104	-267	185	-137
420	30	16	-163	-125	-197	55	-342	198	-687
421	30	17	-198	-189	-145	-48	-339	146	-1042
422	30	18	-228	-221	-45	-179	-270	45	-1183
423	30	19	-287	-154	98	-102	-339	118	-1102
424	30	20	-407	-23	277	121	-552	337	-808
425	30	21	-727	175	504	400	-952	676	-365
426	30	22	-1656	400	976	790	-2046	1418	97
427	30	23	-4841	-304	3450	1557	-6702	4129	-58
432	30	28	404	339	409	782	-39	410	971
433	30	29	83	236	267	438	-118	278	158
434	30	30	-33	-29	98	67	-128	98	-591
439	31	3	-12	-714	-97	2	-727	364	-1393
440	31	4	-90	-373	329	126	-589	358	-1253
441	31	5	-109	-37	418	347	-492	420	-949
442	31	6	-27	186	291	389	-230	309	-508
443	31	7	239	238	51	289	188	51	21
444	31	8	690	241	-213	775	156	309	590
445	31	9	1186	325	-391	1337	174	582	1107

TABLE 1. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses			
	M	N				Max, psi	Min, psi	τ_{Max} , psi	σ_z^* , psi
446	31	10	1460	304	-347	1556	208	674	1379
447	31	11	1251	168	-177	1279	140	569	1295
448	31	12	747	-83	-160	777	-113	445	893
449	31	13	340	-126	-255	452	-239	346	379
450	31	14	137	-106	-284	325	-293	309	-158
451	31	15	64	-87	-264	263	-286	274	-656
452	31	16	59	-76	-222	224	-240	232	-1050
453	31	17	67	-107	-160	163	-202	183	-1317
454	31	18	49	-114	-82	83	-148	116	-1425
455	31	19	-17	-8	12	0	-25	12	-1362
456	31	20	-160	93	78	115	-182	148	-1152
457	31	21	-480	213	51	216	-484	350	-847
458	31	22	-1072	381	-37	382	-1073	727	-503
459	31	23	-1735	-172	-15	-172	-1735	782	-319
460	31	24	-1406	-2202	20	-1406	-2202	398	-309
461	31	25	-1021	1307	199	1324	-1038	1181	693
462	31	26	-443	-465	248	-206	-702	248	407
463	31	27	-268	307	177	357	-319	338	337
464	31	28	-100	301	228	404	-203	303	-67
465	31	29	-107	88	126	150	-168	159	-618
466	31	30	-118	-79	56	-39	-158	60	-1149
467	31	31	-70	-77	75	2	-149	76	-1552
472	32	3	41	-15	-261	275	-250	263	-1467
473	32	4	-157	-154	195	39	-351	195	-1471
474	32	5	-391	-38	321	152	-580	366	-1288
475	32	6	-597	60	292	170	-708	439	-1013
476	32	7	-722	68	191	111	-766	439	-678
477	32	8	-727	32	71	39	-734	386	-328
478	32	9	-601	96	-70	103	-608	356	4
479	32	10	-397	209	-223	282	-471	376	228
480	32	11	-232	139	-336	338	-431	384	236
481	32	12	-108	-89	-359	260	-458	359	32
482	32	13	26	-89	-312	285	-349	317	-257
483	32	14	190	-33	-256	358	-201	279	-594
484	32	15	350	-26	-207	442	-118	280	-942
485	32	16	494	-16	-165	543	-65	304	-1233
486	32	17	589	-50	-121	611	-72	341	-1439
487	32	18	643	-49	-67	650	-55	353	-1513
488	32	19	678	64	-38	681	62	309	-1439
489	32	20	657	46	-61	663	40	311	-1277
490	32	21	633	-14	-138	661	-42	351	-1021
491	32	22	704	178	-270	818	64	377	-631
492	32	23	822	39	-287	916	-55	486	-307
493	32	24	897	-841	235	929	-873	901	-213
494	32	25	335	284	452	762	-144	453	32
495	32	26	452	-129	288	571	-247	409	-66
496	32	27	345	223	301	591	-23	307	-216
497	32	28	229	134	165	353	10	172	-593
498	32	29	119	-27	71	148	-55	101	-1046
499	32	30	70	-64	63	94	-89	92	-1459
500	32	31	69	11	95	139	-60	99	-1779

TABLE 1. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		r_{Max} , psi	σ_z , psi
	M	N				Max, psi	Min, psi		
501	32	32	52	49	62	113	-11	62	-2011
506	33	3	120	306	222	453	-27	240	-1493
507	33	4	-13	34	-105	118	-97	108	-1511
508	33	5	-498	2	-19	3	-499	251	-1436
509	33	6	-975	2	-50	5	-978	491	-1262
510	33	7	-1590	-0	-203	25	-1616	821	-1062
511	33	8	-2243	-1	-138	7	-2252	1129	-870
512	33	9	-2341	0	195	16	-2357	1187	-629
513	33	10	-1735	1	219	28	-1762	895	-368
514	33	11	-1230	2	-125	14	-1242	628	-275
515	33	12	-939	1	-70	7	-944	475	-378
516	33	13	-192	-3	218	140	-336	238	-503
517	33	14	619	-0	157	656	-38	347	-680
518	33	15	1032	5	-18	1032	5	514	-946
519	33	16	1189	-2	-69	1193	-6	600	-1213
520	33	17	1317	-5	33	1318	-5	662	-1387
521	33	18	1623	7	162	1639	-9	824	-1400
522	33	19	1894	-1	-61	1896	-3	950	-1315
523	33	20	1607	-5	-279	1654	-52	853	-1217
524	33	21	1634	4	271	1678	-40	859	-960
525	33	22	3068	2	682	3213	-143	1678	-357
526	33	23	4263	-3	-204	4273	-12	2142	184
527	33	24	3233	1	-782	3413	-179	1796	201
528	33	25	1703	-1	-35	1704	-2	853	-3
529	33	26	1697	-2	438	1804	-108	956	-41
530	33	27	1632	4	-9	1632	4	814	-243
531	33	28	833	-0	-333	950	-117	533	-708
532	33	29	318	-2	-26	321	-5	163	-1181
533	33	30	501	-5	235	594	-97	346	-1509
534	33	31	658	13	14	658	13	323	-1783
535	33	32	193	-54	-322	415	-275	345	-2113
536	33	33	-238	-236	9	-228	-247	9	-2339

TABLE 2. STRESS DISTRIBUTION FOR 8" x 8" ELEMENT WITH "THERMAL" SYMMETRY

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z , psi
	M	N				Max, psi	Min, psi		
7	3	3	33	33	-9	43	24	9	-896
12	4	3	11	28	25	46	-7	26	-896
13	4	4	3	3	39	42	-36	39	-897
18	5	3	-4	116	-45	131	-19	75	-844
19	5	4	-4	41	45	69	-32	51	-854
20	5	5	-5	-6	63	58	-69	63	-821
25	6	3	1	262	-31	265	-2	134	-746
26	6	4	7	73	39	91	-11	51	-778
27	6	5	-23	-15	45	27	-64	45	-754
28	6	6	-64	-63	20	-44	-83	20	-693
33	7	3	1	304	30	307	-2	155	-640
34	7	4	-14	82	20	86	-18	52	-683
35	7	5	-51	-33	9	-29	-54	12	-660
36	7	6	-95	-102	-21	-77	-120	22	-592
37	7	7	-141	-140	-63	-78	-203	63	-482
42	8	3	0	267	7	268	-0	134	-526
43	8	4	-35	77	-8	77	-36	57	-561
44	8	5	-67	-59	-29	-34	-92	29	-541
45	8	6	-108	-143	-64	-59	-191	66	-457
46	8	7	-149	-184	-103	-62	-270	104	-328
47	8	8	-180	-179	-132	-47	-312	132	-145
52	9	3	-0	304	-71	320	-16	168	-384
53	9	4	-21	63	-38	78	-36	57	-420
54	9	5	-54	-94	-66	-6	-143	69	-393
55	9	6	-95	-184	-102	-28	-251	112	-299
56	9	7	-128	-217	-132	-33	-312	139	-136
57	9	8	-140	-196	-142	-23	-313	145	85
58	9	9	-119	-118	-120	1	-238	120	367
63	10	3	0	357	-6	357	0	179	-221
64	10	4	14	26	-58	79	-39	59	-263
65	10	5	-28	-137	-103	34	-198	116	-226
66	10	6	-65	-217	-134	13	-295	154	-111
67	10	7	-83	-231	-144	5	-319	162	83
68	10	8	-72	-178	-123	9	-259	134	352
69	10	9	-16	-59	-57	23	-98	61	699
70	10	10	104	106	70	175	35	70	1112
75	11	3	0	187	74	212	-26	119	-92
76	11	4	-9	-36	-72	51	-95	73	-122
77	11	5	-24	-173	-128	50	-247	148	-56
78	11	6	-35	-232	-148	44	-312	178	87
79	11	7	-29	-215	-135	42	-286	164	323
80	11	8	10	-117	-75	44	-152	98	650
81	11	9	98	63	49	132	29	52	1071
82	11	10	261	305	258	541	24	258	1575
83	11	11	542	541	568	1110	-26	568	2152
88	12	3	0	13	18	25	-13	19	24
89	12	4	-16	-113	-81	30	-159	94	25
90	12	5	-14	-206	-133	54	-273	163	109
91	12	6	-4	-229	-141	64	-297	180	295
92	12	7	23	-168	-103	68	-213	140	575
93	12	8	81	-8	-4	81	-8	45	968

TABLE 2. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane		τ_{Max} , psi	σ_z^* , psi
						Principal Stresses			
	M	N				Max, psi	Min, psi		
94	12	9	185	258	179	405	38	183	1465
95	12	10	364	618	484	991	-10	500	2076
100	13	3	-0	-75	-14	2	-77	40	158
101	13	4	0	-182	-83	32	-214	123	166
102	13	5	6	-232	-124	59	-285	172	272
103	13	6	25	-208	-119	75	-258	166	494
104	13	7	62	-91	-58	81	-111	96	824
105	13	8	123	145	72	207	61	73	1276
106	13	9	214	523	303	709	28	340	1861
111	14	3	-0	-168	10	0	-168	84	266
112	14	4	10	-243	-76	31	-265	148	289
113	14	5	21	-246	-110	60	-285	173	424
114	14	6	42	-170	-92	76	-205	140	670
115	14	7	74	10	-16	78	6	36	1049
116	14	8	118	327	132	391	54	168	1563
117	14	9	166	829	372	995	-1	498	2225
122	15	3	0	-294	23	2	-296	149	349
123	15	4	8	-298	-64	21	-311	166	387
124	15	5	27	-250	-91	54	-277	166	547
125	15	6	50	-122	-68	74	-145	109	828
126	15	7	69	122	11	124	67	29	1242
127	15	8	81	517	159	569	29	270	1801
132	16	3	-0	-395	9	0	-395	198	407
133	16	4	10	-342	-48	17	-348	182	457
134	16	5	37	-251	-68	52	-266	159	634
135	16	6	62	-76	-48	77	-91	84	937
136	16	7	74	227	20	230	71	79	1386
137	16	8	67	686	135	714	39	338	1992
142	17	3	-0	-448	-1	-0	-448	224	433
143	17	4	14	-372	-29	16	-374	195	494
144	17	5	43	-253	-41	49	-259	154	683
145	17	6	67	-45	-35	77	-55	66	1006
146	17	7	53	318	4	318	53	132	1474
147	17	8	-8	873	177	907	-42	474	2107
152	18	3	0	-468	-1	0	-468	234	428
153	18	4	13	-387	-7	13	-387	200	491
154	18	5	46	-259	-10	46	-259	153	683
155	18	6	91	-48	-10	92	-48	70	1016
156	18	7	142	320	-19	322	140	91	1505
157	18	8	68	1073	-78	1079	62	508	2183
162	19	3	-0	-462	-2	-0	-462	231	393
163	19	4	7	-383	10	8	-383	195	454
164	19	5	23	-254	15	24	-255	139	642
165	19	6	30	-43	9	31	-44	37	956
166	19	7	9	295	-25	297	7	145	1417
167	19	8	36	729	-182	773	-9	391	2049
172	20	3	-0	-437	-2	-0	-437	218	319
173	20	4	7	-370	22	9	-371	190	377
174	20	5	21	-256	29	24	-259	141	556
175	20	6	34	-67	12	35	-69	52	860
176	20	7	35	234	-35	240	29	106	1301
177	20	8	-21	708	-78	716	-29	373	1899

TABLE 2. (Continued)

Physical Mesh Number	Mesh Coord. M N		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z , psi
						Max,	Min,		
						psi	psi		
182	21	3	0	-396	-6	0	-396	198	218
183	21	4	7	-350	34	10	-353	181	266
184	21	5	25	-259	46	33	-266	149	429
185	21	6	50	-101	29	55	-107	81	716
186	21	7	80	152	-31	164	68	48	1135
187	21	8	118	548	-170	607	58	274	1700
192	22	3	0	-330	-11	1	-331	166	86
193	22	4	8	-319	46	14	-325	169	127
194	22	5	25	-257	67	40	-272	156	271
195	22	6	50	-132	55	65	-147	106	533
196	22	7	79	72	-1	79	71	4	911
197	22	8	111	378	-126	428	61	183	1414
198	22	9	154	793	-358	954	-7	480	2051
203	23	3	0	-251	-3	0	-251	126	-62
204	23	4	8	-278	57	19	-289	154	-35
205	23	5	20	-247	85	45	-272	159	89
206	23	6	40	-158	80	68	-186	127	319
207	23	7	67	-6	31	79	-17	48	636
208	23	8	107	219	-79	260	67	97	1093
209	23	9	177	514	-275	668	23	323	1650
215	24	3	0	-178	1	0	-178	89	-229
216	24	4	1	-230	64	17	-247	132	-215
217	24	5	9	-231	99	44	-266	155	-110
218	24	6	23	-177	101	65	-219	142	86
219	24	7	48	-71	65	77	-99	88	375
220	24	8	92	88	-21	111	69	21	759
221	24	9	173	294	-175	418	48	185	1232
222	24	10	310	540	-410	851	-1	426	1805
230	25	3	0	-86	-23	6	-91	49	-404
231	25	4	-5	-176	65	17	-198	108	-400
232	25	5	-3	-209	106	42	-254	148	-315
233	25	6	4	-185	117	60	-241	151	-151
234	25	7	23	-117	97	73	-166	119	99
235	25	8	63	-9	38	80	-25	53	422
236	25	9	139	131	-70	205	65	70	826
237	25	10	270	296	-241	525	41	242	1302
238	25	11	481	474	-487	964	-10	487	1845
245	25	25	502	502	513	1015	-12	513	1576
250	26	3	-0	38	-12	41	-4	23	-567
251	26	4	2	-121	62	28	-147	88	-582
252	26	5	-9	-182	104	40	-231	135	-518
253	26	6	-15	-183	124	51	-248	149	-379
254	26	7	-8	-142	120	63	-212	137	-174
255	26	8	20	-70	89	75	-124	100	96
256	26	9	80	23	22	88	15	36	432
257	26	10	186	130	-88	250	66	92	824
258	26	11	360	242	-247	555	46	254	1267
259	26	12	625	338	-455	958	4	477	1750
271	26	24	616	346	460	961	1	480	1512
272	26	25	373	291	281	617	48	284	1006
273	26	26	203	203	126	329	78	126	538

TABLE 2. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z , psi
	M	N				Max., psi	Min., psi		
278	27	3	-0	93	16	95	-3	49	-739
279	27	4	-7	-71	54	24	-102	63	-762
280	27	5	-23	-149	92	26	-198	112	-715
281	27	6	-38	-168	119	32	-238	135	-600
282	27	7	-44	-147	130	45	-236	140	-427
283	27	8	-32	-101	122	60	-193	127	-201
284	27	9	0	-40	90	75	-111	93	74
285	27	10	76	30	30	91	15	38	396
286	27	11	198	101	-62	228	71	78	753
287	27	12	382	163	-184	487	58	214	1133
288	27	13	635	197	-322	805	27	389	1521
289	27	14	1003	171	-500	1238	-63	650	1897
297	27	22	956	197	443	1160	-7	583	1735
298	27	23	650	209	331	827	32	398	1326
299	27	24	406	196	213	539	63	238	914
300	27	25	224	156	101	296	84	106	502
301	27	26	96	92	3	98	90	4	115
302	27	27	15	15	-72	87	-58	72	-241
307	28	3	-1	132	-0	132	-1	66	-901
308	28	4	-15	-32	39	17	-63	49	-926
309	28	5	-38	-116	72	6	-159	82	-893
310	28	6	-63	-142	103	7	-213	110	-801
311	28	7	-81	-136	126	21	-237	129	-657
312	28	8	-87	-107	135	39	-232	136	-470
313	28	9	-77	-66	128	57	-200	129	-240
314	28	10	-42	-20	105	75	-137	106	20
315	28	11	29	24	62	89	-36	62	312
316	28	12	145	61	-3	146	61	42	612
317	28	13	312	88	-81	338	62	138	914
318	28	14	529	100	-150	577	53	262	1205
319	28	15	758	167	-209	825	100	362	1474
320	28	16	982	-11	-118	996	-25	511	1636
321	28	17	1050	48	-216	1094	3	546	1754
322	28	18	1440	74	-79	1444	70	687	1859
323	28	19	1222	7	219	1260	-31	646	1738
324	28	20	986	78	188	1023	41	491	1576
325	28	21	772	95	203	828	39	394	1340
326	28	22	549	122	167	606	65	271	1056
327	28	23	355	123	105	396	83	156	742
328	28	24	195	108	36	208	95	57	407
329	28	25	73	75	-29	103	45	29	70
330	28	26	-12	27	-83	93	-78	86	-256
331	28	27	-64	-30	-123	77	-171	124	-552
332	28	28	-88	-88	-145	57	-232	145	-819
337	29	3	-0	179	-16	180	-1	91	-1043
338	29	4	-17	-5	19	8	-31	20	-1079
339	29	5	-47	-85	44	-18	-114	48	-1053
340	29	6	-81	-109	77	-17	-173	78	-974
341	29	7	-109	-112	108	-2	-219	108	-853
342	29	8	-129	-98	128	15	-243	129	-696
343	29	9	-143	-69	137	36	-247	142	-504

TABLE 2. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane			
						Principal Stresses		τ_{Max} , psi	σ_z , psi
	Max, psi	Min, psi							
344	29	10	-143	-34	138	60	-237	149	-290
345	29	11	-118	-7	130	79	-204	141	-54
346	29	12	-60	9	105	85	-136	110	187
347	29	13	26	31	65	93	-37	65	422
348	29	14	135	61	25	142	53	45	652
349	29	15	252	101	-17	254	99	78	849
350	29	16	385	53	-30	388	50	169	989
351	29	17	484	34	-17	485	33	226	1073
352	29	18	530	169	-3	530	169	181	1123
353	29	19	530	73	24	532	71	230	1054
354	29	20	435	84	39	439	80	180	927
355	29	21	322	81	30	325	77	124	744
356	29	22	203	80	4	203	80	62	518
357	29	23	95	72	-35	120	47	37	257
358	29	24	4	57	-75	111	-49	80	-15
359	29	25	-65	33	-109	104	-136	120	-290
360	29	26	-109	-5	-134	87	-201	144	-563
361	29	27	-132	-48	-148	64	-244	154	-814
362	29	28	-135	-88	-148	38	-262	150	-1042
363	29	29	-121	-121	-133	12	-254	133	-1241
368	30	3	1	204	-2	204	1	101	-1165
369	30	4	-8	8	-2	8	-8	8	-1202
370	30	5	-39	-58	11	-34	-63	15	-1180
371	30	6	-80	-69	43	-31	-118	44	-1111
372	30	7	-115	-80	80	-15	-180	82	-1006
373	30	8	-144	-82	106	-3	-223	110	-872
374	30	9	-174	-59	120	17	-249	133	-709
375	30	10	-202	-21	135	51	-274	163	-531
376	30	11	-214	-6	151	74	-293	184	-335
377	30	12	-203	-13	150	69	-285	177	-146
378	30	13	-180	-1	129	66	-248	157	44
379	30	14	-147	31	104	79	-195	137	222
380	30	15	-100	56	75	87	-130	109	377
381	30	16	-38	47	51	71	-62	66	486
382	30	17	10	53	42	78	-16	47	551
383	30	18	19	117	17	120	16	52	573
384	30	19	33	81	-13	85	30	28	526
385	30	20	8	70	-31	83	-5	44	427
386	30	21	-33	61	-53	85	-57	71	276
387	30	22	-79	50	-77	86	-115	100	94
388	30	23	-120	38	-105	90	-172	131	-118
389	30	24	-155	29	-130	97	-222	159	-346
390	30	25	-178	16	-145	94	-255	175	-579
391	30	26	-184	-14	-151	75	-272	173	-805
392	30	27	-177	-46	-149	51	-275	163	-1024
393	30	28	-162	-72	-135	26	-259	142	-1221
394	30	29	-136	-91	-107	-4	-223	109	-1390
395	30	30	-99	-99	-71	-28	-170	71	-1530
400	31	3	0	167	31	173	-5	89	-1277
401	31	4	5	3	-17	21	-13	17	-1304
402	31	5	-14	-39	-18	-4	-49	22	-1274
403	31	6	-49	-23	8	-21	-52	15	-1205

TABLE 2. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	r_{xy} , psi	In-Plane		r_{Max} , psi	σ_z^* , psi
						Principal Stresses			
	M	N				Max., psi	Min., psi		
404	31	7	-86	-43	48	-12	-117	52	-1120
405	31	8	-117	-67	75	-13	-171	79	-1003
406	31	9	-150	-48	88	3	-200	101	-860
407	31	10	-195	9	106	54	-240	147	-693
408	31	11	-235	20	134	77	-292	185	-529
409	31	12	-262	-24	142	42	-329	186	-373
410	31	13	-294	-23	130	29	-346	188	-221
411	31	14	-320	15	117	51	-357	204	-73
412	31	15	-329	29	103	57	-357	207	44
413	31	16	-323	23	81	41	-341	191	129
414	31	17	-319	37	57	46	-328	187	175
415	31	18	-323	66	24	67	-324	196	186
416	31	19	-314	49	-15	49	-315	182	142
417	31	20	-310	41	-48	47	-316	181	62
418	31	21	-307	39	-74	54	-323	188	-59
419	31	22	-302	26	-95	52	-327	189	-213
420	31	23	-289	11	-117	51	-329	190	-396
421	31	24	-273	13	-135	66	-326	196	-587
422	31	25	-252	17	-139	76	-311	193	-783
423	31	26	-219	-11	-135	55	-285	170	-983
424	31	27	-185	-35	-127	37	-257	147	-1175
425	31	28	-151	-44	-107	22	-218	120	-1346
426	31	29	-116	-51	-74	-3	-164	80	-1499
427	31	30	-79	-58	-35	-32	-105	36	-1626
428	31	31	-45	-45	-1	-44	-46	1	-1720
433	32	3	14	85	19	90	9	40	-1358
434	32	4	-9	-17	-27	14	-41	27	-1378
435	32	5	11	-34	-20	19	-42	30	-1341
436	32	6	23	18	-7	28	13	7	-1260
437	32	7	-5	-1	11	8	-14	11	-1179
438	32	8	-46	-51	38	-11	-87	38	-1076
439	32	9	-66	-47	65	10	-122	66	-940
440	32	10	-85	39	75	74	-120	97	-780
441	32	11	-145	54	70	76	-167	121	-631
442	32	12	-244	-36	71	-14	-266	126	-512
443	32	13	-337	-36	81	-16	-358	171	-385
444	32	14	-401	15	83	31	-416	223	-254
445	32	15	-457	17	72	28	-468	248	-162
446	32	16	-510	-3	59	3	-517	260	-98
447	32	17	-546	11	44	14	-549	282	-66
448	32	18	-568	27	19	28	-569	298	-61
449	32	19	-572	11	-9	11	-572	292	-108
450	32	20	-553	9	-32	10	-555	282	-178
451	32	21	-516	19	-51	24	-521	273	-284
452	32	22	-473	9	-67	18	-482	250	-417
453	32	23	-416	-10	-77	4	-430	217	-573
454	32	24	-340	2	-83	21	-359	190	-737
455	32	25	-264	27	-90	53	-290	171	-905
456	32	26	-199	-7	-91	29	-235	132	-1093
457	32	27	-140	-24	-79	17	-181	99	-1267
458	32	28	-81	-15	-60	21	-116	68	-1417

TABLE 2. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ Max., psi	σ_z^* , psi
	M	N				Max., psi	Min., psi		
459	32	29	-31	-12	-36	16	-59	37	-1558
460	32	30	-3	-20	-9	2	-24	13	-1682
461	32	31	7	-18	15	14	-25	20	-1776
462	32	32	7	7	22	29	-15	22	-1838
467	33	3	127	-14	46	141	-28	85	-1392
468	33	4	1	17	-111	120	-102	111	-1411
469	33	5	-2	-9	50	45	-56	51	-1381
470	33	6	196	2	85	228	-30	129	-1271
471	33	7	234	1	-61	249	-14	131	-1171
472	33	8	41	1	-81	104	-62	83	-1096
473	33	9	-10	-1	129	123	-134	129	-973
474	33	10	228	0	162	312	-84	198	-771
475	33	11	196	0	-127	258	-62	160	-626
476	33	12	-234	-0	-173	92	-326	209	-563
477	33	13	-410	-0	41	4	-413	209	-460
478	33	14	-374	-1	55	7	-382	195	-325
479	33	15	-477	-0	-47	4	-482	243	-243
480	33	16	-663	0	-37	2	-665	334	-209
481	33	17	-736	-0	17	-0	-736	368	-181
482	33	18	-755	-0	-4	-0	-755	377	-185
483	33	19	-796	1	-16	1	-796	399	-230
484	33	20	-768	-0	21	0	-768	384	-304
485	33	21	-666	-0	18	0	-667	333	-392
486	33	22	-597	0	-20	1	-598	299	-517
487	33	23	-536	0	10	0	-536	268	-663
488	33	24	-356	-0	78	16	-373	194	-802
489	33	25	-139	0	6	0	-139	70	-945
490	33	26	-114	0	-62	27	-141	84	-1123
491	33	27	-58	-0	7	1	-59	30	-1294
492	33	28	81	-0	37	95	-14	55	-1429
493	33	29	172	-0	3	172	-0	86	-1556
494	33	30	167	-0	-18	169	-2	86	-1678
495	33	31	124	-0	-8	125	-1	63	-1785
496	33	32	66	-1	-17	70	-5	37	-1864
497	33	33	-6	-6	-53	48	-59	53	-1917

TABLE 3. STRESS DISTRIBUTION 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ Max', psi	σ_z^* , psi
	M	N				Max, psi	Min, psi		
37	3	3	-18	-16	-5	-12	-23	5	-1038
38	3	4	143	-0	-83	181	-39	110	-934
39	3	5	561	-2	-143	596	-36	316	-659
40	3	6	805	2	2	805	2	402	-321
41	3	7	578	-1	159	619	-42	330	-28
42	3	8	135	-2	64	161	-27	94	214
43	3	9	0	1	-179	179	-178	179	454
44	3	10	69	-2	-16	72	-5	39	614
45	3	11	-364	-2	254	129	-495	312	511
46	3	12	-570	-0	39	2	-573	287	298
47	3	13	-136	1	-199	142	-278	210	97
48	3	14	347	1	-96	372	-24	198	-161
49	3	15	420	3	78	434	-11	222	-504
50	3	16	241	-8	75	262	-29	146	-854
51	3	17	88	3	-22	93	-2	47	-1097
52	3	18	72	-50	69	103	-81	92	-1197
57	4	3	9	167	-101	216	-41	129	-952
58	4	4	9	5	93	100	-86	93	-912
59	4	5	48	-45	75	89	-86	88	-714
60	4	6	16	-59	-17	20	-63	41	-413
61	4	7	-79	-71	-105	30	-180	105	-64
62	4	8	-167	-53	-143	44	-264	154	293
63	4	9	-197	-5	-138	67	-269	168	601
64	4	10	-219	64	-130	115	-270	192	769
65	4	11	-332	194	-30	195	-334	265	760
66	4	12	-335	4	128	47	-378	213	531
67	4	13	-231	-57	156	35	-323	179	217
68	4	14	-130	-23	99	36	-189	113	-150
69	4	15	-55	-37	41	-4	-88	42	-527
70	4	16	-15	-60	-18	-9	-66	29	-858
71	4	17	-6	-13	-42	33	-51	42	-1071
72	4	18	4	186	110	237	-47	142	-1119
77	5	3	-12	596	-96	611	-26	319	-702
78	5	4	-20	48	82	103	-75	89	-733
79	5	5	-139	-172	34	-117	-193	38	-554
80	5	6	-258	-219	-82	-155	-322	84	-206
81	5	7	-300	-148	-144	-62	-387	163	275
82	5	8	-219	-3	-102	37	-260	149	809
83	5	9	-41	36	-46	58	-63	60	1262
84	5	10	181	-36	-35	186	-42	114	1519
85	5	11	238	446	-152	527	158	185	1619
86	5	12	-49	244	11	245	-50	147	1261
87	5	13	-59	-147	212	114	-320	217	746
88	5	14	-158	-107	108	-22	-244	111	228
89	5	15	-186	-121	66	-80	-227	74	-274
90	5	16	-126	-130	23	-104	-151	23	-671
91	5	17	-31	-19	-8	-15	-34	10	-895
92	5	18	1	425	57	433	-7	220	-906
97	6	3	6	746	19	746	5	371	-406
98	6	4	-61	15	14	18	-63	41	-462
99	6	5	-163	-300	-55	-144	-320	88	-227

TABLE 3. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
	M	N				Max, psi	Min, psi		
100	6	6	-219	-307	-102	-152	-375	111	277
101	6	7	-112	-90	7	-88	-114	13	996
102	6	8	304	164	254	498	-30	264	1848
107	6	13	440	-527	356	557	-644	600	1665
108	6	14	73	-93	-109	127	-147	137	949
109	6	15	-140	-113	13	-108	-145	19	219
110	6	16	-148	-160	77	-77	-231	77	-322
111	6	17	-60	-64	58	-4	-120	58	-631
112	6	18	2	400	-50	406	-4	205	-655
117	7	3	-2	717	12	717	-2	360	-97
118	7	4	-43	-46	-38	-7	-83	38	-125
119	7	5	-54	-386	-80	-36	-404	184	228
120	7	6	18	-237	2	18	-237	128	968
121	7	7	351	312	470	801	-139	470	2089
128	7	14	604	363	-1031	1521	-554	1038	2056
129	7	15	27	110	-194	267	-130	199	927
130	7	16	-79	-96	78	-9	-166	79	144
131	7	17	-46	-124	112	34	-204	119	-300
132	7	18	-1	138	-91	183	-46	115	-394
137	8	3	-3	668	15	668	-3	336	203
138	8	4	12	-89	-44	28	-105	67	225
139	8	5	40	-402	-45	44	-406	225	701
140	8	6	114	34	110	191	-43	117	1726
145	8	15	134	625	-331	792	-33	412	1732
146	8	16	35	85	29	99	22	38	662
147	8	17	-3	-174	123	61	-239	150	46
148	8	18	-2	-218	-67	17	-237	127	-164
153	9	3	-3	544	53	549	-8	279	421
154	9	4	-7	-112	-37	5	-124	65	490
155	9	5	-17	-358	-17	-16	-359	171	1075
160	9	16	59	358	-32	361	56	153	1101
161	9	17	21	-196	100	60	-235	147	314
162	9	18	1	-494	4	1	-494	248	16
167	10	3	-2	412	2	412	-2	207	509
168	10	4	2	-136	-26	7	-140	74	621
169	10	5	65	-319	-30	67	-321	194	1302
174	10	16	147	560	-0	560	147	206	1356
175	10	17	81	-217	51	89	-226	158	456
176	10	18	0	-610	2	0	-610	305	108
181	11	3	1	425	-47	430	-4	217	476
182	11	4	-22	-108	-26	-15	-115	50	585
183	11	5	-69	-280	-23	-66	-282	108	1239
188	11	16	29	567	75	578	19	280	1297
189	11	17	28	-221	7	28	-221	125	408
190	11	18	0	-688	-28	2	-690	346	55
195	12	3	1	410	14	410	0	205	278
196	12	4	39	-111	-30	45	-117	81	384
197	12	5	39	-251	-15	40	-252	146	994
202	12	16	139	393	82	418	115	151	1009
203	12	17	53	-253	-36	57	-257	157	193

TABLE 3. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
	M	N				Max., psi	Min., psi		
204	12	18	1	-663	3	1	-663	332	-129
209	13	3	2	310	43	315	-4	160	-53
210	13	4	33	-131	3	33	-131	82	38
211	13	5	105	-277	-20	106	-278	192	552
212	13	6	59	232	-88	268	22	123	1555
217	13	15	325	704	473	1024	5	509	1588
218	13	16	92	161	6	161	91	35	501
219	13	17	16	-250	-89	43	-278	160	-155
220	13	18	-1	-486	47	4	-491	247	-402
225	14	3	2	311	-16	312	1	155	-430
226	14	4	-1	-111	45	15	-127	71	-379
227	14	5	88	-320	82	104	-336	220	10
228	14	6	434	-194	-26	435	-195	315	796
229	14	7	1849	149	-1032	2336	-338	1337	2082
236	14	14	156	463	320	665	-46	355	1697
237	14	15	33	306	119	351	-11	181	701
238	14	16	-30	13	-81	75	-92	83	-79
239	14	17	-28	-206	-105	21	-254	138	-563
240	14	18	0	-197	82	30	-227	128	-719
245	15	3	-1	410	-26	412	-3	207	-794
246	15	4	-36	-28	37	5	-69	37	-783
247	15	5	-120	-193	126	-25	-288	131	-518
248	15	6	-263	-32	241	120	-415	268	-9
249	15	7	-591	280	384	426	-736	581	626
250	15	8	-1856	-7	1417	760	-2624	1692	996
255	15	13	683	143	485	968	-142	555	1491
256	15	14	179	158	181	350	-12	181	671
257	15	15	-21	74	-3	74	-22	48	-52
258	15	16	-61	-64	-98	36	-161	98	-613
259	15	17	-22	-136	-83	22	-179	101	-954
260	15	18	4	66	39	85	-15	50	-1035
265	16	3	0	374	25	375	-1	188	-1123
266	16	4	-42	26	-20	32	-47	40	-1119
267	16	5	-133	-102	16	-96	-140	22	-928
268	16	6	-319	51	53	59	-327	193	-558
269	16	7	-596	189	28	190	-597	393	-124
270	16	8	-819	-110	-37	-108	-820	356	242
271	16	9	-502	-1041	-103	-483	-1060	288	509
272	16	10	-208	821	35	822	-209	516	1178
273	16	11	94	-232	148	152	-290	221	1009
274	16	12	37	232	78	259	10	124	851
275	16	13	45	104	45	128	21	54	406
276	16	14	-56	53	-15	55	-58	56	-125
277	16	15	-107	-7	-68	28	-141	85	-635
278	16	16	-85	-64	-79	5	-154	80	-1038
279	16	17	-24	-66	-48	7	-97	52	-1287
280	16	18	-6	135	-53	153	-24	88	-1345
285	17	3	15	192	71	217	-10	114	-1390
286	17	4	19	42	-60	92	-30	61	-1353
287	17	5	13	-92	-52	35	-113	74	-1181
288	17	6	18	37	-44	73	-18	45	-849

TABLE 3. (Continued)

Physical Mesh Number	Mesh Coord.		$\sigma_{x'}$ psi	$\sigma_{y'}$ psi	$\tau_{xy'}$ psi	In-Plane Principal Stresses		$\tau_{Max'}$ psi	$\sigma_{z'}^*$ psi
						Max,	Min,		
	M	N				psi	psi		
289	17	7	-26	103	-97	155	-78	117	-485
290	17	8	-10	-106	-97	50	-167	108	-167
291	17	9	116	-430	152	156	-469	312	84
292	17	10	-84	375	208	455	-164	310	369
293	17	11	-31	-58	85	42	-130	86	277
294	17	12	-158	54	71	76	-179	128	91
295	17	13	-180	38	-4	38	-180	109	-233
296	17	14	-169	16	-44	26	-179	102	-619
297	17	15	-132	-10	-55	11	-153	82	-1000
298	17	16	-80	-23	-39	-3	-100	48	-1314
299	17	17	-41	-26	-10	-21	-46	12	-1526
300	17	18	9	36	-25	51	-5	28	-1588
305	18	3	83	-5	216	303	-226	265	-1526
306	18	4	260	-26	-148	323	-89	206	-1426
307	18	5	-1	26	-57	71	-47	59	-1288
308	18	6	436	-25	283	571	-160	365	-933
309	18	7	971	15	83	978	8	485	-484
310	18	8	1022	-1	-188	1055	-35	545	-149
311	18	9	783	-4	96	795	-15	405	63
312	18	10	714	0	27	715	-1	358	183
313	18	11	134	2	-253	329	-193	261	50
314	18	12	-235	0	-37	6	-241	124	-192
315	18	13	-216	0	58	15	-231	123	-468
316	18	14	-64	0	46	24	-88	56	-783
317	18	15	61	2	15	64	-2	33	-1109
318	18	16	127	-0	-9	128	-1	65	-1394
319	18	17	104	3	-19	108	-1	54	-1599
320	18	18	23	35	-48	77	-20	48	-1689

TABLE 4. STRESS DISTRIBUTION FOR 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

Physical Mesh Number	Mesh Coord.		σ_x psi	σ_y psi	τ_{xy} psi	In-Plane Principal Stresses		τ_{Max} psi	σ_z psi
	M	N				Max, psi	Min, psi		
63	3	4	69	9	0	69	9	30	-1072
64	3	5	217	-10	-17	218	-11	115	-996
65	3	6	424	8	-53	430	2	214	-870
66	3	7	642	-8	-19	643	-9	326	-718
67	3	8	718	8	14	718	8	355	-565
68	3	9	761	-9	-15	762	-10	386	-408
69	3	10	762	9	-16	762	9	377	-239
70	3	11	673	-9	32	674	-11	343	-85
71	3	12	457	10	34	460	7	226	44
72	3	13	291	-10	2	291	-10	150	170
73	3	14	131	11	9	132	11	61	287
74	3	15	-20	-12	31	15	-47	31	372
75	3	16	-181	12	9	13	-181	97	435
76	3	17	-238	-13	-10	-13	-238	113	472
77	3	18	-311	14	8	15	-311	163	475
78	3	19	-364	-15	21	-14	-365	176	433
79	3	20	-417	16	-8	16	-417	216	362
80	3	21	-348	-17	-14	-17	-349	166	266
81	3	22	-303	19	6	19	-303	161	149
82	3	23	-176	-20	-8	-20	-177	78	9
83	3	24	-9	21	-49	58	-45	51	-124
84	3	25	239	-22	-21	240	-24	132	-264
85	3	26	303	24	22	304	22	141	-423
86	3	27	363	-25	-2	363	-25	194	-597
87	3	28	374	27	-24	376	25	175	-749
88	3	29	385	-28	29	387	-30	208	-904
89	3	30	207	29	34	214	23	95	-1051
90	3	31	151	-31	-13	152	-32	92	-1166
91	3	32	47	23	11	52	19	16	-1232
96	4	3	14	50	-14	54	9	23	-1087
97	4	4	36	42	77	116	-38	77	-1066
98	4	5	109	-5	112	178	-74	126	-1011
99	4	6	191	-10	109	239	-57	148	-916
100	4	7	264	-10	86	288	-34	161	-785
101	4	8	303	-32	45	309	-38	174	-648
102	4	9	309	-42	-6	309	-42	175	-491
103	4	10	276	-23	-55	286	-33	159	-323
104	4	11	212	-19	-93	245	-52	148	-159
105	4	12	122	-15	-117	189	-82	136	-0
106	4	13	31	2	-120	137	-105	121	148
107	4	14	-56	17	-107	93	-132	113	285
108	4	15	-127	10	-88	53	-170	112	397
109	4	16	-187	7	-72	31	-211	121	475
110	4	17	-231	10	-56	22	-244	133	521
111	4	18	-269	15	-41	21	-275	148	533
112	4	19	-294	9	-23	10	-296	153	496
113	4	20	-309	13	-2	13	-309	161	427
114	4	21	-300	24	28	26	-302	164	327
115	4	22	-270	31	67	46	-285	165	195
116	4	23	-203	11	104	53	-246	149	40
117	4	24	-115	-4	118	71	-189	130	-121

TABLE 4. (Continued)

Physical Mesh Number	<u>Mesh Coord.</u>		σ psi	σ_y psi	τ_{xy} psi	In-Plane Principal Stresses		τ_{Max} psi	σ_z^* psi
	M	N				Max, psi	Min, psi		
118	4	25	-17	-12	103	89	-118	103	-291
119	4	26	51	-22	70	94	-65	79	-467
120	4	27	97	-35	32	104	-42	73	-643
121	4	28	112	-14	-4	112	-15	63	-800
122	4	29	111	-8	-30	118	-15	67	-945
123	4	30	81	-17	-50	102	-38	70	-1074
124	4	31	53	-12	-60	88	-47	68	-1177
125	4	32	17	30	-40	64	-17	41	-1236
126	4	33	-15	72	76	116	-59	87	-1259
131	5	3	-12	233	-33	237	-16	127	-1017
132	5	4	3	119	110	186	-63	125	-1020
133	5	5	22	13	161	179	-144	161	-983
134	5	6	36	-33	156	161	-158	160	-905
135	5	7	37	-61	112	110	-135	123	-795
136	5	8	22	-101	45	37	-116	77	-660
137	5	9	-7	-110	-29	1	-118	59	-504
138	5	10	-47	-89	-99	33	-169	101	-325
139	5	11	-90	-66	-154	77	-233	155	-141
140	5	12	-128	-30	-182	110	-267	189	54
141	5	13	-158	18	-177	127	-267	197	234
142	5	14	-173	41	-151	118	-251	185	400
143	5	15	-174	35	-122	91	-230	161	538
144	5	16	-171	31	-97	70	-210	140	636
145	5	17	-170	31	-77	57	-196	127	697
146	5	18	-175	32	-60	48	-192	120	714
147	5	19	-184	35	-40	43	-191	117	682
148	5	20	-196	48	-11	48	-197	122	609
149	5	21	-213	72	31	75	-216	146	495
150	5	22	-224	90	91	115	-249	182	351
151	5	23	-209	63	159	136	-281	209	172
152	5	24	-166	-5	190	121	-292	206	-28
153	5	25	-122	-56	166	80	-259	170	-231
154	5	26	-87	-80	113	30	-196	113	-429
155	5	27	-59	-80	58	-10	-129	59	-612
156	5	28	-39	-61	10	-36	-65	15	-780
157	5	29	-23	-44	-33	1	-68	34	-932
158	5	30	-9	-37	-62	41	-86	64	-1055
159	5	31	2	-10	-71	67	-75	71	-1144
160	5	32	13	58	-55	94	-24	59	-1189
161	5	33	16	208	3	208	16	96	-1187
166	6	3	12	429	-30	432	10	211	-904
167	6	4	-3	202	110	250	-51	151	-931
168	6	5	-27	27	157	159	-159	159	-917
169	6	6	-59	-69	143	79	-207	143	-847
170	6	7	-103	-131	87	-29	-205	88	-741
171	6	8	-154	-184	11	-150	-188	19	-605
172	6	9	-201	-191	-66	-130	-262	66	-433
173	6	10	-238	-158	-133	-59	-337	139	-233
174	6	11	-259	-110	-180	10	-380	195	-21
175	6	12	-262	-36	-196	78	-375	227	207
176	6	13	-245	49	-173	129	-326	227	435

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
						Max,	Min,		
	M	N				psi	psi		
177	6	14	-200	80	-129	130	-250	190	640
178	6	15	-139	64	-94	100	-176	138	801
179	6	16	-85	52	-74	84	-117	101	926
180	6	17	-45	46	-63	78	-78	78	1006
181	6	18	-24	44	-58	78	-57	68	1028
182	6	19	-22	58	-49	81	-46	64	1001
183	6	20	-37	79	-32	87	-45	66	917
184	6	21	-76	123	-1	123	-76	99	790
185	6	22	-135	179	70	194	-150	172	619
186	6	23	-165	146	171	222	-241	231	411
187	6	24	-146	-6	220	154	-307	231	164
188	6	25	-138	-113	187	62	-313	187	-81
189	6	26	-141	-144	128	-15	-270	128	-308
190	6	27	-138	-134	75	-61	-211	75	-518
191	6	28	-120	-110	30	-85	-145	30	-704
192	6	29	-93	-85	-11	-77	-101	12	-863
193	6	30	-61	-59	-43	-17	-103	43	-985
194	6	31	-36	-8	-56	36	-80	58	-1079
195	6	32	-20	88	-47	106	-37	71	-1122
196	6	33	-15	252	-29	255	-18	136	-1118
201	7	3	-11	610	-7	610	-11	311	-774
202	7	4	-15	275	91	301	-41	171	-821
203	7	5	-54	32	120	117	-139	128	-819
204	7	6	-111	-116	94	-19	-208	94	-752
205	7	7	-178	-207	32	-157	-228	35	-645
206	7	8	-244	-264	-40	-212	-296	42	-494
207	7	9	-293	-261	-103	-172	-381	104	-297
208	7	10	-312	-210	-148	-105	-418	156	-59
209	7	11	-298	-137	-172	-28	-408	190	203
210	7	12	-261	-25	-170	64	-349	207	483
211	7	13	-208	111	-119	151	-247	199	760
212	7	14	-106	135	-48	144	-115	130	1006
213	7	15	10	83	-15	86	7	39	1208
214	7	16	99	61	-11	102	58	22	1362
215	7	17	169	41	-21	173	38	68	1457
216	7	18	210	38	-39	219	30	95	1490
217	7	19	220	65	-55	237	47	95	1461
218	7	20	200	85	-67	231	54	88	1357
219	7	21	140	149	-70	214	74	70	1206
220	7	22	20	300	-3	300	20	140	1012
221	7	23	-61	288	153	345	-119	232	761
222	7	24	-42	-26	221	188	-255	221	450
223	7	25	-80	-185	161	37	-301	169	153
224	7	26	-142	-199	103	-63	-277	107	-118
225	7	27	-173	-173	75	-98	-247	75	-357
226	7	28	-163	-148	52	-103	-208	52	-569
227	7	29	-129	-123	22	-104	-149	23	-745
228	7	30	-86	-87	-9	-78	-95	9	-881
229	7	31	-48	-16	-30	1	-66	33	-974
230	7	32	-21	109	-27	114	-26	70	-1021
231	7	33	14	287	34	291	10	140	-1007

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z , psi
	M	N				Max, psi	Min, psi		
236	8	3	12	710	-10	710	12	349	-627
237	8	4	-21	322	61	333	-31	182	-690
238	8	5	-67	22	70	60	-106	83	-690
239	8	6	-131	-174	31	-114	-190	38	-622
240	8	7	-201	-283	-33	-190	-295	53	-501
241	8	8	-265	-328	-93	-198	-394	98	-317
242	8	9	-301	-301	-125	-176	-426	125	-82
243	8	10	-289	-227	-127	-128	-388	130	204
244	8	11	-126	-139	-111	-60	-295	118	524
245	8	12	-109	-5	-94	51	-165	108	866
246	8	13	-21	230	-13	231	-22	126	1220
247	8	14	150	201	86	265	86	90	1517
248	8	15	309	75	105	349	34	157	1755
249	8	16	424	49	79	440	33	204	1944
250	8	17	511	6	35	513	4	255	2063
251	8	18	566	10	11	566	10	278	2106
252	8	19	621	26	-62	628	20	304	2078
253	8	20	548	62	-138	585	26	279	1949
254	8	21	473	107	-170	540	40	250	1754
255	8	22	294	455	-136	532	217	158	1546
256	8	23	126	554	102	578	103	237	1257
257	8	24	177	-127	187	266	-216	241	821
258	8	25	32	-280	54	41	-289	165	455
259	8	26	-127	-215	23	-122	-221	50	143
260	8	27	-197	-170	54	-128	-239	56	-142
261	8	28	-193	-161	74	-102	-253	75	-389
262	8	29	-153	-153	64	-89	-218	64	-592
263	8	20	-101	-119	38	-71	-148	39	-750
264	8	31	-48	-37	10	-31	-54	12	-850
265	8	32	-5	118	-3	119	-5	62	-894
266	8	33	-14	414	29	416	-16	216	-864
271	9	3	-12	823	-18	823	-12	418	-468
272	9	4	-21	346	27	348	-23	186	-539
273	9	5	-69	-7	16	-3	-72	35	-544
274	9	6	-129	-240	-32	-121	-248	64	-465
275	9	7	-190	-352	-93	-148	-394	123	-319
276	9	8	-237	-365	-133	-153	-448	147	-94
277	9	9	-252	-292	-123	-147	-396	125	198
278	9	10	-203	-180	-55	-135	-247	56	542
279	9	11	-46	-99	39	-25	-120	47	933
280	9	12	211	-17	74	233	-39	136	1363
281	9	13	369	445	175	586	228	179	1845
291	9	23	488	1098	-49	1102	484	309	1939
292	9	24	545	-478	37	546	-479	513	1257
293	9	25	116	-368	-195	185	-437	311	825
294	9	26	-160	-128	-114	-29	-260	115	465
295	9	27	-235	-94	27	-89	-240	76	127
296	9	28	-219	-141	101	-73	-288	108	-165
297	9	29	-174	-172	112	-61	-285	112	-405
298	9	30	-119	-150	91	-43	-227	92	-590
299	9	31	-64	-67	59	-6	-124	59	-707

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z , psi
	M	N				Max, psi	Min, psi		
300	9	32	-16	97	26	103	-22	62	-755
301	9	33	14	381	-28	384	12	186	-732
306	10	3	11	855	-2	855	11	422	-298
307	10	4	-16	340	-5	340	-17	178	-381
308	10	5	-62	-47	-34	-20	-90	35	-380
309	10	6	-112	-304	-83	-80	-335	127	-286
310	10	7	-151	-409	-134	-94	-465	186	-103
311	10	8	-171	-372	-151	-90	-453	181	174
312	10	9	-166	-221	-99	-91	-296	103	529
313	10	10	-108	-24	54	2	-135	69	954
314	10	11	89	61	298	373	-223	298	1426
315	10	12	650	-106	528	922	-378	650	1941
327	10	24	836	-1296	-626	1007	-1466	1236	1652
328	10	25	-163	-248	-545	342	-752	547	1218
329	10	26	-324	159	-208	237	-401	319	843
330	10	27	-275	61	38	65	-279	172	456
331	10	28	-221	-97	138	-8	-311	151	93
332	10	29	-177	-182	158	-21	-338	158	-195
333	10	30	-129	-181	143	-10	-300	145	-410
334	10	31	-77	-104	109	19	-200	109	-548
335	10	32	-34	56	60	86	-64	75	-615
336	10	33	-13	312	-5	312	-13	162	-599
341	11	3	-12	850	8	850	-12	431	-146
342	11	4	-18	313	-32	316	-21	169	-223
343	11	5	-47	-92	-72	6	-145	76	-210
344	11	6	-76	-358	-115	-35	-399	182	-95
345	11	7	-86	-446	-145	-35	-497	231	134
346	11	8	-66	-354	-137	-12	-409	198	474
347	11	9	-22	-103	-55	6	-131	68	913
348	11	10	13	247	127	302	-43	173	1437
349	11	11	-119	483	258	579	-215	397	1952
354	11	25	-1570	386	392	462	-1645	1053	1531
355	11	26	-401	581	1	581	-401	491	1311
356	11	27	-153	202	99	228	-179	203	833
257	11	28	-133	-61	158	65	-259	162	393
358	11	29	-135	-185	184	26	-346	186	38
359	11	30	-112	-206	183	31	-348	189	-217
360	11	31	-67	-149	155	52	-268	160	-384
361	11	32	-19	-11	95	80	-111	96	-461
362	11	33	12	232	18	233	10	111	-447
367	12	3	11	784	1	784	11	386	3
368	12	4	-9	268	-50	277	-18	147	-66
369	12	5	-25	-136	-92	27	-188	108	-38
370	12	6	-30	-391	-121	6	-428	217	108
371	12	7	-7	-452	-119	23	-482	252	380
372	12	8	70	-306	-61	79	-315	197	792
373	12	9	246	32	109	292	-14	153	1338
374	12	10	689	500	558	1160	28	566	2051
379	12	26	1522	576	-887	2054	44	1005	2131
380	12	27	442	213	-168	531	124	203	1301
381	12	28	86	-20	49	105	-39	72	727
382	12	29	-34	-156	154	71	-261	166	303

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x psi	σ_y psi	τ_{xy} psi	In-Plane Principal Stresses		τ_{Max} psi	σ_z^* psi
	M	N				Max, psi	Min, psi		
383	12	30	-58	-208	198	79	-345	212	-5
384	12	31	-39	-191	189	88	-318	203	-211
385	12	32	-9	-99	121	76	-183	129	-313
386	12	33	-12	115	-26	120	-17	69	-324
391	13	3	-12	739	6	739	-12	376	141
392	13	4	-2	221	-56	234	-15	125	78
393	13	5	-2	-172	-94	40	-214	127	130
394	13	6	12	-398	-104	37	-423	230	310
395	13	7	50	-408	-70	60	-419	239	626
396	13	8	117	-176	36	122	-181	151	1103
397	13	9	203	343	266	548	-2	275	1734
402	13	27	354	676	-475	1017	13	502	1714
403	13	28	198	205	-122	323	80	122	1065
404	13	29	88	-45	81	127	-84	105	570
405	13	30	32	-173	177	134	-275	204	209
406	13	31	6	-219	192	116	-329	222	-37
407	13	32	-3	-203	129	60	-267	163	-182
408	13	33	11	-139	-45	24	-152	88	-220
413	14	3	11	635	16	635	11	312	258
414	14	4	3	172	-53	188	-13	100	208
415	14	5	14	-193	-81	42*	-221	132	280
416	14	6	43	-381	-74	56	-393	225	491
417	14	7	88	-333	-21	89	-334	212	857
418	14	8	143	-19	91	184	-60	122	1391
423	14	28	221	504	-176	588	136	226	1382
424	14	29	187	117	15	190	114	38	832
425	14	30	118	-108	126	175	-164	170	411
426	14	31	58	-233	159	127	-303	215	117
427	14	32	13	-296	114	51	-333	192	-64
428	14	33	-11	-333	-10	-10	-333	161	-137
433	15	3	-12	564	4	564	-12	288	348
434	15	4	0	137	-45	151	-14	82	310
435	15	5	17	-198	-62	33	-215	124	402
436	15	6	36	-349	-50	43	-355	199	636
437	15	7	40	-248	-4	40	-248	144	1035
438	15	8	-5	137	99	188	-56	122	1605
443	15	28	198	665	-174	723	140	291	1624
444	15	29	159	257	-28	265	151	57	1026
445	15	30	116	-32	74	146	-63	105	567
446	15	31	67	-231	112	105	-268	186	241
447	15	32	25	-269	84	42	-386	214	33
448	15	33	10	-478	-2	10	-478	244	-54
453	16	3	12	497	-4	497	12	242	412
454	16	4	10	109	-35	120	-1	61	385
455	16	5	25	-197	-44	33	-205	119	489
456	16	6	50	-328	-29	52	-330	191	747
457	16	7	86	-212	6	86	-212	149	1180
458	16	8	132	234	84	281	85	98	1818
463	16	28	-43	844	-142	866	-65	466	1769
464	16	29	46	390	-24	392	44	174	1151
465	16	30	69	35	50	105	-1	53	674
466	16	31	49	-224	76	68	-243	156	324

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x^* psi	σ_y^* psi	τ_{xy}^* psi	In-Plane Principal Stresses		$\tau_{Max.}$ psi	σ_z^* psi
	M	N				Max, psi	Min, psi		
467	16	32	17	-418	56	24	-425	224	100
468	16	33	-9	-569	-13	-9	-570	281	2
473	17	3	-12	469	9	470	-12	241	444
474	17	4	8	93	-25	100	1	49	424
475	17	5	19	-188	-29	23	-192	107	538
476	17	6	30	-299	-12	31	-299	165	810
477	17	7	34	-167	8	34	-167	100	1252
478	17	8	-41	276	-78	294	-59	177	1883
483	17	28	100	998	-183	1034	64	485	1929
484	17	29	86	460	-4	460	86	187	1247
485	17	30	75	63	39	109	30	39	736
486	17	31	45	-226	46	53	-234	143	371
487	17	32	13	-453	32	15	-455	235	135
488	17	33	8	-657	-7	9	-657	333	24
493	18	3	13	402	6	402	13	195	435
494	18	4	-1	77	-20	82	-6	44	425
495	18	5	-1	-177	-25	2	-181	92	542
496	18	6	-13	-274	-18	-12	-275	131	812
497	18	7	-50	-152	-6	-50	-152	51	1250
498	18	8	-7	90	59	119	-35	77	1869
503	18	28	-13	1245	44	1247	-14	631	1975
504	18	29	102	493	14	493	101	196	1270
505	18	30	77	68	16	89	56	16	744
506	18	31	42	-231	15	43	-232	137	376
507	18	32	12	-468	10	12	-468	240	137
508	18	33	-8	-667	7	-8	-667	330	19
513	19	3	-13	398	-5	398	-13	205	392
514	19	4	1	65	-18	69	-4	36	380
515	19	5	10	-177	-21	13	-179	96	502
516	19	6	31	-277	-15	31	-278	155	772
517	19	7	69	-158	-7	70	-158	114	1218
518	19	8	17	387	54	395	9	193	1875
523	19	28	-21	970	168	998	-49	523	1855
524	19	29	0	472	46	477	-4	240	1196
525	19	30	33	68	6	69	32	19	692
526	19	31	27	-232	-7	27	-232	130	330
527	19	32	10	-470	-7	11	-470	240	94
528	19	33	7	-666	4	7	-666	337	-14
533	20	3	13	362	8	362	13	175	311
534	20	4	8	55	-12	58	5	26	301
535	20	5	13	-167	-10	13	-167	90	420
536	20	6	25	-258	5	25	-258	141	683
537	20	7	42	-157	5	42	-157	100	1103
538	20	8	98	186	-127	276	8	134	1716
543	20	28	146	942	108	956	132	412	1750
544	20	29	129	389	44	396	122	137	1089
545	20	30	79	30	-11	81	28	27	596
546	20	31	40	-240	-30	44	-243	143	246
547	20	32	12	-459	-24	13	-460	237	18
548	20	33	-7	-635	-3	-7	-635	314	-90
553	21	3	-14	338	14	338	-15	177	185
554	21	4	-2	52	-7	53	-3	28	182

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z *, psi
	M	N				Max, psi	Min, psi		
555	21	5	5	-151	-3	5	-151	78	293
556	21	6	5	-236	8	5	-237	121	537
557	21	7	-18	-158	1	-18	-158	70	926
558	21	8	-91	90	-53	105	-105	105	1456
563	21	28	100	742	203	800	41	380	1498
564	21	29	93	314	21	316	91	112	908
565	21	30	70	1	-45	92	-21	56	448
566	21	31	38	-239	-61	50	-252	151	118
567	21	32	10	-435	-43	15	-439	227	-93
568	21	33	6	-605	2	6	-605	306	-191
573	22	3	14	301	-11	302	13	144	37
574	22	4	-2	49	-5	50	-3	26	30
575	22	5	5	-139	4	5	-139	72	138
576	22	6	19	-233	12	19	-234	127	364
577	22	7	44	-200	-1	44	-200	122	723
578	22	8	100	-30	-58	123	-52	87	1221
583	22	28	97	515	155	566	46	260	1200
584	22	29	75	212	2	212	75	68	670
585	22	30	54	-35	-70	93	-74	83	261
586	22	31	29	-234	-87	56	-260	158	-41
587	22	32	8	-394	-60	16	-402	209	-231
588	22	33	-5	-515	17	-5	-515	255	-320
593	23	3	-15	336	-8	336	-15	176	-126
594	23	4	2	57	-3	57	2	28	-138
595	23	5	0	-122	9	1	-123	62	-42
596	23	6	3	-222	24	5	-225	115	156
597	23	7	13	-218	23	15	-220	118	470
598	23	8	22	-83	-21	26	-87	56	908
599	23	9	-14	244	-125	294	-65	180	1467
604	23	27	156	612	299	761	8	376	1458
605	23	28	106	333	108	376	62	157	878
606	23	29	64	108	-26	120	52	34	408
607	23	30	36	-75	-93	89	-128	108	42
608	23	31	18	-225	-105	57	-265	161	-224
609	23	32	8	-342	-71	22	-356	189	-391
610	23	33	5	-408	12	5	-409	207	-460
615	24	3	15	290	21	292	14	139	-318
616	24	4	3	61	-4	61	3	29	-326
617	24	5	-3	-101	8	-3	-102	50	-246
618	24	6	-3	-201	34	3	-207	105	-66
619	24	7	20	-229	54	31	-240	136	207
620	24	8	98	-171	42	105	-177	141	595
621	24	9	295	52	-11	296	51	122	1115
622	24	10	619	843	5	843	619	112	1865
627	24	26	507	883	296	1046	344	351	1740
628	24	27	257	375	173	498	133	183	1058
629	24	28	100	166	31	178	88	45	538
630	24	29	32	18	-66	92	-41	66	128
631	24	30	6	-105	-112	76	-175	126	-196
632	24	31	-1	-210	-114	50	-260	155	-426
633	24	32	-1	-283	-76	18	-302	160	-569

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane		τ_{Max} , psi	σ_z , psi
						Principal Stresses			
	M	N				Max, psi	Min, psi		
634	24	33	-4	-299	2	-4	-299	147	-622
639	25	3	-16	258	10	259	-16	137	-520
640	25	4	-7	65	-5	65	-8	36	-528
641	25	5	-3	-74	10	-1	-75	37	-447
642	25	6	6	-160	48	19	-173	96	-293
643	25	7	34	-191	100	72	-229	151	-50
644	25	8	100	-152	146	167	-219	193	283
645	25	9	206	60	150	300	-34	167	726
646	25	10	280	688	-62	697	271	213	1305
647	25	11	418	1791	-1430	2691	-482	1587	2051
652	25	25	556	1249	1113	2068	-264	1166	1869
653	25	26	276	665	229	771	170	301	1196
654	25	27	146	274	22	278	143	68	643
655	25	28	47	82	-58	126	4	61	193
656	25	29	-4	-32	-105	88	-123	106	-158
657	25	30	-19	-119	-123	64	-202	133	-435
658	25	31	-16	-188	-114	40	-244	142	-632
659	25	32	-8	-224	-72	13	-246	130	-753
660	25	33	4	-206	10	4	-207	105	-795
665	26	3	17	235	-18	237	16	111	-713
666	26	4	1	66	-6	66	1	33	-721
667	26	5	3	-44	14	6	-48	27	-652
668	26	6	7	-101	60	34	-127	80	-511
669	26	7	15	-116	127	92	-193	143	-300
670	26	8	25	-87	192	169	-230	200	-24
671	26	9	28	44	199	235	-164	199	321
672	26	10	26	315	17	316	25	145	748
673	26	11	187	440	-511	840	-212	526	1210
674	26	12	906	-730	-403	1000	-823	912	1542
686	26	24	583	-268	258	656	-341	498	1491
687	26	25	185	490	403	768	-94	431	1128
688	26	26	45	412	92	434	23	206	669
689	26	27	2	201	-54	214	-12	113	239
690	26	28	-25	49	-106	124	-101	112	-127
691	26	29	-38	-47	-123	81	-166	124	-430
692	26	30	-36	-115	-123	54	-204	129	-663
693	26	31	-23	-161	-104	33	-217	125	-834
694	26	32	-7	-167	-62	14	-188	101	-936
695	26	33	-3	-93	16	-0	-96	48	-962
700	27	3	-17	261	12	262	-18	140	-903
701	27	4	7	73	-5	73	7	33	-907
702	27	5	3	-11	11	9	-17	13	-846
703	27	6	-7	-38	54	34	-79	56	-720
704	27	7	-29	-38	116	82	-150	116	-542
705	27	8	-70	-27	172	125	-222	174	-317
706	27	9	-126	10	179	134	-250	192	-47
707	27	10	-160	60	72	81	-181	131	260
708	27	11	-56	-17	-150	115	-188	152	601
709	27	12	284	-373	-201	340	-430	385	944
710	27	13	518	-109	-204	579	-170	374	1395
720	27	23	370	-52	162	425	-107	266	1309
721	27	24	221	-40	194	324	-144	234	928

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x^* psi	σ_y^* psi	τ_{xy}^* psi	In-Plane Principal Stresses		τ_{Max}^* psi	σ_z^* psi
	M	N				Max, psi	Min, psi		
722	27	25	17	225	167	318	-76	197	575
723	27	26	-67	239	21	241	-68	155	220
724	27	27	-78	137	-75	161	-102	131	-126
725	27	28	-71	32	-113	105	-144	124	-427
726	27	29	-59	-46	-120	67	-173	120	-684
727	27	30	-43	-101	-110	42	-186	114	-881
728	27	31	-23	-132	-87	26	-180	103	-1029
729	27	32	-4	-118	-51	16	-137	76	-1113
730	27	33	2	-19	-6	4	-21	12	-1128
735	28	3	17	176	27	181	13	84	-1084
736	28	4	-4	70	-7	71	-4	38	-1086
737	28	5	-13	17	-0	17	-13	15	-1032
738	28	6	-35	14	30	28	-49	39	-916
739	28	7	-81	22	71	59	-117	88	-766
740	28	8	-154	16	109	69	-207	138	-581
741	28	9	-244	-9	119	40	-294	167	-374
742	28	10	-313	-62	76	-41	-335	147	-138
743	28	11	-298	-167	1	-167	-298	66	123
744	28	12	-179	-283	-11	-177	-284	53	410
745	28	13	-77	-131	0	-77	-131	27	743
746	28	14	15	162	-124	233	-56	144	1085
747	28	15	356	-243	-158	395	-282	338	1297
748	28	16	557	341	-288	757	141	308	1631
749	28	17	882	-44	252	946	-108	527	1722
750	28	18	13	-26	25	26	-38	32	1575
751	28	19	786	-69	-258	858	-141	499	1685
752	28	20	486	336	245	667	155	256	1585
753	28	21	336	-271	122	360	-295	327	1244
754	28	22	98	154	114	243	9	117	1046
755	28	23	86	6	53	112	-20	66	745
756	28	24	27	17	79	101	-57	79	437
757	28	25	-61	119	58	136	-78	107	141
758	28	26	-102	138	-14	139	-103	121	-149
759	28	27	-101	88	-73	113	-126	120	-433
760	28	28	-84	20	-100	81	-145	113	-688
761	28	29	-64	-40	-104	52	-156	104	-909
762	28	30	-44	-83	-92	30	-158	94	-1078
763	28	31	-25	-103	-69	16	-143	79	-1206
764	28	32	-10	-78	-39	8	-96	52	-1283
765	28	33	-2	13	-8	17	-6	11	-1292
770	29	3	-19	170	-20	173	-21	97	-1245
771	29	4	-16	66	-17	69	-20	44	-1248
772	29	5	-28	32	-18	37	-33	35	-1191
773	29	6	-57	43	-7	43	-58	50	-1097
774	29	7	-111	53	9	54	-111	83	-966
775	29	8	-194	40	24	43	-197	120	-810
776	29	9	-296	-11	33	-7	-300	146	-641
777	29	10	-387	-96	30	-93	-390	148	-452
778	29	11	-435	-191	29	-187	-439	126	-245
779	29	12	-431	-236	55	-222	-446	112	-10
780	29	13	-409	-147	75	-127	-429	151	244

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	r_{xy} , psi	In-Plane Principal Stresses		r_{Max} , psi	σ_z , psi
	M	N				Max, psi	Min, psi		
781	29	14	-349	-11	29	-9	-352	171	498
782	29	15	-185	-72	24	-67	-190	61	702
783	29	16	-123	162	13	162	-123	143	898
784	29	17	-38	153	-16	154	-39	97	999
785	29	18	25	-181	5	25	-181	103	967
786	29	19	37	130	31	139	28	55	998
787	29	20	28	155	10	156	27	64	904
788	29	21	61	-74	14	62	-75	69	717
789	29	22	-18	47	44	69	-40	54	531
790	29	23	-31	23	22	31	-39	35	298
791	29	24	-51	32	26	39	-58	49	46
792	29	25	-83	72	11	72	-84	78	-202
793	29	26	-100	81	-28	86	-104	95	-453
794	29	27	-96	54	-65	78	-120	99	-695
795	29	28	-81	9	-84	59	-131	95	-908
796	29	29	-63	-33	-85	38	-134	86	-1102
797	29	30	-44	-65	-73	19	-128	74	-1251
798	29	31	-26	-77	-52	7	-110	58	-1365
799	29	32	-11	-48	-26	3	-62	32	-1429
800	29	33	1	50	14	53	-2	28	-1436
805	30	3	20	172	-21	174	17	79	-1364
806	30	4	3	48	-29	62	-11	36	-1375
807	30	5	-21	30	-41	53	-43	48	-1329
808	30	6	-51	48	-44	65	-67	66	-1241
809	30	7	-93	54	-51	70	-109	89	-1120
810	30	8	-161	45	-58	60	-176	118	-984
811	30	9	-245	-2	-54	9	-257	133	-835
812	30	10	-327	-84	-38	-78	-333	127	-675
813	30	11	-392	-157	-4	-157	-392	118	-496
814	30	12	-434	-179	50	-169	-443	137	-303
815	30	13	-453	-133	97	-106	-480	187	-97
816	30	14	-438	-58	105	-31	-465	217	105
817	30	15	-379	-24	108	6	-409	208	276
818	30	16	-343	79	90	97	-361	229	421
819	30	17	-276	82	36	86	-280	183	503
820	30	18	-175	-53	45	-38	-190	76	514
821	30	19	-168	78	61	92	-182	137	512
822	30	20	-137	83	18	84	-138	111	434
823	30	21	-85	0	10	2	-86	44	306
824	30	22	-84	25	21	29	-88	58	147
825	30	23	-79	24	14	26	-81	54	-47
826	30	24	-81	30	9	31	-82	56	-259
827	30	25	-91	44	-7	45	-91	68	-477
828	30	26	-96	47	-32	54	-103	79	-690
829	30	27	-91	30	-56	52	-113	82	-900
830	30	28	-79	2	-68	41	-118	79	-1092
831	30	29	-63	-26	-67	25	-114	70	-1259
832	30	30	-45	-47	-54	8	-100	54	-1399
833	30	31	-24	-56	-34	-3	-77	37	-1494
834	30	32	-4	-24	-14	3	-31	17	-1550
835	30	33	-0	98	6	98	-1	49	-1554

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x^* psi	σ_y^* psi	τ_{xy}^* psi	In-Plane Principal Stresses		τ_{Max}^* psi	σ_z^* psi
	M	N				Max, psi	Min, psi		
840	31	3	-21	141	43	152	-32	92	-1483
841	31	4	7	22	-34	49	-20	35	-1484
842	31	5	-3	24	-56	68	-47	58	-1437
843	31	6	-10	40	-64	84	-54	69	-1349
844	31	7	-17	28	-84	93	-82	87	-1238
845	31	8	-40	33	-107	110	-117	113	-1102
846	31	9	-75	10	-109	85	-150	117	-949
847	31	10	-107	-54	-88	12	-172	92	-793
848	31	11	-141	-98	-45	-70	-169	50	-627
849	31	12	-178	-102	20	-97	-183	43	-453
850	31	13	-211	-85	84	-43	-252	105	-279
851	31	14	-228	-52	119	8	-288	148	-118
852	31	15	-232	-13	131	48	-293	171	23
853	31	16	-234	34	120	80	-279	180	130
854	31	17	-212	33	88	62	-240	151	195
855	31	18	-170	-6	80	27	-203	115	214
856	31	19	-165	39	75	64	-190	127	194
857	31	20	-149	41	45	51	-159	105	125
858	31	21	-121	12	29	18	-127	73	15
859	31	22	-111	17	23	21	-115	68	-128
860	31	23	-107	19	15	21	-108	64	-297
861	31	23	-105	19	5	19	-105	62	-485
862	31	25	-107	23	-11	24	-108	66	-679
863	31	26	-105	24	-30	31	-112	71	-874
864	31	27	-97	15	-45	31	-113	72	-1063
865	31	28	-82	-3	-53	23	-108	66	-1233
866	31	29	-65	-16	-49	14	-95	55	-1385
867	31	30	-46	-26	-34	-0	-71	35	-1505
868	31	31	-25	-34	-14	-15	-44	15	-1599
969	31	32	-7	-11	-2	-6	-12	3	-1652
870	31	33	-0	80	-25	87	-7	47	-1662
875	32	3	19	-2	17	28	-11	20	-1571
876	32	4	-0	-20	-25	17	-37	27	-1567
877	32	5	28	24	-38	64	-12	38	-1503
878	32	6	68	30	-54	107	-9	58	-1414
879	32	7	97	-10	-71	132	-46	89	-1307
880	32	8	157	9	-86	196	-30	113	-1157
881	32	9	210	26	-96	251	-15	133	-990
882	32	10	263	-27	-84	285	-50	168	-826
883	32	11	295	-41	-47	301	-48	174	-652
884	32	12	308	-26	2	308	-26	167	-475
885	32	13	274	-23	47	281	-30	155	-317
886	32	14	222	-30	81	246	-54	150	-184
887	32	15	155	-4	97	201	-50	125	-70
888	32	16	91	13	93	153	-48	100	11
889	32	17	33	9	77	99	-57	78	53
890	32	18	-5	-5	70	65	-75	70	54
891	32	19	-50	17	60	53	-85	69	19
892	32	20	-79	13	42	29	-95	62	-49
893	32	21	-99	4	29	11	-106	59	-158
894	32	22	-110	5	21	9	-114	61	-294

TABLE 4. (Continued)

Physical Mesh Number	Mesh Coord.		σ_x , psi	σ_y , psi	τ_{xy} , psi	In-Plane Principal Stresses		τ_{Max} , psi	σ_z^* , psi
	M	N				Max, psi	Min, psi		
895	32	23	-121	11	12	12	-122	67	-454
896	32	24	-125	4	3	4	-125	65	-632
897	32	25	-126	6	-8	6	-126	66	-815
898	32	26	-113	8	-19	11	-116	64	-994
899	32	27	-96	6	-29	14	-104	59	-1168
900	32	28	-71	-6	-31	7	-84	45	-1323
901	32	29	-46	-5	-27	8	-59	34	-1464
902	32	30	-23	-5	-16	4	-32	18	-1575
903	32	31	-12	-13	-2	-11	-15	2	-1665
904	32	32	-7	-7	8	0	-15	8	-1724
905	32	33	3	25	-12	30	-2	16	-1739
910	33	4	-19	-29	24	0	-49	25	-1609
911	33	5	120	34	77	165	-11	88	-1518
912	33	6	250	-36	-61	262	-48	155	-1427
913	33	7	142	36	-29	150	29	60	-1331
914	33	8	397	-35	99	418	-57	238	-1165
915	33	9	624	33	27	625	31	297	-957
916	33	10	764	-30	-31	766	-31	398	-776
917	33	11	830	28	41	832	26	403	-586
918	33	12	1020	-28	45	1021	-30	526	-388
919	33	13	956	26	-41	958	24	467	-232
920	33	14	819	-24	-37	821	-26	423	-131
921	33	15	647	22	4	647	22	313	-35
922	33	16	550	-21	-11	550	-21	285	21
923	33	17	351	20	-36	355	16	170	36
924	33	18	232	-19	-8	232	-19	126	22
925	33	19	117	17	-0	117	17	50	-25
926	33	20	49	-16	-17	53	-20	37	-107
927	33	21	-54	15	-10	16	-56	36	-226
928	33	22	-68	-14	8	-13	-69	28	-363
929	33	23	-104	13	-4	14	-104	59	-516
930	33	24	-113	-12	-9	-12	-114	51	-694
931	33	25	-131	12	5	12	-131	72	-869
932	33	26	-79	-11	10	-9	-80	35	-1046
933	33	27	-59	10	-4	11	-59	35	-1208
934	33	28	-13	-10	5	-6	-17	5	-1361
935	33	29	32	10	16	40	2	19	-1487
936	33	30	83	-9	-6	84	-10	47	-1596
937	33	31	49	9	-14	53	4	25	-1685
938	33	32	39	-7	6	40	-8	24	-1751

TABLE 5. BENDING MOMENTS AND MAXIMUM STRESSES

	16" x 16" Element With Thermal Symmetry	8" x 8" Element With Thermal Symmetry	8" x 8" Element With No Thermal Symmetry (Intermediate Mesh)	8" x 8" Element With No Thermal Symmetry (Fine Mesh)
Max In-Plane Normal Stress	4,308	1,444	2,336	2,691
Mesh Coordinates, M	12	28	14	25
N	3	18	7	11
Min. In-Plane Normal Stress	-6,702	-796	-2,624	-1,645
Mesh Coordinates, M	30	33	15	11
N	23	19	8	25
Max In-Plane Shear Stress	4,129	687	1,692	1,587
Mesh Coordinates, M	30	28	15	25
N	23	18	8	11
Max σ_z^*	2,639	2,225	2,089	2,131
Mesh Coordinates, M	7	14	7	12
N	7	9	7	26
Min σ_z^*	-2,339	-1,917	-1,689	-1,751
Mesh Coordinates, M	33	33	18	33
N	33	33	18	32
Bending Moment About the x-Axis ^(a)	-23,927	-7,075	-25,384	-22,270
Bending Moment About the y-Axis ^(a)	23,927	7,075	-8,535	-7,457

(a) Bending moments are calculated using σ_z^* . To obtain true axial stresses and bending moments, multiply by 1.676.

TABLE 6. STRESS FUNCTION FOR 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
1	2.0820909E 00	53	4.5437362E-01	105	6.8635435E-01
2	1.0190830E 00	54	6.4698083E-01	106	9.9556503E-01
3	1.1281319E 00	55	2.4019419E 00	107	7.9091582E-01
4	8.9737163E-01	56	1.0810366E 00	108	3.8784520E-01
5	2.0820835E 00	57	9.9074379E-01	109	2.2209308E-02
6	1.1281293E 00	58	7.8422502E-01	110	-2.1457294E-01
7	1.0067584E 00	59	5.2832282E-01	111	-3.8754657E-01
8	9.9168749E-01	60	3.6279529E-01	112	-5.3418732E-01
9	9.9008865E-01	61	-6.3873802E-01	113	-6.4984518E-01
10	3.1486694E-01	62	-9.3097531E-01	114	-6.8844122E-01
11	8.9740075E-01	63	6.9638879E-01	115	-7.9278213E-01
12	9.9148476E-01	64	9.9288946E-01	116	-8.7594993E-01
13	9.8151908E-01	65	7.5731128E-01	117	-1.0322299E 00
14	9.4054242E-01	66	4.0221788E-01	118	-1.2648195E 00
15	9.0080465E-01	67	3.7291805E-01	119	-1.4934684E 00
16	-1.2330682E-01	68	2.0926347E 00	120	-1.6292593E 00
17	8.2392466E-01	69	-2.4946085E 00	121	-9.7475711E-01
18	9.9003850E-01	70	4.1711150E-01	122	6.2937372E-01
19	9.4058781E-01	71	9.9434727E-01	123	9.9628175E-01
20	8.3995844E-01	72	7.8644341E-01	124	8.0158923E-01
21	7.5845933E-01	73	3.9809398E-01	125	3.9572963E-01
22	7.1819635E-01	74	2.0759912E-01	126	-6.3408075E-03
23	8.5654247E-01	75	4.4658110E-01	127	-3.1493763E-01
24	9.1912533E-01	76	-8.9472936E-01	128	-5.4235734E-01
25	9.8944612E-01	77	-7.7289103E-01	129	-6.8860722E-01
26	9.0038965E-01	78	6.0456971E-01	130	-6.8266345E-01
27	7.5996509E-01	79	9.9503505E-01	131	-7.9097444E-01
28	6.6954361E-01	80	7.9303382E-01	132	-8.7094485E-01
29	6.3069953E-01	81	4.0566931E-01	133	-1.0019092E 00
30	5.6486417E-01	82	1.3391217E-01	134	-1.2176233E 00
31	4.2150858E-01	83	1.6662397E-02	135	-1.4937910E 00
32	8.2476622E-01	84	-7.0670266E-01	136	-1.7589036E 00
33	9.8914623E-01	85	-1.2586938E 00	137	-1.9313049E 00
34	8.8614339E-01	86	-8.5434463E-01	138	-1.9494250E 00
35	7.1733123E-01	87	-8.7606927E-01	139	-3.5504809E-01
36	6.3369403E-01	88	2.8886530E-01	140	7.1339496E-01
37	6.2949407E-01	89	7.7080567E-01	141	9.9726295E-01
38	5.0982096E-01	90	9.9536395E-01	142	8.1534431E-01
39	6.4706538E-01	91	7.8620446E-01	143	4.3710274E-01
40	-1.4042894E-01	92	3.9939540E-01	144	4.6696350E-02
41	5.9552573E-01	93	9.7359585E-02	145	-2.6527515E-01
42	9.8920364E-01	94	-9.8496009E-03	146	-4.8337618E-01
43	8.7381781E-01	95	-4.3159327E-03	147	-6.0872468E-01
44	6.6693363E-01	96	5.8542265E-01	148	-6.4890946E-01
45	5.6433077E-01	97	-1.6259961E 00	149	-7.4433411E-01
46	5.1035312E-01	98	3.0675913E-02	150	-8.6266966E-01
47	-3.7188621E-01	99	-8.9472888E-01	151	-1.0461939E 00
48	-8.2592554E-01	100	-8.5444192E-01	152	-1.3116622E 00
49	7.2123382E-01	101	-8.7253658E-01	153	-1.6292032E 00
50	9.8960580E-01	102	-1.0317718E 00	154	-1.9312701E 00
51	3.2867583E-01	103	-1.2177927E 00	155	-2.1396266E 00
52	5.8312736E-01	104	-5.3843576E-01	156	-2.1936810E 00

TABLE 6. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
157	-2.0649740E 00	209	3.2622191E-02	261	-1.0952543E 00
158	-9.0966636E-03	210	-1.1663551E-01	262	-1.0408980E 00
159	7.7671077E-01	211	-3.3778644E-01	263	-8.0987427E-01
160	9.9775995E-01	212	-6.6278441E-01	264	-4.9614548E-01
161	8.4218298E-01	213	-1.0675078E 00	265	-2.5864824E-01
162	5.1656743E-01	214	-1.4693903E 00	266	-2.5472607E-01
163	1.7562603E-01	215	-1.7717389E 00	267	-3.6998957E-01
164	-9.6141423E-02	216	-1.9002484E 00	268	1.3626741E 00
165	-2.7840969E-01	217	-1.8245581E 00	269	1.0725212E 00
166	-3.8588758E-01	218	-1.5667622E 00	270	1.0017350E 00
167	-4.5578541E-01	219	-1.1963727E 00	271	1.0279614E 00
168	-5.5990995E-01	220	-8.0981320E-01	272	1.0615792E 00
169	-7.1172613E-01	221	5.1900409E-01	273	1.0039234E 00
170	-9.3874171E-01	222	9.1377188E-01	274	7.9359630E-01
171	-1.2486432E 00	223	1.0002678E 00	275	7.4974236E-01
172	-1.6083022E 00	224	9.5117424E-01	276	-8.5465294E-01
173	-1.9495319E 00	225	8.4486367E-01	277	-4.4697939E-02
174	-2.1932687E 00	226	7.2011026E-01	278	-3.4061688E-02
175	-2.2767525E 00	227	6.0551906E-01	279	-3.0462853E-01
176	-2.1744281E 00	228	5.2304866E-01	280	-5.8127128E-01
177	-1.9000180E 00	229	4.1538867E-01	281	-7.2605817E-01
178	3.0449540E-02	230	2.6997607E-01	282	-6.9003014E-01
179	8.0473467E-01	231	1.5915335E-01	283	-4.9946600E-01
180	9.9859871E-01	232	6.4545141E-02	284	-2.6841748E-01
181	8.7810106E-01	233	-5.3230174E-02	285	-2.5452868E-01
182	6.2135453E-01	234	-2.8618737E-01	286	-8.8819848E-01
183	3.5264208E-01	235	-6.5417464E-01	287	1.5050544E 00
184	1.4311144E-01	236	-1.0558568E 00	288	1.1138946E 00
185	9.8078694E-03	237	-1.3712264E 00	289	1.0028286E 00
186	-7.3300124E-02	238	-1.5131512E 00	290	1.0737374E 00
187	-1.5318143E-01	239	-1.4468598E 00	291	1.1770750E 00
188	-2.16770318E-01	240	-1.1961775E 00	292	1.1289890E 00
189	-4.3395219E-01	241	-8.4042479E-01	293	6.3684634E-01
190	-6.8039352E-01	242	-4.9624074E-01	294	-1.3499219E-01
191	-1.0173688E 00	243	-2.6841817E-01	295	8.6090496E-02
192	-1.4112062E 00	244	8.6929545E-01	296	-8.7217292E-02
193	-1.7887073E 00	245	9.8564392E-01	297	-3.1567816E-01
194	-2.0651896E 00	246	1.0007745E 00	298	-4.4984787E-01
195	-2.1738316E 00	247	9.8841280E-01	299	-4.3753780E-01
196	-2.0869752E 00	248	9.5226897E-01	300	-3.0233908E-01
197	-1.8250487E 00	249	8.7085254E-01	301	-1.5650148E-01
198	-1.4467167E 00	250	7.3869840E-01	302	-3.7003570E-01
199	2.7466065E-01	251	6.0954887E-01	303	1.5308428E 00
200	8.5814245E-01	252	2.3995540E-01	304	1.1577648E 00
201	9.9973564E-01	253	-1.2256844E-01	305	1.0039807E 00
202	9.1429683E-01	254	-1.3111950E-01	306	1.1155292E 00
203	7.3374819E-01	255	-1.9537537E-01	307	1.2718063E 00
204	5.4325704E-01	256	-7.3483910E-02	308	1.2221685E 00
205	3.9535508E-01	257	-3.4647488E-02	309	1.1583303E 00
206	3.0583556E-01	258	-2.7853384E-01	310	1.5840045E-01
207	2.4048823E-01	259	-6.3930458E-01	311	1.7429437E-01
208	1.5036621E-01	260	-9.4761348E-01	312	4.3038921E-02

TABLE 6. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
313	-1.3966459E-01	365	1.3141816E-01	417	9.4946051E-01
314	-2.5850709E-01	366	1.2422342E-01	418	8.2388918E-01
315	-2.6572511E-01	367	1.8595643E-01	419	7.0805044E-01
316	-1.7915366E-01	368	2.8302585E-01	420	6.0628362E-01
317	-3.1636642E-02	369	2.9654722E-01	421	5.2526847E-01
318	5.3670869E-01	370	-5.7500729E-01	422	4.7491576E-01
319	2.7074743E 00	371	1.7975356E-01	423	4.5965782E-01
320	1.3058375E 00	372	6.5525565E-01	424	4.6875572E-01
321	1.0050708E 00	373	8.1309292E-01	425	4.8087963E-01
322	1.1611516E 00	374	1.5291077E 00	426	4.6468441E-01
323	1.4022826E 00	375	1.1515125E 00	427	3.9340672E-01
324	1.2597459E 00	376	1.0079654E 00	428	3.6777869E-01
325	-6.2392709E-01	377	1.1258578E 00	429	4.3730814E-01
326	1.0546430E-01	378	1.3598112E 00	430	6.1504573E-01
327	2.7108239E-01	379	1.5409380E 00	431	6.9980220E-01
328	1.5720682E-01	380	1.5413390E 00	432	8.1291337E-01
329	-5.6585339E-03	381	1.3126433E 00	433	8.7772182E-01
330	-1.1054068E-01	382	8.0825324E-01	434	9.0597241E-01
331	-1.1462020E-01	383	4.0291384E-01	435	9.3697598E-01
332	-3.0514885E-02	384	4.4035463E-01	436	9.8526167E-01
333	3.3235758E-02	385	8.3140674E-01	437	1.4803065E 00
334	-5.1657208E-01	386	8.3086523E-01	438	1.0935568E 00
335	2.7930567E 00	387	7.1513584E-01	439	1.0079000E 00
336	1.3431262E 00	388	5.8681802E-01	440	1.0487111E 00
337	1.0060961E 00	389	4.5708302E-01	441	1.1515879E 00
338	1.1597575E 00	390	3.4811698E-01	442	1.2620242E 00
339	1.4257486E 00	391	2.8267873E-01	443	1.3441176E 00
340	1.4440913E 00	392	2.7411638E-01	444	1.3878170E 00
341	8.9212929E-01	393	3.2134565E-01	445	1.3911194E 00
342	3.8391387E-01	394	4.1603616E-01	446	1.3422977E 00
343	3.9152501E-01	395	5.6234318E-01	447	1.2450587E 00
344	2.5506291E-01	396	8.7956142E-01	448	1.1214300E 00
345	1.0339755E-01	397	2.6407613E 00	449	1.0089965E 00
346	8.4661099E-03	398	-1.1530647E 00	450	9.1637880E-01
347	-5.1928658E-04	399	1.4417947E 00	451	8.4106412E-01
348	6.5789334E-02	400	4.3878044E-01	452	7.8013663E-01
349	1.7061333E-01	401	6.5544662E-01	453	7.3212922E-01
350	4.3836749E-01	402	8.1573317E-01	454	7.0135610E-01
351	4.3880984E-01	403	8.7745465E-01	455	6.8792556E-01
352	2.0820243E 00	404	9.2213610E-01	456	6.7574010E-01
353	1.2486905E 00	405	1.5168644E 00	457	6.4808156E-01
354	1.0072897E 00	406	1.1213056E 00	458	5.8557367E-01
355	1.1466575E 00	407	1.0081332E 00	459	4.6996903E-01
356	1.4098368E 00	408	1.0912029E 00	460	3.9633440E-01
357	1.5390967E 00	409	1.2683407E 00	461	6.2440374E-01
358	1.3289624E 00	410	1.4377153E 00	462	6.9356408E-01
359	7.1557756E-01	411	1.5286254E 00	463	8.1382840E-01
360	7.5593392E-01	412	1.5210726E 00	464	8.9116310E-01
361	6.0135711E-01	413	1.4215106E 00	465	9.2190338E-01
362	4.8846852E-01	414	1.2739909E 00	466	9.3764347E-01
363	3.4462190E-01	415	1.1550409E 00	467	9.6420741E-01
364	2.1185944E-01	416	1.0659931E 00	468	1.0009470E 00

TABLE 6. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
469	1.0183116E 00	514	1.0182317E 00	559	6.5999131E-01
470	7.5987508E-01	515	1.0182092E 00	560	4.2584210E-01
471	9.8637012E-01	516	1.0179970E 00	561	7.0716781E-01
472	1.0086400E 00	517	1.0182183E 00	562	9.7064396E-01
473	1.0200180E 00	518	1.0184913E 00	563	8.4642055E-01
474	1.0527821E 00	519	1.0181027E 00	564	7.8195961E-01
475	1.0917571E 00	520	1.0180291E 00	565	9.3323361E-01
476	1.1220276E 00	521	1.0185602E 00	566	1.0289476E 00
477	1.1416673E 00	522	1.0181796E 00	567	9.6088083E-01
478	1.1548238E 00	523	1.0178792E 00	568	8.9647847E-01
479	1.1516646E 00	524	1.0182617E 00	569	9.8125825E-01
480	1.1164724E 00	525	1.0181706E 00	570	1.1264861E 00
481	1.0602430E 00	526	1.0177788E 00	571	9.4147744E-01
482	1.0160786E 00	527	1.0177245E 00	572	5.2946274E-01
483	9.8578459E-01	528	1.0176253E 00	573	9.3294430E-01
484	9.6142954E-01	529	1.0176757E 00	574	1.2175603E 00
485	9.4140434E-01	530	1.0179500E 00	575	1.2515265E 00
486	9.2455659E-01	531	1.0176634E 00	576	1.5925629E 00
487	9.1541848E-01	532	1.0174323E 00	577	2.3441580E 00
488	9.1306014E-01	533	1.0175926E 00	578	2.5438746E 00
489	9.0161451E-01	534	1.0183974E 00	579	1.6396322E 00
490	8.8305609E-01	535	1.0183745E 00	580	1.3297166E 00
491	8.6414076E-01	536	1.0316700E 00	581	1.8093876E 00
492	8.2020892E-01	537	1.1267202E 00	582	1.1369276E 00
493	7.7731667E-01	538	1.8872643E 00	583	4.0738019E-01
494	8.5081805E-01	539	1.1193952E 00	584	3.0501919E-01
495	8.9366964E-01	540	9.4883221E-01	585	4.4009919E-01
496	9.5023133E-01	541	1.0073842E 00	586	5.3861735E-01
497	9.7488382E-01	542	1.0620119E 00	587	1.8006460E-01
498	9.7856197E-01	543	1.0919194E 00	588	-3.5410214E-01
499	9.8513216E-01	544	1.1643088E 00	589	3.9195766E-01
500	1.0007812E 00	545	1.2752386E 00	590	1.1448480E 00
501	1.0148394E 00	546	1.2875765E 00	591	-6.9589458E-01
502	1.0188428E 00	547	1.1571788E 00	592	-2.6611511E 00
503	9.8118309E-01	548	1.1051608E 00	593	-8.0118616E-01
504	1.4805657E-05	549	1.1478281E 00	594	1.3486299E 00
505	8.8758060E-01	550	1.0505064E 00	595	-3.5404484E-02
506	1.0006144E 00	551	9.2987888E-01	596	-4.1993449E-01
507	1.0143637E 00	552	8.9267389E-01	597	7.5151564E-01
508	1.0161606E 00	553	8.9727795E-01	598	1.3031821E 00
509	1.0167504E 00	554	9.0138254E-01	599	6.5926719E-01
510	1.0169682E 00	555	8.4947044E-01	600	1.3730704E-01
511	1.0171835E 00	556	7.8342769E-01	601	7.6596514E-01
512	1.0175881E 00	557	8.7556703E-01	602	1.8872644E 00
513	1.0179847E 00	558	9.3690977E-01		

TABLE 7. STRESS FUNCTION FOR 8" x 8" ELEMENT WITH "THERMAL" SYMMETRY

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
1	2.9098932E-01	53	4.0732629E-01	105	7.7695216E-01
2	4.3930644E-01	54	3.7983126E-01	106	8.7296066E-01
3	4.0718597E-01	55	3.6690910E-01	107	8.8103230E-01
4	4.2647222E-01	56	3.8338052E-01	108	7.1584136E-01
5	2.9099896E-01	57	4.3482419E-01	109	4.1992179E-01
6	4.0717130E-01	58	5.1770915E-01	110	4.3024259E-01
7	4.2149211E-01	59	6.1972134E-01	111	4.2297021E-01
8	4.2365777E-01	60	7.2475545E-01	112	4.4084418E-01
9	4.2352039E-01	61	3.7847134E-02	113	4.9759612E-01
10	4.6766005E-01	62	3.6347660E-01	114	5.9368062E-01
11	4.2645391E-01	63	4.2343313E-01	115	7.1629119E-01
12	4.2367119E-01	64	4.1359977E-01	116	8.3538524E-01
13	4.1966908E-01	65	3.9656888E-01	117	8.9818463E-01
14	4.1522074E-01	66	4.0077778E-01	118	8.2183508E-01
15	4.1128894E-01	67	4.3968145E-01	119	4.8765547E-01
16	4.0874628E-01	68	5.1561996E-01	120	5.1690016E-01
17	4.1514882E-01	69	6.1993052E-01	121	4.4624342E-01
18	4.2351546E-01	70	7.3339937E-01	122	4.2287774E-01
19	4.1524134E-01	71	8.2963133E-01	123	4.4776540E-01
20	4.0004846E-01	72	8.8468690E-01	124	5.2089288E-01
21	3.8547607E-01	73	3.1517516E-01	125	6.3398631E-01
22	3.7448262E-01	74	3.9830474E-01	126	7.6546729E-01
23	2.1549637E-01	75	4.2333712E-01	127	8.7480378E-01
24	3.8841105E-01	76	4.1826535E-01	128	8.9662173E-01
25	4.2368242E-01	77	4.1809687E-01	129	7.3448594E-01
26	4.1131015E-01	78	4.4527680E-01	130	5.7630822E-01
27	3.8535387E-01	79	5.0951564E-01	131	4.5776370E-01
28	3.6122248E-01	80	6.0801858E-01	132	4.2277910E-01
29	3.4721303E-01	81	7.2463452E-01	133	4.5340032E-01
30	3.4837051E-01	82	8.3007164E-01	134	5.3969800E-01
31	2.0045852E-01	83	8.8557700E-01	135	6.6607683E-01
32	3.8627148E-01	84	8.5371951E-01	136	8.0318887E-01
33	4.2368290E-01	85	7.1587331E-01	137	9.0068001E-01
34	4.0663866E-01	86	4.3319707E-01	138	8.8063782E-01
35	3.7451284E-01	87	4.2258188E-01	139	6.0708130E-01
36	3.4715315E-01	88	4.2321554E-01	140	5.8545241E-01
37	3.3609356E-01	89	4.2419376E-01	141	4.6150954E-01
38	3.4767460E-01	90	4.4345257E-01	142	4.2270573E-01
39	3.8342834E-01	91	4.9557390E-01	143	4.5736751E-01
40	3.3291001E-01	92	5.8414705E-01	144	5.5253468E-01
41	4.0102925E-01	93	6.9895474E-01	145	6.8808653E-01
42	4.2359654E-01	94	8.1360648E-01	146	8.2897245E-01
43	4.0430756E-01	95	8.8464142E-01	147	9.1606678E-01
44	3.7184837E-01	96	8.5403397E-01	148	8.7114955E-01
45	3.4836403E-01	97	6.6245269E-01	149	7.5238605E-01
46	3.4772120E-01	98	3.9807954E-01	150	5.8889542E-01
47	3.7669537E-01	99	4.2429813E-01	151	4.6284830E-01
48	4.3466741E-01	100	4.2308252E-01	152	4.2266977E-01
49	5.1570122E-01	101	4.3249180E-01	153	4.5905715E-01
50	2.9683194E-01	102	4.7100388E-01	154	5.5832163E-01
51	3.9154801E-01	103	5.4660068E-01	155	6.9891171E-01
52	4.2348623E-01	104	6.5512463E-01	156	8.4488837E-01

TABLE 7. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
157	9.3107427E-01	211	8.5821834E-01	265	-1.0679849E-01
158	8.0597103E-01	212	9.6820333E-01	266	7.8537713E-01
159	-1.0150763E-01	213	4.6152023E-01	267	7.3243859E-01
160	5.8539934E-01	214	4.3469850E-01	268	9.1386898E-01
161	4.6214823E-01	215	4.2209867E-01	269	1.0494786E 00
162	4.2261270E-01	216	4.3820341E-01	270	1.1304985E 00
163	4.5860853E-01	217	4.9144819E-01	271	1.1529098E 00
164	5.5683713E-01	218	5.8189955E-01	272	1.1190455E 00
165	6.9566286E-01	219	7.0066665E-01	273	1.0377651E 00
166	8.3993865E-01	220	8.3031237E-01	274	9.2336497E-01
167	9.3600626E-01	221	9.4488159E-01	275	7.9320413E-01
168	9.3326758E-01	222	1.0106565E 00	276	3.3982715E-01
169	1.0320243E 00	223	9.8736498E-01	277	4.0706971E-01
170	5.7272274E-01	224	8.3064544E-01	278	4.2130312E-01
171	4.5951705E-01	225	9.3062806E-01	279	4.1941034E-01
172	4.2256057E-01	226	1.1077426E 00	280	4.2804092E-01
173	4.5689464E-01	227	1.1529162E 00	281	4.6035762E-01
174	5.5137044E-01	228	4.4734250E-01	282	5.1971529E-01
175	6.8684022E-01	229	4.2726843E-01	283	6.0290990E-01
176	8.3174686E-01	230	4.2184529E-01	284	7.0244457E-01
177	9.3530459E-01	231	4.3153254E-01	285	8.0839102E-01
178	9.1224656E-01	232	4.6952298E-01	286	9.0945072E-01
179	5.5390056E-01	233	5.4103792E-01	287	9.9405078E-01
180	5.6041170E-01	234	6.4238536E-01	288	1.0522289E 00
181	4.5600278E-01	235	7.6238543E-01	289	1.0787784E 00
182	4.2252129E-01	236	8.8338008E-01	290	1.0764302E 00
183	4.5398650E-01	237	9.8248849E-01	291	1.0386716E 00
184	5.4231382E-01	238	1.0327947E 00	292	1.0710606E 00
185	6.7225294E-01	239	1.0056010E 00	293	9.5313245E-01
186	8.1752850E-01	240	8.7664609E-01	294	1.0426704E 00
187	9.3588449E-01	241	7.4268330E-01	295	1.0826540E 00
188	9.6207209E-01	242	7.2564316E-01	296	1.1245530E 00
189	8.0556421E-01	243	9.6820388E-01	297	1.1477697E 00
190	5.2353223E-01	244	1.1077417E 00	298	1.1394361E 00
191	4.4859860E-01	245	1.1542121E 00	299	1.0970953E 00
192	4.2243472E-01	246	1.1190121E 00	300	1.0228748E 00
193	4.4995651E-01	247	1.0228854E 00	301	9.2337922E-01
194	5.2913621E-01	248	3.0096926E-01	302	8.0896626E-01
195	6.4961227E-01	249	4.0702110E-01	303	6.9216697E-01
196	7.9071503E-01	250	4.2156711E-01	304	5.8568537E-01
197	9.1867365E-01	251	4.2556365E-01	305	3.4242606E-01
198	9.8314459E-01	252	4.4798912E-01	306	4.0605741E-01
199	9.1795790E-01	253	4.9945379E-01	307	4.2107953E-01
200	6.6438887E-01	254	5.8039344E-01	308	4.1437355E-01
201	4.7541088E-01	255	6.8426371E-01	309	4.1185983E-01
202	4.3970645E-01	256	7.9937223E-01	310	4.2757398E-01
203	4.2228955E-01	257	9.1056902E-01	311	4.6622858E-01
204	4.4469007E-01	258	1.0003887E 00	312	5.2686101E-01
205	5.1190764E-01	259	1.0507360E 00	313	6.0492898E-01
206	6.1896241E-01	260	1.0464303E 00	314	6.9384056E-01
207	7.5113316E-01	261	9.8227636E-01	315	7.8611922E-01
208	8.8324300E-01	262	8.2968994E-01	316	8.7458900E-01
209	9.7840271E-01	263	6.0229046E-01	317	9.5319421E-01
210	9.8852795E-01	264	1.0726216E 00	318	1.0174982E 00

TABLE 7. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
319	1.0649025E 00	372	4.0318008E-01	425	4.2073383E-01
320	1.0875948E 00	373	4.2379512E-01	426	4.0460995E-01
321	1.1095973E 00	374	4.5762008E-01	427	3.9691453E-01
322	1.1240372E 00	375	5.0089893E-01	428	3.9844658E-01
323	1.1273077E 00	376	5.4788764E-01	429	4.0685040E-01
324	1.1279357E 00	377	5.9607616E-01	430	4.1320636E-01
325	1.1162553E 00	378	6.4620006E-01	431	4.2711765E-01
326	1.0888519E 00	379	6.9629468E-01	432	4.1562374E-01
327	1.0416960E 00	380	7.4144107E-01	433	4.1991210E-01
328	9.7453518E-01	381	7.7775104E-01	434	4.1352919E-01
329	8.8993615E-01	382	8.0616966E-01	435	4.0916790E-01
330	7.9320024E-01	383	8.2524885E-01	436	4.0954893E-01
331	6.9216390E-01	384	8.2614435E-01	437	4.0774770E-01
332	5.9611383E-01	385	8.1344403E-01	438	4.0642763E-01
333	5.1433358E-01	386	7.8913887E-01	439	4.1280196E-01
334	4.5447879E-01	387	7.5481277E-01	440	4.2587776E-01
335	2.9441578E-01	388	7.1227337E-01	441	4.3337253E-01
336	3.9916701E-01	389	6.6349612E-01	442	4.3323988E-01
337	4.2098797E-01	390	6.1001121E-01	443	4.3804287E-01
338	4.1166279E-01	391	5.5412714E-01	444	4.4814101E-01
339	4.0179029E-01	392	5.0056170E-01	445	4.5636383E-01
340	4.0505666E-01	393	4.5447745E-01	446	4.6206062E-01
341	4.2590361E-01	394	4.2008786E-01	447	4.6792978E-01
342	4.6489034E-01	395	4.0053744E-01	448	4.7196328E-01
343	5.1978866E-01	396	3.9690097E-01	449	4.7186500E-01
344	5.8592281E-01	397	4.0549325E-01	450	4.6980727E-01
345	6.5769169E-01	398	3.0041214E-01	451	4.6619945E-01
346	7.3079920E-01	399	3.9918033E-01	452	4.5969187E-01
347	8.0234104E-01	400	4.2062001E-01	453	4.5180274E-01
348	8.6869645E-01	401	4.1287344E-01	454	4.4514886E-01
349	9.2500008E-01	402	4.0305387E-01	455	4.3808617E-01
350	9.6575599E-01	403	3.9885581E-01	456	4.2720634E-01
351	9.9746168E-01	404	3.9879701E-01	457	4.1731656E-01
352	1.0219208E 00	405	4.0578128E-01	458	4.1102490E-01
353	1.0211471E 00	406	4.2325019E-01	459	4.0722526E-01
354	1.0073511E 00	407	4.4815521E-01	460	4.0548924E-01
355	9.7977946E-01	408	4.7217134E-01	461	4.0686483E-01
356	9.3895364E-01	409	4.9357005E-01	462	4.1088548E-01
357	8.8511710E-01	410	5.1842604E-01	463	4.1322504E-01
358	8.1959239E-01	411	5.4656639E-01	464	4.0262119E-01
359	7.4481887E-01	412	5.7257161E-01	465	4.0456565E-01
360	6.6483604E-01	413	5.9402809E-01	466	4.1427472E-01
361	5.8568500E-01	414	6.1152332E-01	467	4.1431211E-01
362	5.1433173E-01	415	6.2278248E-01	468	4.1552949E-01
363	4.5739719E-01	416	6.2378151E-01	469	4.1458401E-01
364	4.2007928E-01	417	6.1668500E-01	470	4.1478861E-01
365	4.0461338E-01	418	6.0286273E-01	471	4.1481810E-01
366	2.5243905E-01	419	5.8283301E-01	472	4.1465209E-01
367	3.9315628E-01	420	5.5856090E-01	473	4.1435413E-01
368	4.2090434E-01	421	5.3225809E-01	474	4.1423856E-01
369	4.1166292E-01	422	5.0383304E-01	475	4.1408054E-01
370	3.9929194E-01	423	4.7304307E-01	476	4.1391945E-01
371	3.9562051E-01	424	4.4408371E-01	477	4.1377833E-01

TABLE 7. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
478	4.1366749E-01	507	4.3044798E-01	536	2.1389725E-01
479	4.1363310E-01	508	3.5416503E-01	537	9.6601349E-02
480	4.1361605E-01	509	3.4459364E-01	538	4.4756419E-01
481	4.1353803E-01	510	4.4501324E-01	539	6.1927761E-01
482	4.1352218E-01	511	4.6300117E-01	540	5.5271519E-02
483	4.1355709E-01	512	4.3328905E-01	541	-6.0910336E-02
484	4.1350358E-01	513	4.4530882E-01	542	6.7897692E-01
485	4.1346779E-01	514	4.7784694E-01	543	6.7745872E-01
486	4.1348268E-01	515	4.8088082E-01	544	4.0853348E-01
487	4.1345828E-01	516	4.7656918E-01	545	5.0396637E-01
488	4.1340628E-01	517	4.8721863E-01	546	7.2834412E-01
489	4.1336935E-01	518	4.8522222E-01	547	7.1243263E-01
490	4.1332681E-01	519	4.6781666E-01	548	6.5924925E-01
491	4.1328396E-01	520	4.6330327E-01	549	7.4506494E-01
492	4.1325338E-01	521	4.6650735E-01	550	7.4457501E-01
493	4.1322902E-01	522	4.4208062E-01	551	6.2366533E-01
494	4.1320915E-01	523	4.0134535E-01	552	6.0366724E-01
495	4.1320364E-01	524	4.2014809E-01	553	6.7419715E-01
496	4.1323358E-01	525	4.2119138E-01	554	5.5884897E-01
497	4.1347589E-01	526	3.9920466E-01	555	2.5145929E-01
498	4.1552315E-01	527	3.8691010E-01	556	4.5911332E-01
499	4.3151021E-01	528	3.9181916E-01	557	4.5848376E-01
500	4.5200253E-01	529	3.9820343E-01	558	3.0561629E-01
501	3.6752061E-01	530	4.0262130E-01	559	2.4353514E-01
502	4.1946033E-01	531	4.1552511E-01	560	2.9386864E-01
503	4.2944047E-01	532	4.2927757E-01	561	3.3095031E-01
504	3.8236007E-01	533	1.1353178E-05	562	3.4297037E-01
505	3.7221424E-01	534	4.5158859E-01	563	4.3151021E-01
506	4.1933750E-01	535	5.7353845E-01		

TABLE 8. STRESS FUNCTION FOR 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
1	-1.2988701E-02	53	-3.0687935E-02	105	7.9205547E-02
2	-2.5721841E-02	54	9.8781669E-02	106	1.5197840E-01
3	-4.8232378E-01	55	-4.4782569E-02	107	3.6554259E-02
4	-9.2943708E-01	56	-5.9700065E-02	108	-1.6711449E-02
5	-5.6925879E-01	57	-4.9936398E-02	109	-5.1101564E-02
6	3.0885543E-03	58	-6.2072009E-02	110	-6.6515244E-02
7	3.6544055E-02	59	-7.6017511E-02	111	-5.7682984E-02
8	-6.6220871E-01	60	-8.3056986E-02	112	-4.3617018E-02
9	1.5628392E-01	61	-8.0488834E-02	113	-1.0744386E-01
10	5.4477013E-01	62	-6.6603514E-02	114	-4.7852347E-01
11	-6.9138350E-02	63	-4.4458898E-02	115	-5.1175984E-01
12	-6.0035906E-01	64	-2.1873744E-02	116	-1.3471007E-01
13	-4.8182172E-01	65	-1.0325396E-02	117	-4.9919292E-02
14	-1.7440802E-01	66	-2.7001089E-02	118	-8.6850896E-02
15	-1.0595698E-01	67	-4.5697057E-02	119	-1.2186936E-01
16	-2.7411857E-01	68	-5.6193435E-02	120	-9.9969237E-02
17	-5.1176341E-02	69	-6.2425296E-02	121	-4.3991385E-02
18	-4.5384741E-02	70	-6.2541544E-02	122	-3.5931167E-02
19	-5.7012073E-02	71	-5.3709942E-02	123	-1.1743723E-01
20	-1.2634077E-01	72	-4.4595608E-02	124	-4.5467616E-02
21	-1.7201255E-01	73	-6.6090930E-02	125	-6.7802060E-01
22	-1.2963592E-01	74	-1.5059681E-01	126	3.3468377E-01
23	-5.0838654E-02	75	-5.7190526E-01	127	-1.7211110E-02
24	-5.1315961E-02	76	-1.3570464E-01	128	-6.1270195E-04
25	-1.2352847E-01	77	-5.0735489E-02	129	-9.9761407E-03
26	-2.7614557E-02	78	-7.5657259E-02	130	-3.5664237E-02
27	3.8267977E-02	79	-1.1330711E-01	131	-4.7817925E-02
28	-3.7597705E-02	80	-1.2520631E-01	132	-4.3561260E-02
29	-1.2148089E-01	81	-1.0270760E-01	133	-6.8289974E-02
30	-1.1773566E-01	82	-5.6715669E-02	134	-2.4409784E-01
31	-7.6817427E-02	83	-8.9292471E-03	135	-5.3027779E-01
32	-5.9562985E-02	84	3.3864789E-02	136	-1.3377676E-01
33	-7.3126935E-02	85	7.6703620E-02	137	-4.9546497E-02
34	-2.6320007E-02	86	5.3973119E-02	138	-8.1137441E-02
35	-3.0045576E-03	87	-6.4642467E-03	139	-1.0447878E-01
36	-4.4213825E-02	88	-4.7573597E-02	140	-7.1899171E-02
37	-4.9912587E-02	89	-7.0764605E-02	141	-5.6483208E-02
38	-5.0751638E-02	90	-7.4241453E-02	142	-2.6941442E-01
39	-5.1170438E-02	91	-5.8189198E-02	143	-5.6244156E-01
40	-5.1326661E-02	92	-4.3968552E-02	144	-7.0424086E-02
41	-5.1693059E-02	93	-1.1179776E-01	145	2.7333698E-02
42	-5.1957390E-02	94	-4.8834431E-01	146	7.5802634E-03
43	-5.1987424E-02	95	-6.2080516E-01	147	-3.0754225E-02
44	-5.2076344E-02	96	-1.4671629E-01	148	-4.3344500E-02
45	-5.1906441E-02	97	-5.0001800E-02	149	-2.0600213E-02
46	-5.1416492E-02	98	-8.5877838E-02	150	4.1299992E-02
47	-5.0847481E-02	99	-1.3015250E-01	151	-4.3589162E-01
48	-5.0377292E-02	100	-1.2935260E-01	152	-1.1484741E-01
49	-5.0062253E-02	101	-8.1040593E-02	153	-4.8745093E-02
50	-5.0169418E-02	102	-1.8211358E-02	154	-7.6591645E-02
51	-4.9164059E-02	103	2.2218839E-02	155	-9.1946551E-02
52	-4.7481602E-02	104	5.6963378E-02	156	-6.0112612E-01

TABLE 8. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
157	-8.6398001E-02	209	-4.3557556E-02	261	-6.9468423E-02
158	-1.3670587E-01	210	-5.5391493E-02	262	-2.9287770E-01
159	4.3885692E-02	211	-4.9907381E-02	263	-3.7504177E-01
160	4.5985695E-02	212	-9.4567654E-03	264	-9.4933521E-02
161	-1.3001245E-02	213	-4.3561563E-02	265	-4.1419005E-02
162	-4.2870402E-02	214	-6.9986938E-01	266	-5.7281068E-02
163	1.0383764E-02	215	-9.1940054E-02	267	-8.0829387E-02
164	2.2372401E-01	216	3.5109609E-02	268	-9.1082720E-02
165	-2.4766482E-01	217	9.8980178E-02	269	-1.0938570E-01
166	-8.9076658E-02	218	5.7273276E-02	270	-1.5311676E-01
167	-4.7502858E-02	219	-1.1829840E-02	271	-1.7310318E-01
168	-7.1164284E-02	220	-4.1899671E-02	272	-5.2222833E-02
169	-7.7934944E-02	221	8.1499246E-03	273	-3.5272472E-02
170	-5.0427268E-02	222	1.8231593E-01	274	4.6572927E-03
171	-1.8904540E-01	223	-2.3686176E-01	275	1.2309900E-02
172	-4.4991180E-01	224	-7.8813189E-02	276	2.3468107E-03
173	3.8237085E-02	225	-4.2665111E-02	277	-1.6275027E-02
174	7.4136094E-02	226	-5.7988011E-02	278	-3.3855779E-02
175	9.9749852E-04	227	-5.7829152E-02	279	-4.1794738E-02
176	-4.2547976E-02	228	-9.1141146E-03	280	-4.1881477E-02
177	8.7844368E-03	229	7.2326134E-02	281	-7.2050786E-02
178	1.5625299E-01	230	1.8147722E-01	282	-2.6419065E-01
179	-4.0313676E-01	231	9.3997027E-01	283	-2.2453770E-01
180	-1.0255403E-01	232	-1.1113323E-00	284	-7.0159544E-02
181	-4.6013238E-02	233	2.8143613E-01	285	-4.1065615E-02
182	-6.5815092E-02	234	-2.5748819E-01	286	-4.8459598E-02
183	-7.2329428E-02	235	-2.5769215E-02	287	-6.3555058E-02
184	-2.9923790E-02	236	5.9006067E-02	288	-6.6687269E-02
185	1.3198586E-01	237	6.4505104E-02	289	-7.5207601E-02
186	-2.4540887E-01	238	2.0980692E-02	290	-9.7360176E-02
187	5.9762269E-02	239	-2.5696031E-02	291	-1.0135482E-01
188	8.0341198E-02	240	-4.1678432E-02	292	-4.7013569E-02
189	2.9720937E-03	241	-3.0287556E-02	293	-4.1012004E-02
190	-4.2269585E-02	242	-5.5483655E-02	294	-3.0818189E-02
191	2.4765361E-02	243	-3.9481490E-01	295	-2.8397244E-02
192	2.7403345E-01	244	-9.8699075E-02	296	-3.2047962E-02
193	-4.2590082E-01	245	-4.2105637E-02	297	-3.8246835E-02
194	-1.0676689E-01	246	-6.0357686E-02	298	-4.2937704E-02
195	-4.4713233E-02	247	-7.8029496E-02	299	-4.4054248E-02
196	-5.7799463E-02	248	-6.8173717E-02	300	-4.1578987E-02
197	-5.8077269E-02	249	-5.4643171E-02	301	-4.3038804E-02
198	-2.2000167E-02	250	-8.0286043E-02	302	-3.1631926E-02
199	1.4360707E-02	251	-1.0532934E-01	303	2.7641398E-02
200	-1.9337942E-01	252	-9.7494291E-02	304	-3.7592965E-02
201	8.6121622E-02	253	-2.1816789E-02	305	-4.4693087E-02
202	7.9391981E-02	254	1.6211740E-02	306	-4.6647640E-02
203	-4.3590165E-04	255	4.1740287E-02	307	-4.4823453E-02
204	-4.2048941E-02	256	4.4404404E-02	308	-4.6120690E-02
205	2.5931191E-02	257	2.2288607E-02	309	-4.4243336E-02
206	2.8327654E-01	258	-1.1377856E-02	310	-4.4234350E-02
207	-2.4919471E-01	259	-3.5546256E-02	311	-4.4124260E-02
208	-8.3129985E-02	260	-4.1505725E-02	312	-4.3493124E-02

TABLE 8. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
313	-4.2843517E-02	328	-1.9812400E-01	343	4.0160797E-01
314	-4.2428647E-02	329	-1.7655366E-01	344	-1.9304576E-01
315	-4.2092338E-02	330	-1.0083207E-01	345	-1.0225204E 00
316	-4.1805499E-02	331	-1.8930262E-01	346	-8.8808469E-01
317	-4.1608616E-02	332	-5.8182742E-02	347	-1.9342063E-01
318	-4.1668156E-02	333	-7.0833780E-03	348	-1.0153485E 00
319	-4.1795766E-02	334	-2.1035508E-02	349	-2.8835392E-03
320	-4.3153648E-02	335	-4.6566988E-02	350	1.9780843E-01
321	-5.5673301E-02	336	-6.0805900E-02	351	3.3403709E-02
322	-1.5440835E-01	337	-6.7107834E-02	352	-1.3293089E-01
323	3.9159885E-02	338	-6.0522264E-02	353	-2.0045054E-01
324	-7.5123326E-02	339	-5.3003243E-02	354	-2.2561491E-01
325	-1.1063623E-01	340	-2.7997776E-02	355	-1.7159413E-01
326	-2.8727036E-04	341	-3.1387119E-01	356	-1.3222300E-01
327	-9.1259530E-02	342	-5.7547639E-01		

TABLE 9. STRESS FUNCTION FOR 8" x 8" ELEMENT WITH NO THERMAL SYMMETRY (FINE MESH)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
1	-2.1274335E-01	53	-2.1787845E-01	105	-2.1704660E-01
2	-2.4783369E-01	54	-2.2643779E-01	106	-2.0436100E-01
3	-3.7858046E-01	55	-2.2428109E-01	107	-1.9193924E-01
4	-5.9602563E-01	56	-2.3939812E-01	108	-1.8210642E-01
5	-5.3366614E-01	57	-1.9797807E-01	109	-1.7392268E-01
6	-5.5410208E-01	58	-2.0604348E-01	110	-1.6695289E-01
7	-6.0904018E-01	59	-1.9118015E-01	111	-1.6164575E-01
8	-6.0394892E-01	60	-1.8734520E-01	112	-1.5874460E-01
9	-3.8186783E-01	61	-1.8592838E-01	113	-1.5738970E-01
10	-3.5068609E-01	62	-1.8816476E-01	114	-1.5824984E-01
11	-2.9408984E-01	63	-1.8788202E-01	115	-1.6293127E-01
12	-2.3377316E-01	64	-1.8856451E-01	116	-1.7245255E-01
13	-7.4912795E-02	65	-1.8797321E-01	117	-1.8382118E-01
14	-1.4167998E-01	66	-1.8840941E-01	118	-1.9466138E-01
15	-9.0154500E-02	67	-1.8786957E-01	119	-2.0350623E-01
16	-7.1219438E-02	68	-1.8834468E-01	120	-2.0873155E-01
17	3.4766983E-02	69	-1.8766610E-01	121	-2.0855945E-01
18	-1.0939753E-01	70	-1.8812035E-01	122	-2.0585245E-01
19	-5.8069916E-02	71	-1.8740303E-01	123	-2.0162725E-01
20	-1.2363441E-01	72	-1.8787330E-01	124	-1.9480676E-01
21	-1.6557524E-01	73	-1.8708184E-01	125	-1.8650133E-01
22	-4.5944322E-01	74	-1.8767793E-01	126	-1.8339762E-01
23	-3.4649376E-01	75	-1.8684092E-01	127	-1.9463980E-01
24	-3.8959740E-01	76	-1.8750715E-01	128	-2.6023069E-01
25	-3.7726075E-01	77	-1.8656219E-01	129	-2.9684055E-01
26	-5.1382623E-01	78	-1.8739336E-01	130	-2.1079913E-01
27	-2.0257924E-01	79	-1.8633523E-01	131	-1.8788536E-01
28	-3.0210920E-01	80	-1.8726540E-01	132	-2.0365300E-01
29	-2.2920641E-01	81	-1.8608585E-01	133	-2.3912415E-01
30	-1.8827760E-01	82	-1.8719637E-01	134	-2.7745137E-01
31	-1.9398151E-01	83	-1.8583180E-01	135	-3.1059282E-01
32	-2.0586677E-01	84	-1.8708930E-01	136	-3.3357436E-01
33	-2.2915887E-01	85	-1.8558685E-01	137	-3.4035535E-01
34	-2.6239889E-01	86	-1.8698488E-01	138	-3.2942699E-01
35	-2.5994173E-01	87	-1.8527990E-01	139	-3.0394504E-01
36	-2.6477111E-01	88	-1.8687475E-01	140	-2.6778941E-01
37	-2.6966610E-01	89	-1.8501270E-01	141	-2.2687260E-01
38	-2.6495743E-01	90	-1.8670057E-01	142	-1.8856413E-01
39	-2.3127920E-01	91	-1.8429065E-01	143	-1.5656127E-01
40	-2.1982323E-01	92	-1.8292106E-01	144	-1.3034749E-01
41	-2.0514099E-01	93	-1.5485720E-01	145	-1.0922576E-01
42	-1.9176888E-01	94	-1.5631864E-01	146	-9.3208913E-02
43	-1.6696118E-01	95	-1.8676681E-01	147	-8.2418232E-02
44	-1.7102343E-01	96	-1.8714126E-01	148	-7.7558619E-02
45	-1.6128806E-01	97	-1.9282618E-01	149	-8.0655226E-02
46	-1.5733949E-01	98	-2.0482248E-01	150	-9.5455731E-02
47	-1.4333610E-01	99	-2.1650462E-01	151	-1.2453545E-01
48	-1.6187982E-01	100	-2.2666152E-01	152	-1.6351673E-01
49	-1.5825937E-01	101	-2.3494107E-01	153	-2.0183361E-01
50	-1.7232132E-01	102	-2.3808736E-01	154	-2.3126597E-01
51	-1.8409177E-01	103	-2.3472875E-01	155	-2.4793282E-01
52	-2.2687408E-01	104	-2.2744370E-01	156	-2.5169742E-01

TABLE 9. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
157	-2.4538940E-01	209	-3.9030674E-01	261	-2.9946551E-01
158	-2.3174666E-01	210	-2.8918297E-01	262	-3.0499844E-01
159	-2.1231355E-01	211	-1.8416956E-01	263	-2.8572370E-01
160	-1.9186717E-01	212	-9.6096501E-02	264	-2.4761562E-01
161	-1.8227624E-01	213	-2.9244730E-02	265	-2.0443798E-01
162	-2.1229196E-01	214	2.3679893E-02	266	-1.8296481E-01
163	-3.7555881E-01	215	6.6570471E-02	267	-2.3682256E-01
164	-4.0567824E-01	216	1.0247359E-01	268	-5.0695007E-01
165	-2.3125800E-01	217	1.3176106E-01	269	-6.2403265E-01
166	-1.8720256E-01	218	1.5041700E-01	270	-2.7490739E-01
167	-2.1535542E-01	219	1.5451815E-01	271	-1.8848063E-01
168	-2.7750894E-01	220	1.3327190E-01	272	-2.4092218E-01
169	-3.4510177E-01	221	6.4806892E-02	273	-3.5210210E-01
170	-4.0186083E-01	222	-4.7341308E-02	274	-4.6383700E-01
171	-4.3732803E-01	223	-1.5692289E-01	275	-5.3782257E-01
172	-4.4315209E-01	224	-2.3801503E-01	276	-5.5529578E-01
173	-4.1817950E-01	225	-2.8705472E-01	277	-5.1398665E-01
174	-3.6751899E-01	226	-3.0771456E-01	278	-4.2528440E-01
175	-2.9907393E-01	227	-3.0407658E-01	279	-3.0668303E-01
176	-2.2482581E-01	228	-2.8034225E-01	280	-1.7202004E-01
177	-1.5793718E-01	229	-2.4283754E-01	281	-3.8438396E-02
178	-1.0353791E-01	230	-2.0333824E-01	282	2.9638012E-02
179	-5.9642416E-02	231	-1.8214922E-01	283	5.9983444E-02
180	-2.4408605E-02	232	-2.0454107E-01	284	8.0494058E-02
181	3.2464513E-03	233	-2.5266649E-01	285	1.0360006E-01
182	2.3422027E-02	234	-5.0350751E-01	286	1.3639114E-01
183	3.3918620E-02	235	-2.5617866E-01	287	1.6139241E-01
184	3.1204363E-02	236	-1.8752348E-01	288	2.2502983E-01
185	8.2638938E-03	237	-2.3543403E-01	289	2.7469932E-01
186	-4.3003020E-02	238	-3.3740421E-01	290	3.1975321E-01
187	-1.1686070E-01	239	-4.4430698E-01	291	2.7421903E-01
188	-1.9018142E-01	240	-5.2375991E-01	292	7.1897998E-02
189	-2.4587770E-01	241	-5.5757481E-01	293	-7.0197123E-02
190	-2.7849853E-01	242	-5.3848307E-01	294	-1.5445485E-01
191	-2.8933232E-01	243	-4.7062687E-01	295	-2.1530863E-01
192	-2.8211339E-01	244	-3.6569220E-01	296	-2.5959693E-01
193	-2.6090524E-01	245	-2.3849708E-01	297	-2.8081392E-01
194	-2.3034044E-01	246	-1.1148540E-01	298	-2.7450854E-01
195	-1.9903022E-01	247	-1.9141801E-02	299	-2.4434684E-01
196	-1.8310938E-01	248	4.1451209E-02	300	-2.0435211E-01
197	-2.0917177E-01	249	8.8701918E-02	301	-1.8201458E-01
198	-3.1109582E-01	250	1.2798990E-01	302	-2.2453077E-01
199	-5.2913821E-01	251	1.6567960E-01	303	-4.0536269E-01
200	-2.5371894E-01	252	2.0150822E-01	304	-6.1636928E-01
201	-1.8803282E-01	253	2.3273962E-01	305	-2.7559934E-01
202	-2.2658522E-01	254	2.5342544E-01	306	-1.8798605E-01
203	-3.1182034E-01	255	2.5314453E-01	307	-2.4298883E-01
204	-4.0360193E-01	256	1.8140146E-01	308	-3.5564949E-01
205	-4.7708383E-01	257	2.7538809E-02	309	-4.6234349E-01
206	-5.1701241E-01	258	-1.1122122E-01	310	-5.2112085E-01
207	-5.1429591E-01	259	-2.0700288E-01	311	-5.1466903E-01
208	-4.6939057E-01	260	-2.6741006E-01	312	-4.4862176E-01

TABLE 9. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
313	-3.4686637E-01	366	-2.6632331E-01	419	-1.8076884E-01
314	-2.3968431E-01	367	-1.8825961E-01	420	-2.2059233E-01
315	-1.4024661E-01	368	-2.3883310E-01	421	1.2567207E-01
316	-3.4063461E-02	369	-3.3495547E-01	422	2.8387200E-01
317	-3.5674322E-02	370	-4.1074759E-01	423	2.6282131E-01
318	-3.9456130E-02	371	-4.2485719E-01	424	1.5646903E-01
319	-9.8396432E-02	372	-3.6754225E-01	425	2.8699710E-02
320	-8.4977907E-02	373	-2.6250702E-01	426	-8.2732975E-02
321	-3.6111127E-02	374	-1.6367716E-01	427	-1.5676506E-01
322	-1.5292704E-01	375	-1.3689961E-01	428	-1.8249925E-01
323	7.1972485E-02	376	-1.2694914E-01	429	-1.5275147E-01
324	1.6522500E-01	377	5.9701056E-01	430	-5.0778652E-02
325	2.2588685E-01	378	2.4437861E-01	431	-4.7676788E-01
326	2.7355295E-01	379	2.3299904E-01	432	-2.4784572E-01
327	3.2479609E-02	380	1.6243971E-01	433	-1.8900871E-01
328	-4.3456694E-02	381	5.7755841E-02	434	-2.2351592E-01
329	-7.4141914E-02	382	-4.4863600E-02	435	-2.8184464E-01
330	-1.2466281E-01	383	-1.2295468E-01	436	-3.1010136E-01
331	-1.8405258E-01	384	-1.6777921E-01	437	-2.8443465E-01
332	-2.2830957E-01	385	-1.8235460E-01	438	-2.2156576E-01
333	-2.4383797E-01	386	-1.8264343E-01	439	-1.8080177E-01
334	-2.3065214E-01	387	-2.0824471E-01	440	-2.1682197E-01
335	-2.0152460E-01	388	-3.7490484E-01	441	3.3954581E-02
336	-1.8279212E-01	389	-5.9729645E-01	442	2.9358822E-01
337	-2.1544183E-01	390	-2.6890402E-01	443	3.1423764E-01
338	-3.4193963E-01	391	-1.8906722E-01	444	2.2098957E-01
339	-6.3368897E-01	392	-2.3383217E-01	445	8.3631741E-02
340	-2.7792313E-01	393	-3.1676757E-01	446	-4.9657488E-02
341	-1.8885710E-01	394	-3.7373895E-01	447	-1.4583638E-01
342	-2.4229819E-01	395	-3.6828187E-01	448	-1.8181537E-01
343	-3.4912183E-01	396	-2.9910056E-01	449	-1.3885413E-01
344	-4.4274843E-01	397	-2.0513813E-01	450	6.1159137E-03
345	-4.7998381E-01	398	-1.7583592E-01	451	-4.3254847E-01
346	-4.4639557E-01	399	-4.0028502E-01	452	-2.3917547E-01
347	-3.5675643E-01	400	-3.2322983E-01	453	-1.8815376E-01
348	-2.5142125E-01	401	1.9554679E-01	454	-2.1867083E-01
349	-1.8510373E-01	402	2.5121929E-01	455	-2.6822568E-01
350	-1.9394035E-01	403	1.7593603E-01	456	-2.8775603E-01
351	-2.6389267E-01	404	6.2859618E-02	457	-2.5680020E-01
352	-4.9823982E-02	405	-4.4568059E-02	458	-1.9585540E-01
353	-7.5048187E-02	406	-1.2475210E-01	459	-1.8331953E-01
354	1.7116136E-02	407	-1.6975668E-01	460	-4.1759801E-01
355	5.6988350E-02	408	-1.8186814E-01	461	2.2195493E-02
356	8.8950042E-03	409	-1.6963549E-01	462	2.7348714E-01
357	-7.3323603E-02	410	-1.2347559E-01	463	3.3546781E-01
358	-1.4729856E-01	411	-4.8524052E-01	464	2.6037826E-01
359	-1.9232227E-01	412	-2.5183745E-01	465	1.2006632E-01
360	-2.0458722E-01	413	-1.8835338E-01	466	-2.7295074E-02
361	-1.9349699E-01	414	-2.2849812E-01	467	-1.3880171E-01
362	-1.8198551E-01	415	-2.9823208E-01	468	-1.8233746E-01
363	-2.1030853E-01	416	-3.3859377E-01	469	-1.3378787E-01
364	-3.3957553E-01	417	-3.1958743E-01	470	1.3096857E-02
365	-5.5451639E-01	418	-2.4948743E-01	471	-4.7701086E-01

TABLE 9. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
472	-2.4258690E-01	525	1.5691547E-01	578	-1.5099090E-01
473	-1.8884606E-01	526	-6.3535258E-03	579	-8.8203442E-02
474	-2.1531351E-01	527	-1.3234707E-01	580	-8.8648694E-02
475	-2.5855131E-01	528	-1.8174561E-01	581	2.7493443E-01
476	-2.7324565E-01	529	-1.2203653E-01	582	3.8497214E-01
477	-2.4217342E-01	530	7.6211255E-02	583	3.5899668E-01
478	-1.8856779E-01	531	-3.8578066E-01	584	2.4820773E-01
479	-1.9356186E-01	532	-2.2733619E-01	585	1.0184381E-01
480	-4.9646364E-01	533	-1.8814922E-01	586	-3.9424179E-02
481	3.9302465E-03	534	-2.0917716E-01	587	-1.4282550E-01
482	2.6995797E-01	535	-2.4037754E-01	588	-1.8209429E-01
483	3.5960676E-01	536	-2.4596341E-01	589	-1.3739395E-01
484	2.9056168E-01	537	-2.1174090E-01	590	4.1373569E-03
485	1.4461990E-01	538	-1.5444013E-01	591	-4.3618891E-01
486	-1.3113650E-02	539	-1.2295312E-01	592	-2.3123730E-01
487	-1.3454201E-01	540	-1.0999515E-01	593	-1.8870748E-01
488	-1.8177076E-01	541	-2.6152938E-01	594	-2.0591013E-01
489	-1.1933781E-01	542	3.0940777E-01	595	-2.3408780E-01
490	1.0856300E-01	543	3.9379929E-01	596	-2.4330064E-01
491	-3.6868560E-01	544	3.0594666E-01	597	-2.1743394E-01
492	-2.2778435E-01	545	1.5060713E-01	598	-1.5756379E-01
493	-1.8807314E-01	546	-1.1040528E-02	599	-8.6444633E-02
494	-2.1319852E-01	547	-1.3397110E-01	600	-5.4532880E-02
495	-2.5184391E-01	548	-1.8215508E-01	601	-1.0252005E-01
496	-2.6346615E-01	549	-1.2746249E-01	602	1.6737057E-01
497	-2.3277342E-01	550	4.1108823E-02	603	3.4247959E-01
498	-1.7679501E-01	551	-3.8019546E-01	604	3.7983622E-01
499	-1.0820298E-01	552	-2.2619430E-01	605	3.1718726E-01
500	2.8997779E-01	553	-1.8897230E-01	606	1.9920109E-01
501	-6.9383360E-01	554	-2.0835509E-01	607	6.2964796E-02
502	1.9965453E-01	555	-2.3744568E-01	608	-6.1468863E-02
503	3.6990077E-01	556	-2.4335880E-01	609	-1.4937814E-01
504	3.0686893E-01	557	-2.1262273E-01	610	-1.8177868E-01
505	1.5686165E-01	558	-1.5815384E-01	611	-1.4825510E-01
506	-6.3515701E-03	559	-1.1990903E-01	612	-5.2347383E-02
507	-1.3246847E-01	560	-1.5441334E-01	613	-3.4597603E-01
508	-1.8225268E-01	561	1.6156677E-01	614	-2.1892420E-01
509	-1.2317096E-01	562	3.6358557E-01	615	-1.8761152E-01
510	6.7890376E-02	563	3.8476779E-01	616	-2.0478030E-01
511	-4.3237458E-01	564	2.8478316E-01	617	-2.3285671E-01
512	-2.3447755E-01	565	1.3188166E-01	618	-2.4518807E-01
513	-1.8890047E-01	566	-2.2175565E-02	619	-2.2542535E-01
514	-2.1108441E-01	567	-1.3754961E-01	620	-1.6937171E-01
515	-2.4530373E-01	568	-1.8175745E-01	621	-8.7987328E-02
516	-2.5245951E-01	569	-1.2529316E-01	622	-2.4849012E-02
517	-2.1736220E-01	570	7.5826455E-02	623	-1.4088473E-01
518	-1.6400327E-01	571	-3.0569527E-01	624	-1.0850633E-01
519	-2.0783603E-01	572	-2.1612913E-01	625	-4.6942287E-01
520	-8.6706355E-01	573	-1.8800064E-01	626	2.2550681E-01
521	2.9766860E-01	574	-2.0729422E-01	627	3.7095067E-01
522	3.1575929E-01	575	-2.3538717E-01	628	3.4798491E-01
523	3.8111968E-01	576	-2.4194820E-01	629	2.5817423E-01
524	3.0768638E-01	577	-2.1192815E-01	630	1.3993191E-01

TABLE 9. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
631	1.8276498E-02	684	-1.4477764E-02	737	-2.2582877E-01
632	-8.6401740E-02	685	6.0940501E-02	738	-2.5465542E-01
633	-1.5707338E-01	686	1.1949272E-01	739	-2.8590877E-01
634	-1.8208194E-01	687	2.0952956E-01	740	-3.2058604E-01
635	-1.5961410E-01	688	2.2815176E-01	741	-3.5764565E-01
636	-1.0680925E-01	689	1.8128170E-01	742	-3.9282288E-01
637	-3.2393178E-01	690	1.0084658E-01	743	-4.1714436E-01
638	-2.1569841E-01	691	1.1593441E-02	744	-4.1409016E-01
639	-1.8839368E-01	692	-7.0299439E-02	745	-3.6779503E-01
640	2.0407933E-01	693	-1.3358476E-01	746	-3.0138243E-01
641	-2.3114804E-01	694	-1.7098400E-01	747	-2.5423425E-01
642	-2.4675474E-01	695	-1.8207561E-01	748	-1.7757320E-01
643	-2.3679305E-01	696	-1.8020979E-01	749	-1.4666626E-01
644	-1.9648593E-01	697	-2.0717616E-01	750	-1.1253222E-01
645	-1.3368748E-01	698	-4.1453024E-01	751	-7.4063173E-02
646	-8.5929835E-02	699	-2.2434462E-01	752	-2.8732166E-02
647	-1.5290408E-01	700	-1.8824573E-01	753	-2.7870530E-02
648	-4.5430397E-01	701	-2.0092653E-01	754	6.6293778E-03
649	-3.9072522E-01	702	-2.2727703E-01	755	2.1650589E-02
650	2.9550677E-02	703	-2.5259748E-01	756	3.4116913E-02
651	2.8289234E-02	704	-2.7209723E-01	757	4.2713708E-02
652	2.5871625E-01	705	-2.8552769E-01	758	3.2747321E-02
653	3.2206838E-01	706	-2.9487250E-01	759	9.5185668E-04
654	2.7640314E-01	707	-3.0597863E-01	760	-4.5052739E-02
655	1.8327020E-01	708	-3.2521182E-01	761	-9.4405122E-02
656	7.5475226E-02	709	-3.3882376E-01	762	-1.3744441E-01
657	-2.7518277E-02	710	-2.9844282E-01	763	-1.6716351E-01
658	-1.1128441E-01	711	-2.4371385E-01	764	-1.8063553E-01
659	-1.6465648E-01	712	-2.5748240E-01	765	-1.8212879E-01
660	-1.8185758E-01	713	-2.1251677E-01	766	-1.8617002E-01
661	-1.6503187E-01	714	-3.2664186E-01	767	-2.1155815E-01
662	-1.1427295E-01	715	2.7942056E-02	768	-2.6665339E-01
663	-2.9140132E-01	716	-2.3410277E-01	769	-2.0495738E-01
664	-2.1025597E-01	717	-6.0905946E-02	770	-1.8814590E-01
665	-1.8726803E-01	718	-3.3569595E-02	771	-1.9938089E-01
666	-2.0240141E-01	719	4.4528525E-02	772	-2.2227328E-01
667	-2.2903710E-01	720	6.8743776E-02	773	-2.5100172E-01
668	-2.4918661E-01	721	9.6674551E-02	774	-2.8673918E-01
669	-2.5336451E-01	722	1.2811878E-01	775	-3.3091485E-01
670	-2.3908451E-01	723	1.2546094E-01	776	-3.8120163E-01
671	-2.1185801E-01	724	8.5064738E-02	777	-4.2928311E-01
672	-1.9336369E-01	725	2.2274570E-02	778	-4.6145407E-01
673	-2.2409227E-01	726	-4.6155632E-02	779	-4.6295471E-01
674	-3.1348168E-01	727	-1.0734519E-01	780	-4.2729734E-01
675	-3.0677920E-01	728	-1.5226115E-01	781	-3.6799488E-01
676	-3.3482543E-01	729	-1.7617503E-01	782	-3.0477772E-01
677	-3.3900575E-01	730	-1.8195480E-01	783	-2.3278080E-01
678	-4.2647999E-01	731	-1.8709300E-01	784	-1.8450835E-01
679	-1.8094703E 00	732	-2.3960283E-01	785	-1.5785501E-01
680	1.5214035E 00	733	-2.2419427E-01	786	-1.0850318E-01
681	-1.5489819E 00	734	-2.0020962E-01	787	-7.7382768E-02
682	-2.5763805E-01	735	-1.8712116E-01	788	-6.8788658E-02
683	-1.7625733E-02	736	-2.0045879E-01	789	-5.1850250E-02

TABLE 9. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
790	-4.1167389E-02	843	-2.1784456E-01	896	-1.7387320E-01
791	-3.4514998E-02	844	-2.3874609E-01	897	-1.7398418E-01
792	-3.3438244E-02	845	-2.6437747E-01	898	-1.7506528E-01
793	-4.3761736E-02	846	-2.9513084E-01	899	-1.7743320E-01
794	-6.6978350E-02	847	-3.2705352E-01	900	-1.8074946E-01
795	-9.8793272E-02	848	-3.5032665E-01	901	-1.8327027E-01
796	-1.3217923E-01	849	-3.5795254E-01	902	-1.8500818E-01
797	-1.6028107E-01	850	-3.4909167E-01	903	-1.8579631E-01
798	-1.7796643E-01	851	-3.2646871E-01	904	-1.8455335E-01
799	-1.8352026E-01	852	-2.9542372E-01	905	-1.8235272E-01
800	-1.8207196E-01	853	-2.6229764E-01	906	-1.8287962E-01
801	-1.8894979E-01	854	-2.3417994E-01	907	-1.7231990E-01
802	-2.2115162E-01	855	-2.1109848E-01	908	-1.9623190E-01
803	-3.1589810E-01	856	-1.8795251E-01	909	-1.8715951E-01
804	-2.0871377E-01	857	-1.7077908E-01	910	-1.8808223E-01
805	-1.8688275E-01	858	-1.5996551E-01	911	-1.8588424E-01
806	-1.9597405E-01	859	-1.5154188E-01	912	-1.8793645E-01
807	-2.1441996E-01	860	-1.4586864E-01	913	-1.8561088E-01
808	-2.3834246E-01	861	-1.4327172E-01	914	-1.8779470E-01
809	-2.6999361E-01	862	-1.4384353E-01	915	-1.8562848E-01
810	-3.1028567E-01	863	-1.4811395E-01	916	-1.8747064E-01
811	-3.5751148E-01	864	-1.5621372E-01	917	-1.8567154E-01
812	-4.0393886E-01	865	-1.6663108E-01	918	-1.8730343E-01
813	-4.3667737E-01	866	-1.7661988E-01	919	-1.8549261E-01
814	-4.4434112E-01	867	-1.8398775E-01	920	-1.8690243E-01
815	-4.2348856E-01	868	-1.8711604E-01	921	-1.8533108E-01
816	-3.8120795E-01	869	-1.8511834E-01	922	-1.8640320E-01
817	-3.2897142E-01	870	-1.8226338E-01	923	-1.8491669E-01
818	-2.7344158E-01	871	-1.9461590E-01	924	-1.8588742E-01
819	-2.2968089E-01	872	-2.6330558E-01	925	-1.8453609E-01
820	-1.9791759E-01	873	-6.5598543E-02	926	-1.8529533E-01
821	-1.6035186E-01	874	-1.7496847E-01	927	-1.8413504E-01
822	-1.3424397E-01	875	-1.8662242E-01	928	-1.8481851E-01
823	-1.2066727E-01	876	-1.9080534E-01	929	-1.8377708E-01
824	-1.0832933E-01	877	-1.9183080E-01	930	-1.8439896E-01
825	-9.9868484E-02	878	-1.9627035E-01	931	-1.8350812E-01
826	-9.5491916E-02	879	-2.0509316E-01	932	-1.8406753E-01
827	-9.6135755E-02	880	-2.1286878E-01	933	-1.8330029E-01
828	-1.0390935E-01	881	-2.2207339E-01	934	-1.8381012E-01
829	-1.1916650E-01	882	-2.3470469E-01	935	-1.8310245E-01
830	-1.3923518E-01	883	-2.4330416E-01	936	-1.8361175E-01
831	-1.5960531E-01	884	-2.4553336E-01	937	-1.8298073E-01
832	-1.7583199E-01	885	-2.4340999E-01	938	-1.8343652E-01
833	-1.8452543E-01	886	-2.3746093E-01	939	-1.8310803E-01
834	-1.8467268E-01	887	-2.2699361E-01	940	-1.8536593E-01
835	-1.8217183E-01	888	-2.1576905E-01	941	-1.8094498E-01
836	-1.9930709E-01	889	-2.0641082E-01	942	-1.7623865E-01
837	-3.0141611E-01	890	-1.9839225E-01	943	-2.0197159E-01
838	-3.5651824E-01	891	-1.8998511E-01	944	-2.3201495E-01
839	-2.1203526E-01	892	-1.8405445E-01	945	-1.7539159E-01
840	-1.8805064E-01	893	-1.8011509E-01	946	-2.2962031E-01
841	-1.9290838E-01	894	-1.7688521E-01	947	-2.5753908E-01
842	-2.0326338E-01	895	-1.7456868E-01	948	-2.6895443E-01

TABLE 9. (Continued)

Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function	Physical Mesh No.	Stress Function
949	-2.5868055E-01	967	-1.8883594E-01	984	-5.5836037E-01
950	-3.0668252E-01	968	-2.0003467E-01	985	-3.3746372E-01
951	-2.8822837E-01	969	-1.8760647E-01	986	-3.1978014E-01
952	-2.7197285E-01	970	-1.9012531E-01	987	-2.5227985E-01
953	-2.4744843E-01	971	-1.8785110E-01	988	-2.7699011E-01
954	-2.5277171E-01	972	-7.5348838E-02	989	-1.3331395E-01
955	-2.1935183E-01	973	-2.8448780E-01	990	-2.0460317E-01
956	-2.1192385E-01	974	-5.0449154E-01	991	-1.5995601E-01
957	-1.9798730E-01	975	-3.7093695E-06	992	-1.7459181E-01
958	-1.9736843E-01	976	-3.9945239E-01	993	-1.1055529E-01
959	-1.7678551E-01	977	-5.7885833E-01	994	-2.0821903E-01
960	-1.8351111E-01	978	-6.0026179E-01	995	-1.7412699E-01
961	-1.7634380E-01	979	-4.7421835E-01	996	-2.0408190E-01
962	-1.7781252E-01	980	-8.4806983E-01	997	-2.2089872E-01
963	-1.6984019E-01	981	-7.0722823E-01	998	-3.0437478E-01
964	-1.8259765E-01	982	-6.0269217E-01	999	-2.0165074E-01
965	-1.7966794E-01	983	-4.6007581E-01	1000	-2.2923904E-01
966	-1.8545909E-01				

TABLE 10. RELATIVE DISPLACEMENTS OF THE BOUNDARY POINTS ON THE SECOND QUADRANT HOLE OF THE
16" x 16" ELEMENT

Number	Boundary-Point Number	Horizontal Displacement, U, 10^{-6} in.	Vertical Displacement, V, 10^{-6} in.	Normal Displacement, N, 10^{-6} in.	Tangential Displacement, T, 10^{-6} in.	Diameter Decrease, δD , 10^{-6} in.
0	67	1835	-1835	2595	0	5190
1	68	2114	-1403	2532	158	5090
2	69	2281	-793	2408	175	4895
3	70	2450	-196	2450	196	4842
4	71	2191	421	2225	160	4751
5	72	1986	1088	2264	50	4586
6	73	1720	1614	2357	75	4714
7	74	1179	2001	2322	20	--
8	75	1176	2301	2526	540	--
9	76	170	2392	2392	170	--
10	77	-453	2353	2487	197	--
11	78	-996	2389	2567	358	--
12	79	-1463	2207	2595	526	--

TABLE 11. RELATIVE DISPLACEMENTS OF THE BOUNDARY POINTS ON THE THIRD QUADRANT HOLE OF THE
16" x 16" ELEMENT

Number	Boundary-Point Number	Horizontal Displacement, U, 10^{-6} in.	Vertical Displacement, V, 10^{-6} in.	Normal Displacement, N, 10^{-6} in.	Tangential Displacement, T, 10^{-6} in.	Diameter Decrease, δD , 10^{-6} in.
0	80	1367	-1367	1933	0	3866
1	81	1577	-1028	1880	101	3816
2	82	1683	-434	1738	-16	3662
3	83	1663	293	1663	-293	3703
4	84	1702	548	1786	-88	4272
5	85	1660	1120	1998	-139	4283
6	86	1519	1590	2198	-50	4396
7	87	1100	2004	2285	-49	--
8	88	616	2409	2486	-28	--
9	89	19	2040	2040	19	--
10	90	-389	1888	1924	113	--
11	91	-944	1691	1936	28	--
12	92	-1325	1407	1933	58	--

TABLE 12. RELATIVE DISPLACEMENTS OF THE BOUNDARY POINTS ON THE FOURTH QUADRANT HOLE OF THE 16" x 16" ELEMENT

Number	Boundary-Point Number	Horizontal Displacement, U, 10^{-6} in.	Vertical Displacement, V, 10^{-6} in.	Normal Displacement, N, 10^{-6} in.	Tangential Displacement, T, 10^{-6} in.	Diameter Decrease, δD , 10^{-6} in.
0	93	-1534	-866	1534	-866	3068
1	94	-1505	-1357	1678	-921	3440
2	95	-1341	-1752	2037	-846	3924
3	96	-1049	-2009	2162	-679	4126
4	97	-646	-2113	2152	-497	4155
5	98	106	-1575	1796	-510	3765
6	99	549	-1508	1508	-549	3295
7	100	741	-1564	1702	-311	3234
8	101	1075	-1114	1502	-374	2838
9	102	1339	-594	1367	-526	2607
10	103	1528	-76	1361	-698	2502
11	104	1621	396	1463	-802	2898
12	105	1534	866	1534	-866	--
13	106	1481	1282	1762	-854	--
14	107	1256	1599	1887	-757	--
15	108	930	1848	1964	-649	--
16	109	551	1995	2003	-520	--
17	110	149	1999	1969	-373	--
18	111	-265	1787	1787	-265	--
19	112	-660	1410	1532	-272	--
20	113	-1012	959	1336	-396	--
21	114	-1290	464	1240	-586	--
22	115	-1361	-76	1141	-746	--
23	116	-1633	-547	1435	-951	--
24	117	-1631	-672	1631	-672	--

TABLE 13. RELATIVE DISPLACEMENTS OF THE BOUNDARY POINTS ON THE HOLE OF THE
8" x 8" ELEMENT WITH "THERMAL" SYMMETRY

Number	Boundary-Point Number	Horizontal Displacement, U, 10^{-6} in.	Vertical Displacement, V, 10^{-6} in.	Normal Displacement, N, 10^{-6} in.	Tangential Displacement, T, 10^{-6} in.	Diameter Decrease, δD , 10^{-6} in.
0	67	2677	-2677	3786	0	7572
1	68	2994	-2314	3784	-7	7578
2	69	3261	-1911	3779	-15	7591
3	70	3475	-1473	3774	-28	7605
4	71	3633	-1006	3769	-47	7639
5	72	3733	-523	3769	-67	7670
6	73	3770	-41	3769	-77	7694
7	74	3633	442	3658	-98	7518
8	75	3562	926	3678	-126	7514
9	76	3387	1380	3654	-151	7454
10	77	3162	1809	3638	-176	7381
11	78	2894	2210	3766	-201	7471
12	79	2589	2579	3647	-223	7318
13	80	2250	2910	3671	-236	--
14	71	1882	3200	3705	-242	--
15	72	1484	3445	3743	-242	--
16	73	1074	3652	3800	-226	--
17	74	641	3788	3836	-200	--
18	75	185	3860	3860	-179	--
19	76	-262	3919	3925	-138	--
20	77	-698	3840	3901	-88	--
21	78	-1132	3702	3870	-54	--
22	79	-1548	3504	3831	-29	--
23	90	-1941	3281	3812	-1	--
24	71	-2309	3010	3794	-21	--
25	72	-2650	2705	3786	-39	--

TABLE 14. RELATIVE DISPLACEMENTS OF THE BOUNDARY POINTS ON THE HOLE OF THE
8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

Number	Boundary- Point Number	Horizontal Displacement, U, 10^{-6} in.	Vertical Displacement, V, 10^{-6} in.	Normal Displacement, N, 10^{-6} in.	Tangential Displacement, T, 10^{-6} in.	Diameter Decrease, δD , 10^{-6} in.
0	125	-4023	-350	4023	-350	8045
1	126	-3984	-743	4040	-322	8092
2	127	-3911	-1144	4063	-305	8105
3	128	-3816	-1537	4104	-283	8148
4	129	-3678	-1911	4137	-250	8203
5	130	-3488	-2250	4146	-205	8244
6	131	-3240	-2518	4101	-133	8247
7	132	-2908	-2759	4006	-104	8161
8	133	-2528	-3030	3943	-148	8082
9	134	-2144	-3293	3924	-201	8030
10	135	-1821	-3530	3967	-188	8054
11	136	-1472	-3656	3938	-142	8010
12	137	-1068	-3738	3884	-139	7927
13	138	-642	-3805	3855	-163	7898
14	139	-214	-3841	3842	-187	7859
15	140	219	-3833	3833	-219	7722
16	141	653	-3798	3840	-252	7753
17	142	1022	-3720	3863	-284	7720
18	143	1502	-3610	3897	-312	7677
19	144	1905	-3471	3945	-328	7707
20	145	2272	-3292	3987	-322	7742
21	146	2607	-3052	4001	-310	7776
22	147	2934	-2778	4027	-312	7847
23	148	3235	-2474	4059	-423	7924
24	149	3493	-2155	4092	-310	7992
25	150	3696	-1807	4104	-283	8019
26	151	3851	-1418	4095	-271	8040
27	152	3960	-996	4074	-276	8060
28	153	4038	-568	4068	-283	8099
29	154	4055	-132	4046	-293	8092
30	155	4022	318	4022	-318	8118
31	156	3995	756	4052	-334	--
32	157	3883	1174	4042	-340	
33	158	3735	1590	4044	-358	
34	159	3565	1991	4066	-369	
35	160	3364	2369	4098	-820	
36	161	3151	2716	4146	-345	
37	162	2897	2992	4155	-285	
38	163	2602	3227	4139	-322	
39	164	2251	3440	4106	-201	
40	165	1874	3638	4087	-196	
41	166	1502	3789	4072	-169	
42	167	1100	3893	4043	-157	
43	168	696	3986	4043	-147	
44	169	307	4007	4017	-113	
45	170	-122	3889	3889	-122	
46	171	-549	3877	3913	-140	
47	172	-926	3747	3857	-126	
48	173	-1311	3549	3780	-150	
49	174	-1696	3363	3762	-181	
50	175	-2052	3151	3755	-201	

TABLE 14. (Continued)

Number	Boundary- Point Number	Horizontal Displacement, U, 10^{-6} in.	Vertical Displacement, V, 10^{-6} in.	Normal Displacement, N, 10^{-6} in.	Tangential Displacement, T, 10^{-6} in.	Diameter Decrease, δD , 10^{-6} in.
51	176	-2407	2918	3755	-232	
52	177	-2735	2678	3820	-241	
53	178	-3018	2425	3865	-217	
54	179	-3265	2142	3900	-186	
55	180	-3475	1813	3915	-168	
56	181	-3669	1461	3945	-157	
57	182	-3835	1096	3986	-143	
58	183	-3967	727	4031	-113	
59	184	-4033	336	4046	-87	
60	185	-4096	-61	4096	-61

FIGURE 1. MESH POINT ARRAY FOR THE 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

67 and 68

FIGURE 2. TEMPERATURE DISTRIBUTION FOR THE 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

69 and 70

FIGURE 3. σ_x STRESSES FOR THE 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

71 and 72

FIGURE 4. σ_y STRESSES FOR THE 16" X 16" ELEMENT WITH "THERMAL" SYMMETRY

73 and 74

FIGURE 5. T_{xy} STRESSES FOR THE 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

75 and 76

FIGURE 6. MAXIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 16" x 16" ELEMENT WITH "THERMAL" SYMMETRY

77 and 78

FIGURE 7. MINIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 16" x 16" ELEMENT WITH THERMAL SYMMETRY

FIGURE 8. MAXIMUM SHEAR STRESSES IN THE X-Y PLANE FOR THE 16' X 16' ELEMENT WITH "THERMAL" SYMMETRY

81 and 82

FIGURE 10. MESH POINT ARRAY FOR THE 8'' X 8'' ELEMENT WITH "THERMAL" SYMMETRY

85 and 86

FIGURE 11. TEMPERATURE DISTRIBUTION FOR THE 8' X 8' ELEMENT WITH "THERMAL" SYMMETRY

[illegible]

FIGURE 12. σ_x STRESSES FOR THE 8" x 8" ELEMENT WITH "THERMAL" SYMMETRY

FIGURE 13. σ_y STRESSES FOR THE 8'' X 8'' ELEMENT WITH "THERMAL" SYMMETRY

93 and 94

FIGURE 15. MAXIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 8" x 8" ELEMENT WITH "THERMAL" SYMMETRY

FIGURE 16. MINIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 8'' X 8'' ELEMENT WITH "THERMAL" SYMMETRY

FIGURE 18. AXIAL STRESSES FOR THE 8" x 8" ELEMENT WITH "THERMAL" SYMMETRY

101 and 102

FIGURE 19. MESH POINT ARRAY FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

FIGURE 20. TEMPERATURE DISTRIBUTION FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

105 and 106

FIGURE 21. σ_x STRESSES FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

107 and 108

FIGURE 22. σ_y STRESSES FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

109 and 110

FIGURE 23. τ_{xy} STRESSES FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

111 and 112

FIGURE 24. MAXIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

113 and 114

115 and 116

FIGURE 26. MAXIMUM SHEAR STRESSES IN THE X-Y PLANE FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

117 and 118

FIGURE 27. AXIAL STRESSES FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (INTERMEDIATE MESH)

FIGURE 28. MESH POINT ARRAY FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

121 and 122

FIGURE 29. TEMPERATURE DISTRIBUTION FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

123 and 124

FIGURE 30. σ_x STRESSES FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

125 and 126

FIGURE 31. σ_y STRESSES FOR THE 6" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

127 and 128

FIGURE 32. T_{xy} STRESSES FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

129 and 130

FIGURE 33. MAXIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

131 and 132

FIGURE 34. MINIMUM PRINCIPAL STRESSES IN THE X-Y PLANE FOR THE 8" x 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

133 and 134

FIGURE 35. MAXIMUM SHEAR STRESSES IN THE X-Y PLANE FOR THE 8" X 8" ELEMENT WITH NO "THERMAL" SYMMETRY (FINE MESH)

135 and 136

FIGURE 36. AXIAL STRESSES FOR THE 8" X 8" WITH NO "THERMAL" SYMMETRY (FINE MESH)