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MARIETTA

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DYNAMICS AND LOADS ANALYSES

OF

SUPPORT STRUCTURE

FOR

SNAP 19 GENERATORS

(NIMBUS APPLICATION)

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1.0 INTRODUCTION

The environment specified for the SNAP 19 generator installation in the NIMBUS application necessitated design of the generator support structure as a three-dimensional damped vibration isolation mount of well defined frequency response characteristics. These requirements are predicated on providing reasonable design criteria for the generator itself. Evaluation of design involved comprehensive three-dimensional structural dynamics analysis and, as such, the investigation was conducted on a Martin developed computer program.

This report covers the brief description of different configurations investigated, and lists the results obtained for the final configuration.

2.0 DESIGN EVOLUTION

The three major considerations influencing the design of the generator support were:

1. Cantilevered configuration required by satellite space allocation.
2. Requirements that the lowest resonant frequency in each of three mutually perpendicular axes be between 30 and 60 cps.
3. 80g equivalent static load requirement, which was predicated essentially, on ability to design the support structure within above frequency limits.

Several configurations utilizing available vibration isolators were considered initially. All of them were subsequently eliminated, because of their failure to satisfy overall design considerations.

It was decided therefore to design the required elasticity and damping into the support structure itself. However, the complex nature of the support structure precluded use of hand calculations. Therefore the Martin Co. developed SB 028 digital program for three-dimensional structural analysis was utilized (see para. 3.0).

Two possible methods of mounting the generator assembly to its supports were considered:

- a) generator attached at its c.g. by a "cradle" arrangement to the support, and
- b) generator attached to the support by its bottom flange.

Figures 1 and 3 represent analytical models for the two c.g. mounted configurations which were analyzed. Figures 2 and 4 represent those associated with the bottom mounted generators. Including the variations in elastic properties of the structure, a total of 9 separate systems were analyzed. A brief description of these systems is summarized in Table 1.

TABLE 1
SUMMARY OF INVESTIGATED CONFIGURATIONS

Model No.		Resonant Frequencies(cps)		
		X	Y	Z
1000	Generator supported by a "cradle" attached to simplified model of a tripod placed on stand-off structure. Material: titanium. (Figure 1).	55	17	12
1001	Same as "1000" except that the cradle was made infinitely rigid (Figure 1).	112	21	13
2000	The generator was bottom-mounted on a tripod simulated in extensive detail (Figure 2).	112	38	69
3000	The detailed tripod of "2000" was used with cradle of "1000" (Figure 3).	48	22	26
4000	The generator was bottom-mounted on a leaf spring system from a ring. The ring was supported by three legs from a stand-off structure (Figure 4).	57	29	39
4001	Same as "4000" except for a simulated deletion of leaf spring tension capability in Y- direction (Figure 4).	54	16	Method of simulating loss of ten- sion invali- dated
4002	Same as "4001" except for material changes: aluminum stand-off, steel ring and legs, titanium springs (Figure 4).	55	18	Z- direction data
4003	Same as "4000" except for material changes: aluminum stand-off, steel ring and legs, titanium springs (Figure 4).	58	30	43
4004	Same as "4000" except that the compliances were based on released production drawings (Figure 4).	56	41	57

SNAP 19 GENERATOR SUPPORT
ANALYTICAL MODEL -
1000 SERIES
FIG. 1

LEGEND:

- FORCE REACTION
- AXIAL ELEMENT
- | 2-DIGIT BENDING ELEMENT
- SHEAR ELEMENT

SNAP 19 GENERATOR SUPPORT
ANALYTICAL MODEL-
2000 SERIES
 FIG 2

SNAP 19 GENERATOR SUPPORT
ANALYTICAL MODEL -
4000 SERIES
FIG. 4

3.0 ANALYTICAL TECHNIQUES

Martin developed program SB 028, utilizing an IBM 7094 digital computer, performs both static and dynamic analyses of any complex structure by an element-matrix force technique. The structural model consists wholly of "elements", the internal loading of which can be represented by force and moment resultants at "grid points". Any structural system can be synthesized by a multi-mesh network of simple structural elements (tension, bending, torque, shear, force and moment reactions) connected together at grid points.

The elements are classified as primary and redundant. The primary elements comprise a statically determinate basic structure, their number being equal to the number of equilibrium equations at the grid points. These equations are solved for the primary elements in terms of the redundant elements and external forces and moments. Elastic properties are assigned to the elements; redundant elements are calculated to make internal deflections compatible, and the deflections and rotations of the structure at selected grid points are then determined.

This program, in general, requires the following type of input information:

Geometry of structure
Sectional and material properties
Distribution of structural mass
Loading conditions (static and/or
time dependent loads)

The output of the program is of three types:

1. Internal loads in all structural members for prescribed loading conditions, static or time dependent; unit loads; and normalized modal loads.
2. Deflections and rotations at selected grid points, for specified loading conditions (static or time dependent), for unit loads, or normalized modal loads.
3. Resonant frequencies and mode shapes of the three dimensional elastic response.

4.0 ANALYTICAL MODEL

The model used for the final analysis consisted of 43 grid points defining 185 elastic and rigid elements and 9 reactions (X-, Y-, Z- directions at 3 attachment points). Thirty-one of the grid points were assigned masses that represented the actual mass distribution of the generator and its support structure. The diagram with all elements and the coordinate system used is shown in Figure 4.

The generator was simulated by two mass points supported from the piston assembly by 8 rigid elements. The piston assembly was simulated by 11 rigid elements, as its stiffness was judged to be considerably higher than the rest of the support structure.

The titanium leaf springs were simulated by 36 elastic elements representing their tension and bending characteristics; the springs were considered simply supported at the ring.

The steel ring and legs were simulated by 118 elastic elements representing the tension, bending and shear load carrying capabilities of the structures. Simple supports were assigned to the attachment points of the legs to the stand-off structure.

The aluminum stand-off structure was simulated by a simplified model consisting of 12 tension and shear elements of properties equivalent to actual structure.

Values assigned to the elastic moduli of each material at the operating temperatures were as follows:

Aluminum 6061-T6	$E = 9.8 \times 10^6$ psi
Steel 17-7PH (legs)	$E = 29.7 \times 10^6$ psi
Steel 17-7PH (legs)	$G = 11.6 \times 10^6$ psi
Steel 17-7PH (ring)	$E = 29.4 \times 10^6$ psi
Steel 17-7PH (ring)	$G = 11.5 \times 10^6$ psi
Titanium Ti6AL4V	$E = 14.7 \times 10^6$ psi

5.0 RESULTS

5.1 The computed frequencies of the final configuration were:

41 cps - Y- direction

56 cps - X- direction

57 cps - Z- direction

The mode shapes associated with the above frequencies are shown in Figures 5, 6 and 7. The data used for plotting of these modes is included as Appendix E.

5.2 The internal loads in all elements, and the deflections at all mass points are included in Appendices B and C for static loading conditions investigated (1, 60, 80 and 100g in X-, Y-, and Z- directions). The design has been based on the 80g static load factor, and inasmuch as the frequency requirement has apparently been met, this L.F. should be adequate.

5.3 Tabulated below are the reactions at the satellite interface. The loads are listed as shown on pages B-8, 9, 10 even though it should be realized that they are not valid to four significant figures.

		80 G Static Loading		
		+X- Direction	+Y- Direction	+Z- Direction
Grid	X- reaction	-653 (lb.)	-7782 (lb.)	0 (lb.)
Point	Y- reaction	0	-3105	0
1	Z- reaction	0	0	-234
Grid	X- reaction	-2800	+3891	+6731
Point	Y- reaction	0	-1569	-1681
2	Z- reaction	0	0	-3005
Grid	X- reaction	-2800	+3891	-6731
Point	Y- reaction	0	-1569	+1681
3	Z- reaction	0	0	-3005

MODE NO.: 1

FREQUENCY: 41 cps

MODAL DATA

SNAP 19 GENERATOR SUPPORT

MODEL 4004

FIGURE 5

MODE NO.: 2

FREQUENCY: 56 cps

MODAL DATA

SNAP 19 GENERATOR SUPPORT

MODEL 4004

FIGURE 6

MODE NO.: 3
FREQUENCY: 57 cps

MODAL DATA
SNAP 19 GENERATOR SUPPORT
MODEL 4004
FIGURE 7

APPENDIX A
LISTING OF INPUT DATA

* FOR SB028 -02-265-3280-763-21691 8.T.BATA 7874
 * REM SNAP 19 GENERATOR SUPPORT STRUCTURAL ANALYSES- MODEL 4004
 * REM EST. RUN TIME 20 MIN
 * REM MAX. RUN TIME 30 MIN
 SNAP 19 GENERATOR SUPPORT - STRUCTURAL ANALYSIS - MODEL 4004

1	1												
0	54												
149	45	93	0	12	0	0	1	0	0	0	6	1	
0	0	0											

43	3	123	3	123									
0.00			0.00		0.00								
0.00			11.62		-7.50								
0.00			11.62		-7.50								
2.65			0.00		0.00								
2.65			11.62		7.50								
2.65			11.62		-7.50								
4.3948			12.7750		4.0377		-1	1					
7.1277			12.7628		4.2387		-1	1					
4.3948			12.7750		-4.0377		-1	1					
7.1277			12.7628		-4.2387		-1	1					
2.8440			2.0214		0.00		-1	1					
3.3486			1.8748		0.00		-1	1					
3.2319			6.0644		0.00		-1	1					
4.7459			5.6245		0.00		-1	1					
3.6198			10.1074		0.00		-1	1					
3.7882			10.6870		2.25								
4.2482			12.2703		3.8970								
4.8766			14.4332		4.50								
5.5050			16.5961		3.8970								
5.9650			18.1794		2.25								
6.1334			18.7590		0.00								
5.9650			18.1794		-2.25								
5.5050			16.5961		-3.8970								
4.8766			14.4332		-4.50								
4.2482			12.2703		-3.8970								
3.7882			10.6870		-2.25								
6.1432			9.3742		0.00		-1	1					
6.3116			9.9538		2.25								
6.7716			11.5371		3.8970								
7.40			13.70		4.50								
8.0284			15.8629		3.8970								
8.4884			17.4462		2.25								
8.6568			18.0258		0.00								
8.4884			17.4462		-2.25								
8.0284			15.8629		-3.8970								
7.40			13.70		-4.50								
6.7716			11.5371		-3.8970								
6.3116			9.9538		-2.25								
4.8766			14.4332		0.00			1					
7.40			13.70		0.00			1					
7.4428			13.1065		0.00		-2	23					
14.3454			11.6821		0.00		-2	23					
24.1506			8.8332		0.00								

END

1	1	1	4
1	1	3	2

CC 1	
CC 2	
CC 3	
CC 4	
CC 5	
PHASE 1	
GP PRCPL	
GP 1	
GP 2	
GP 3	
GP 4	
GP 5	
GP 6	
GP 7	
GP 8	
GP 9	
GP 10	
GP 11	
GP 12	
GP 13	
GP 14	
GP 15	
GP 16	
GP 17	
GP 18	
GP 19	
GP 20	
GP 21	
GP 22	
GP 23	
GP 24	
GP 25	
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GP 28	
GP 29	
GP 30	
GP 31	
GP 32	
GP 33	
GP 34	
GP 35	
GP 36	
GP 37	
GP 38	
GP 39	
GP 40	
GP 41	
GP 42	
GP 43	
GP END	
T1	
T2	

$$\frac{A}{3}$$

2	9	10	6			
2	25	37	6			
2	26	38	6			
2	39	40	5	2	3	2
2	27	28	6			
2	28	29	6			
2	29	8	36	2	40	39
2	8	30	26	2	40	39
2	30	31	6			
2	31	32	6			
2	32	33	6			
2	33	34	6			
2	34	35	6			
2	35	36	6			
2	36	10	36	2	40	39
2	10	37	26	2	40	39
2	37	38	6			
2	38	27	36	2	40	39
4	15	16	28	27		
4	17	7	8	29		
4	7	18	30	8		
4	19	20	32	31		
4	22	23	35	34		
4	24	9	10	36		
4	9	25	37	10		
4	26	15	27	38		
2	39	15	2	2	39	40
2	39	17	2	2	39	40
2	39	19	2	2	39	40
2	39	21	2	2	39	40
2	39	23	2	2	39	40
2	39	25	2	2	39	40
2	39	15	6			
2	39	17	6			
2	39	19	6			
2	39	21	6			
2	39	23	6			
2	39	25	6			
2	39	40	1246	2	3	2
2	40	27	246	2	39	40
2	40	29	246	2	39	40
2	40	31	246	2	39	40
2	40	33	246	2	39	40
2	40	35	246	2	39	40
2	40	37	246	2	39	40
2	40	41	23456	2	3	2
2	41	42	23456	2	3	2
2	42	43	246	2	3	2

END

45						
1	1					
1	2	3	2			
1	3	3	2			
2	5	7	36	2	5	8
2	5	8	3	2	5	7
2	6	9	3	2	6	10

1.0

T72
 T73
 T74
 T75
 T76
 T77
 T78-79
 T80-81
 T82
 T83
 T84
 T85
 T86
 T87
 T88-89
 T90-91
 T92
 T93-94
 T95
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 T102
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 T109
 T110
 T111
 T112
 T113
 T114
 T115-118
 T119-121
 T122-124
 T125-127
 T128-130
 T131-133
 T134-136
 T137-141
 T142-146
 T147-149
 T END
 NO. RED.
 U150
 U151
 U152
 U153-154
 U155
 U156

4-4

2	6	10	3	2	6	9
2	13	15	3	2	4	12
3	15	16	17			
3	16	17	7			
3	7	18	19			
3	18	19	20			
3	19	20	21			
3	20	21	22			
3	21	22	23			
3	22	23	24			
3	23	24	9			
3	9	25	26			
3	25	26	15			
3	27	28	29			
3	28	29	8			
3	8	30	31			
3	30	31	32			
3	31	32	33			
3	32	33	34			
3	33	34	35			
3	34	35	36			
3	35	36	10			
3	10	37	38			
3	37	38	27			
2	39	15	4	2	39	40
2	39	17	4	2	39	40
2	39	19	4	2	39	40
2	39	21	4	2	39	40
2	39	23	4	2	39	40
2	39	25	4	2	39	40
4	16	17	29	28		
4	18	19	31	30		
4	20	21	33	32		
4	21	22	34	33		
4	23	24	36	35		
4	25	26	38	37		
2	15	16	2	2	40	39
2	27	28	2	2	40	39

END	31	0	3	123
1	1	4	0	1 3 2
2	1	4	0	1 3 2
3	1	4	0	1 3 2
4	1	4	0	1 3 2
5	1	4	0	1 3 2
6	1	4	0	1 3 2
7	1	4	0	1 3 2
8	1	4	0	1 3 2
9	1	4	0	1 3 2
10	1	4	0	1 3 2
11	1	4	0	1 3 2
12	1	4	0	1 3 2
13	1	4	0	1 3 2
14	1	4	0	1 3 2
15	1	4	0	1 3 2

U157
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 U190
 U191
 U192
 U193
 U194
 U END
 VD PRCPL
 V1-3
 V4-6
 V7-9
 V10-12
 V13-15
 V16-18
 V19-21
 V22-24
 V25-27
 V28-30
 V31-33
 V34-36
 V37-39
 V40-42
 V43-45

4-5

17	1	4	0	1	3	2
19	1	4	0	1	3	2
21	1	4	0	1	3	2
23	1	4	0	1	3	2
25	1	4	0	1	3	2
27	1	4	0	1	3	2
29	1	4	0	1	3	2
31	1	4	0	1	3	2
33	1	4	0	1	3	2
35	1	4	0	1	3	2
37	1	4	0	1	3	2
39	1	4	0	1	3	2
40	1	4	0	1	3	2
41	1	4	0	1	3	2
42	1	4	0	1	3	2
43	1	4	0	1	3	2

LND

12	2					
1	1	.21	1 2	.21	1 3	.21
2	1	.31	2 2	.31	2 3	.31
3	1	.31	3 2	.31	3 3	.31
4	1	.42	4 2	.42	4 3	.42
5	1	.52	5 2	.52	5 3	.52
6	1	.52	6 2	.52	6 3	.52
7	1	.13	7 2	.13	7 3	.13
8	1	.13	8 2	.13	8 3	.13
9	1	.13	9 2	.13	9 3	.13
10	1	.13	10 2	.13	10 3	.13
11	1	.18	11 2	.18	11 3	.18
12	1	.18	12 2	.18	12 3	.18
13	1	.38	13 2	.38	13 3	.38
14	1	.38	14 2	.38	14 3	.38
15	1	.774	15 2	.774	15 3	.774
17	1	.574	17 2	.574	17 3	.574
19	1	.574	19 2	.574	19 3	.574
21	1	.574	21 2	.574	21 3	.574
23	1	.574	23 2	.574	23 3	.574
25	1	.574	25 2	.574	25 3	.574
27	1	.774	27 2	.774	27 3	.774
29	1	.574	29 2	.574	29 3	.574
31	1	.574	31 2	.574	31 3	.574
33	1	.574	33 2	.574	33 3	.574
35	1	.574	35 2	.574	35 3	.574
37	1	.574	37 2	.574	37 3	.574
39	1	2.41	39 2	2.41	39 3	2.41
40	1	2.41	40 2	2.41	40 3	2.41
41	1	2.00	41 2	2.00	41 3	2.00
42	1	30.00	42 2	30.00	42 3	30.00
43	1	30.00	43 2	30.00	43 3	30.00

1.0	0.0	0.0
0.0	1.0	0.0
0.0	0.0	1.0
60.0	0.0	0.0
0.0	60.0	0.0
0.0	0.0	60.0
80.0	0.0	0.0
0.0	80.0	0.0

V46-48

V49-51

V52-54

V55-57

V58-60

V61-63

V64-66

V67-69

V70-72

V73-75

V76-78

V79-81

V82-84

V85-87

V88-90

V91-93

V END

NO. TAU

TAU A-1

TAU A-2

TAU A-3

TAU A-4

TAU A-5

TAU A-6

TAU A-7

TAU A-8

TAU A-9

TAU A-10

TAU A-11

TAU A-12

TAU A-13

TAU A-14

TAU A-15

TAU A-16

TAU A-17

TAU A-18

TAU A-19

TAU A-20

TAU A-21

TAU A-22

TAU A-23

TAU A-24

TAU A-25

TAU A-26

TAU A-27

TAU A-28

TAU A-29

TAU A-30

-2TAU A-31

-1TAU 1

-1TAU 2

-1TAU 3

-1TAU 4

-1TAU 5

-1TAU 6

-1TAU 7

-1TAU 8

A-6

END

0
1 386.04
.21
.31
.31
.42
.52
.52
.13
.13
.13
.13
.18
.18
.38
.38
.774
.574
.574
.574
.574
.574
.774
.574
.575
.574
.574
.574
2.41
2.41
2.00
30.0
30.0
END

1 1 1

0
6
0
1 1.0
1.0

EC END

PHASE 3
B NONE
KD PRCP
K 1 GP 1
K 2 GP 2
K 3 GP 3
K 4 GP 4
K 5 GP 5
K 6 GP 6
K 7 GP 7
K 8 GP 8
K 9 GP 9
K10 GP10
K11 GP11
K12 GP12
K13 GP13
K14 GP14
K15 GP15
K16 GP17
K17 GP19
K18 GP21
K19 GP23
K20 GP25
K21 GP27
K22 GP29
K23 GP31
K24 GP33
K25 GP35
K26 GP37
K27 GP39
K28 GP40
K29 GP41
K30 GP42
K31 GP43
K END
PHASE 4
Y NONE
NO.MODES
NO DAMP
RENORM
GAMMA

APPENDIX B

INTERNAL LOADS DUE TO STATIC LOADS

Static Load 1	=	X- direction,	1g load
"	"	2 = Y-	" , 1g "
"	"	3 = Z-	" , 1g "
"	"	4 = X-	" , 60g, "
"	"	5 = Y-	" , 60g "
"	"	6 = Z-	" , 60g "
"	"	7 = X-	" , 80g "
"	"	8 = Y-	" , 80g "
"	"	9 = Z-	" ,100g "
"	"	10 = X-	" ,100g "
"	"	11 = Y-	" ,100g "
"	"	12 = Z-	" ,100g "

Loads in each element are listed in numerical order. Refer to Figure 4 for element numbers.

Units of the internal loads are:

axial elements - lb.

moment " - in-lb.

shear " - lb/in.

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD I

-8.15942252E 00	0.	-3.49392882E 01	0.	-3.49392879E 01	0.	6
0.	0.	0.	7.94962254E 00	3.46292883E 01	3.46292880E 01	12
2.78603953E 00	2.78604013E 00	-2.24747738E 01	0.	0.	0.	18
4.83143598E 01	-9.80392528E 00	4.83143592E 01	0.	-3.36758119E 01	0.	24
3.95307097E-06	-3.32724944E 01	3.95307097E-06	-3.22614196E 01	1.96790543E-06	3.07773525E 01	30
1.96791619E-06	5.90385342E-06	3.02791202E 01	5.90385342E-06	9.83979070E-06	2.90703362E 01	36
-6.88858259F-03	-1.39642128E-02	2.23863590E-01	3.27150056E-01	2.04685432E 02	2.69294447E 00	42
3.87710506E 00	2.98894942E 00	1.05548152E 01	-5.96650553E 00	7.86817348E 00	-3.68864098E 00	48
-1.47017820F 01	-1.89195743E 01	-1.89195739E 01	-1.47017808E 01	-3.68864024E 00	-5.96650481E 00	54
7.86817509E 00	2.98894623E 00	1.05548154E 01	3.87710980E 00	-1.33592880E 00	2.69294870E 00	60
1.88816226F 00	-2.06870857E-04	1.19817257E-03	-1.94636784E 01	-2.40950635E-04	9.69544053E-05	66
6.40670812E-05	-1.16221607E-04	6.40670884E-05	9.69544053E-05	-2.40950656E-04	-1.94636784E 01	72
1.19817257F-03	-2.06870732E-04	0.	3.55457374E-01	-3.98566920E-01	2.44791055E 01	78
-9.87899256E 00	1.54784469E 01	-6.02942348E 00	1.03034014E 01	2.15614867E 01	2.50627527E 01	84
2.50627524E 01	2.15614858F 01	1.03033990E 01	1.54784496E 01	-6.02942634E 00	2.44791099E 01	90
-9.87899494E 00	-3.98572782E-01	2.23750949E 00	3.55452719E-01	9.63351655E-01	5.56057358E 00	96
-6.55989611F 00	-2.14317569E 00	2.14317590E 00	6.55989623E 00	-5.56057334E 00	-9.63351488E-01	102
1.29480404E-05	-1.60477543E 00	-3.00763190E 00	0.	3.00763088E 00	1.60475540E 00	108
-2.99554724E 01	-1.46039036E 01	6.95103735F 00	2.27585927E 01	6.95103699F 00	-1.46039058E 01	114
8.82096374E-06	3.05004999E 00	0.	2.97715396E 01	-1.15156065E-05	-2.48563725E 01	120
2.19966358F 01	1.24919701E 00	-2.47111136E 01	3.09007671E 01	4.28945351E 00	-2.36395031E 01	126
-8.07508445F 00	0.	-2.28862193F 01	-3.15696806E 01	-4.28945160E 00	-2.36395022E 01	132
-8.07508278E 00	-1.24917984E 00	-2.47111127E 01	3.09007674E 01	2.07727996E 02	1.70930995F 02	138
0.	0.	5.95381153E 01	1.70930995F 02	8.54669976E 01	0.	144
0.	5.76174223E 01	8.54669976F 01	0.	2.88086322E 01	0.	150
0.	0.	9.53397775F 00	-9.80392540E 00	-1.41533306E 01	-9.53397346E 00	156
1.41533332E 01	6.58849514E-06	1.22079356E 00	7.88287306E 00	-6.01674771E 00	-7.67892551E-01	162
6.36302793F 00	-7.50656843E 00	6.36302650F 00	-7.67894369F-01	-6.01674783E 00	7.88287222E 00	168
1.22079378F 00	-4.22615558E 00	-1.07189272F 01	9.81756580E 00	-1.69289625E 00	-9.77130115E 00	174
1.12717190E 01	-9.77130008E 00	-1.69289497E 00	9.81756902E 00	-1.07189231E 01	-4.22615504E 00	180
-2.48637614E 01	-2.47111177E 01	-2.36395028E 01	-2.28862113E 01	-2.36395016E 01	-2.47111171E 01	186
9.63480401E-01	-6.55999976F 00	-2.14317009E 00	2.14317033E 00	6.55999982E 00	-9.63480234E-01	192
-1.33593564E 00	2.23751909E 00					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 2

-9.72701371E 01	0.	4.86350679E 01	-1.96120003E 01	4.86350691E 01	-1.96120003E 01	6
0.	0.	0.	8.84662986E 01	-4.42331487E 01	-4.42331493E 01	12
-2.26737511E 01	-2.26737496E 01	5.55189043E 01	-3.32220310E 00	0.	3.32220313E 00	18
-2.83050972E 01	-3.96452081E 01	-2.83050981E 01	0.	-1.86053258E 02	0.	24
0.	-1.86321510E 02	0.	-1.86933832E 02	0.	2.79050714E 02	30
0.	8.61605334E-06	2.78967646E 02	8.61605334E-06	1.43601400E-05	2.78839111E 02	36
-2.34774768E-02	-4.80587250E-02	-4.49595618E-02	-7.36791956E-02	7.07216543E 02	1.02504174E 01	42
-1.66659755E 01	-1.34308031E 01	-2.83805329E 01	3.08949664E 00	-3.32036689E 01	-2.81861040E 01	48
-2.29051983E 01	-2.10784954E 01	-2.10784966E 01	-2.29051983E 01	-2.81861049E 01	3.08949971E 00	54
-3.32036644E 01	-1.34308109E 01	-2.83805311E 01	-1.66659726E 01	-9.01632333E 00	1.02504197E 01	60
7.09054995E 00	-2.26255342E-04	-2.40802765E-04	4.79263949E 00	-6.27761286E-05	-2.24189833E-04	66
1.31469619E-04	-1.36442482E-04	1.31469584E-04	-2.24195421E-04	-6.27759433E-05	4.79263926E 00	72
-2.41041183E-04	-2.26254967E-04	0.	-2.36892360E 01	4.58042061E 00	-4.88253284E 01	78
2.74756068E 01	-1.04856753E 00	4.10572255E 01	3.57627919E 01	2.98191041E 01	2.84347746E 01	84
2.84347740E 01	2.98191008E 01	3.57627881E 01	-1.04857373E 00	4.10572219E 01	-4.88253295E 01	90
2.74256042E 01	4.58041859E 00	1.39127699E 01	-2.36892384E 01	-1.09467746E 01	-1.21198705E 01	96
2.37938666E 00	8.25461161E-01	-8.25460112E-01	-2.37938604E 00	1.21198714E 01	1.09467754E 01	102
0.	-7.80384064E 00	-3.75455984E 00	0.	3.75456285E 00	7.80384159E 00	108
-1.89738382E 02	-1.87075962E 01	2.89123183E 01	2.20159370E 01	2.89123109E 01	-1.87075919E 01	114
-1.37516536E-05	7.77654618E 00	0.	-8.64000869E 00	0.	3.55199814E 00	120
2.91356069E 02	1.15364932E 01	6.21993065E 00	-3.18485746E 01	4.64868355E 00	8.46919417E 00	126
-3.54617268E 01	0.	9.04984212E 00	-2.68267411E 01	-4.64868927E 00	8.46919703E 00	132
-3.54617268E 01	-1.15364932E 01	6.21993256E 00	-3.18485725E 01	7.14965588E 02	5.88311994E 02	138
0.	0.	-1.72977646E 01	5.88311994E 02	2.94155988E 02	0.	144
0.	-1.67401488E 01	2.94155988E 02	0.	-8.37034571E 00	-3.88139990E 01	150
-1.74582620E 01	1.24582620E 01	-1.75876942E 01	-3.96452084E 01	7.51272827E 01	1.75877054E 01	156
-7.51272738E 01	0.	-8.86709785E-01	3.24100003E 00	1.46781483E 01	-9.50923705E 00	162
4.65037853E 00	-8.66389441E 00	4.65038663E 00	-9.50922143E 00	1.46781549E 01	3.24098969E 00	168
-8.86712742E-01	7.87371904E 00	-1.01092726E 01	-1.07828711E 01	1.51114872E 01	-5.42864215E 00	174
1.04196058E 01	-5.42864013E 00	1.51114887E 01	-1.07828736E 01	-1.01092771E 01	7.87371117E 00	180
3.52428854E 00	6.21993166E 00	8.46919799E 00	9.04984546E 00	8.46920085E 00	6.21993285E 00	186
-1.09467460E 01	2.37939605E 00	8.25477159E-01	-8.25476110E-01	-2.37939551E 00	1.09467468E 01	192
-9.01633084E 00	1.39127840E 01					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 3						
-1.30417459E-05	-2.92178917E 00	8.41409814E 01	-2.10073233E 00	-8.41409779E 01	2.10073233E 00	6
0.	0.	0.	1.30417468E-05	-7.73209423E 01	7.73209387E 01	12
-1.97635937E 00	1.97634137E 00	0.	-3.61571947E-01	4.78562802E 00	-3.61571953E-01	18
-1.08305070E 02	-3.58755139E 01	1.08305055E 02	-4.38201088E 00	0.	-4.38199866E 00	24
-1.24153474E 01	0.	-1.24153474E 01	0.	4.55648279E 00	1.11460686E-05	30
4.55650711E 00	1.29494789E 01	1.10864639E-05	1.29494789E 01	1.98218478E 01	1.10864639E-05	36
0.	0.	0.	0.	0.	-1.49244489E 01	42
-4.42598140E 01	-1.03234586E 01	-7.83470625E 01	9.47622108E 00	-7.58563000E 01	-5.58424103E 01	48
-3.03575119E 01	-1.04742932E 01	1.04742989E 01	3.03575164E 01	5.58424211E 01	-9.47622156E 00	54
7.58563006E 01	1.03234941E 01	7.83470720E 01	4.42598301E 01	-9.79859221E 00	1.49244671E 01	60
0.	8.25905550E-04	-6.47187233E-03	4.63477367E 01	2.61644930E-04	-6.46453410E-04	66
1.36749597E-04	0.	-1.36749618E-04	6.46454507E-04	-2.61717722E-04	-4.63477284E 01	72
6.47211075E-03	-8.25905716E-04	7.30854702E 02	1.66693781E 01	4.76332551E 01	-6.28721654E 01	78
8.38911903E 01	-3.59325048E 01	8.19892073E 01	5.41996390E 01	2.81801558E 01	9.16223466E 00	84
-9.16227078E 00	-2.81802008E 01	-5.41996485E 01	3.59324971E 01	-8.19892108E 01	6.28721869E 01	90
-8.38911843E 01	-4.76332468E 01	-9.67116547E 00	-1.66693847E 01	-1.48278307E 01	-1.55367549E 01	96
1.02694719E 01	9.64737618E 00	9.64737594E 00	1.02694221E 01	-1.55367552E 01	-1.48278302E 01	102
-1.25228448E 01	-6.57916069E 00	7.40753084E 00	1.06987295E 01	7.40753365E 00	-6.57916641E 00	108
0.	9.58306348E 01	5.56196320E 01	0.	-5.56196415E 01	-9.58306360E 01	114
1.67385101E-01	0.	1.36744772E 01	0.	1.39915922E 01	0.	120
1.33514404E-05	8.61806107E 00	4.21620560E 00	-1.27506679E 02	-9.49687195E 00	3.68085536E 00	126
-6.16362679E 01	-1.20854879E 01	0.	3.72847733E-05	-9.49702454E 00	-3.68085501E 00	132
6.16362655E 01	8.61805725E 00	-4.21620560E 00	1.27506667E 02	0.	0.	138
7.44529206E 02	6.12638527E 02	0.	0.	0.	6.12639683E 02	144
3.06319836E 02	0.	0.	3.06320673E 02	0.	0.	150
-3.75581053E 01	-3.75581053E 01	-2.10788256E 01	3.58755305E 01	4.23619270E 01	-7.10788634E 01	156
4.23619729E 01	-1.89053017E 01	5.62170601E 00	-3.55281511E 01	3.30878475E 01	-2.25608796E 01	162
1.47297278E 00	-9.89107075E-06	-1.47299173E 00	2.25608677E 01	-3.30878603E 01	3.55281660E 01	168
-5.62171173E 00	5.17421424E 00	4.08446312E 01	-4.22047448E 01	3.00809571E 01	3.37612173E 00	174
-2.76591367E-05	-3.37610978E 00	-3.00809288E 01	4.22047502E 01	-4.08446163E 01	-5.17422795E 00	180
0.	4.21622753E 00	3.68086290E 00	0.	-3.68086255E 00	-4.21622807E 00	186
-1.48285289E 01	1.02697386E 01	9.64739060E 00	9.64739048E 00	1.02697383E 01	-1.48285291E 01	192
9.79858768E 00	9.67113650E 00					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 4

-4.89565349F 02	0.	-2.09635729E 03	0.	-2.09635726E 03	0.	6
0.	0.	0.	4.76965344E 02	2.07775733E 03	2.07775730E 03	12
1.67162384E 02	1.67162365E 02	-1.34848650E 03	0.	0.	0.	18
2.89886156E 03	-5.88235420E 02	2.89886153E 03	0.	-2.02054867E 03	0.	24
3.07970116F-04	-1.99634966E 03	3.07970116E-04	-1.93568510E 03	0.	1.84664111E 03	30
0.	2.45808467E-04	1.81674719E 03	2.45808467E-04	4.09682238E-04	1.74422015E 03	36
-4.13314956E-01	-8.37852764E-01	1.34318152E 01	1.96290031E 01	1.22811261E 04	1.61576724E 02	42
2.32626367E 02	1.79337014E 02	6.33288956E 02	-3.57990456E 02	4.72090405E 02	-2.21318460E 02	48
-8.82106936E 02	-1.13517448E 03	-1.13517447E 03	-8.82106888E 02	-2.21318448E 02	-3.57990336E 02	54
4.72090495F 02	1.79336959E 02	6.33288968E 02	2.32626671E 02	-8.01556313E 01	1.61577003E 02	60
1.13289729E 02	-1.24122494E-02	7.18917847F-02	-1.16787068E 03	-1.44570385E-02	5.81741333E-03	66
3.84402579F-03	-6.97326660E-03	3.84402686E-03	5.81741333E-03	-1.44570416E-02	-1.16782066E 03	72
7.18917847E-02	-1.24122448E-02	0.	2.13275355E 01	-2.39139673E 01	1.46874614E 03	78
-5.92739487E 02	9.28706801E 02	-3.61765319E 02	6.18204206E 02	1.29368933E 03	1.50376521E 03	84
1.50376517F 03	1.29368919E 03	6.18204010E 02	9.28707182E 02	-3.61765534E 02	1.46874677E 03	90
-5.92739666E 02	-2.39143342E 01	1.34250411E 02	2.13272497E 01	5.78011030E 01	3.33634418E 02	96
-3.93593761E 02	-1.28590538E 02	1.28590557E 02	3.93593779E 02	-3.33634394E 02	-5.78010923E 01	102
8.26363313E-04	-9.62864983E 01	-1.80457853E 02	0.	1.80457923E 02	9.62853384E 01	108
-1.79732837F 03	-8.76234174E 02	4.17062223E 02	1.36551560E 03	4.17062193E 02	-8.76234281E 02	114
2.26520869E-04	1.83003040E 02	0.	1.78629740E 03	-7.77654755E-04	-1.49138239F 03	120
1.31979820E 03	7.49517816E 01	-1.48266686E 03	1.85404578E 03	2.57367188E 02	-1.41837019E 03	126
-4.84504974E 02	0.	-1.37317315E 03	-1.89418107E 03	-2.57367066F 02	-1.41837016E 03	132
-4.84504920E 02	-7.49508053E 01	-1.48266675E 03	1.85404587E 03	1.24636798E 04	1.02558596E 04	138
0.	0.	3.57228696E 03	1.02558596E 04	5.12801981E 03	0.	144
0.	3.45704538E 03	5.12801981E 03	0.	1.72851795E 03	0.	150
0.	0.	5.72038847F 02	-5.88235456E 02	-8.49199569E 02	-5.72038656E 02	156
8.49199927E 02	5.13286918E-04	7.32475626E 01	4.72972381E 02	-3.61004940E 02	-4.60735768E 01	162
3.81781667F 02	-4.50394118E 02	3.81781641E 02	-4.60735708E 01	-3.61004847E 02	4.72972447E 02	168
7.32476813F 01	-2.53569555E 02	-6.43135661E 02	5.89053810E 02	-1.01574007E 02	-5.86278027E 02	174
6.76303542F 02	-5.86277759E 02	-1.01573588E 02	5.89054286E 02	-6.43135130E 02	-2.53569290E 02	180
-1.49182571E 03	-1.48266710E 03	-1.41837014F 03	-1.37317270E 03	-1.41837013E 03	-1.48266703E 03	186
5.78088284E 01	-3.93599978E 02	-1.28590204E 02	1.28590220E 02	3.93599993E 02	-5.78088170E 01	192
-8.01561630E 01	1.34250812E 02					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD						
-5.83620816E 03	0.	2.91810408E 03	-1.17671999E 03	2.91810411E 03	-1.17671999E 03	6
0.	0.	0.	5.30797791E 03	-2.65398896E 03	-2.65398899E 03	12
-1.36042501E 03	-1.36042506E 03	3.33113453E 03	-1.99332185E 02	0.	1.99332187E 02	18
-1.69830558E 03	-2.37871292E 03	-1.69830564E 03	0.	-1.11631952E 04	0.	24
5.12375134E-04	-1.11792904E 04	5.12375134E-04	-1.12160297E 04	0.	1.67430426E 04	30
0.	0.	1.67380586E 04	0.	6.47132576E-04	1.67303467E 04	36
-1.40864863E 00	-2.88352349E 00	-2.69757375E 00	-4.42075169E 00	4.24329919E 04	6.15024811E 02	42
-9.99958730E 02	-8.05848646E 02	-1.70283203E 03	1.85369846E 02	-1.99222010E 03	-1.69116621E 03	48
-1.37431186E 03	-1.26470970E 03	-1.26470977E 03	-1.37431192E 03	-1.69116633E 03	1.85369743E 02	54
-1.99221987E 03	-8.05848694E 02	-1.70283179E 03	-9.99958420E 02	-5.40979117E 02	6.15025032E 02	60
4.25432968E 02	-1.35753159E-02	-1.44500732E-02	2.87558156E 02	-3.76656464E-03	-1.34514570E-02	66
7.88817555E-03	-8.18657875E-03	7.88817364E-03	-1.34516954E-02	-3.76655927E-03	2.87558189E 02	72
-1.44500732E-02	-1.35752997E-02	0.	-1.42135414E 03	2.74825239E 02	-2.92951989E 03	78
1.64553641E 03	-6.29142147E 01	2.46343353E 03	2.14576757E 03	1.78914630E 03	1.70608650E 03	84
1.70608646E 03	1.78914608E 03	2.14576733E 03	-6.29143214E 01	2.46343336E 03	-2.92951995E 03	90
1.64553620E 03	2.74825090E 02	8.34766221E 02	-1.42135429E 03	-6.56806463E 02	-7.27192229E 02	96
1.42763202E 02	4.95276678E 01	-4.95276111E 01	-1.42763169E 02	7.27192265E 02	6.56806487E 02	102
0.	-4.68230402E 02	-2.25273523E 02	0.	2.25273830E 02	4.68230528E 02	108
-1.13843025E 04	-1.12245610E 03	1.73473908E 03	1.32095620E 03	1.73473857E 03	-1.12245576E 03	114
-1.10492794E-03	4.66593033E 02	0.	-5.18400490E 02	0.	2.13119629E 02	120
1.74813642E 04	6.92189449E 02	3.73195922E 02	-1.91091433E 03	2.78920898E 02	5.08151680E 02	126
-2.12770358E 03	0.	5.42990535E 02	-1.60960451E 03	-2.78921387E 02	5.08151823E 02	132
-2.12770358E 03	-6.92189574E 02	3.73196045E 02	-1.91091417E 03	4.28979355E 04	3.52987197E 04	138
0.	0.	-1.03786589E 03	3.52987197E 04	1.76493594E 04	0.	144
0.	-1.00440894E 03	1.76493594E 04	0.	-5.02220738E 02	-2.32883996E 03	150
-7.47495717E 02	7.47495717E 02	-1.05526219E 03	-2.37871298E 03	4.50763702E 03	1.05526212E 03	156
-4.50763690E 03	8.53964198E-04	-5.32026243E 01	1.94459803E 02	8.80688906E 02	-5.70554221E 02	162
2.79022676E 02	-5.19833660E 02	2.79023233E 02	-5.70553193E 02	8.80689192E 02	1.94459516E 02	168
-5.32024914E 01	4.72422886E 02	-6.06556678E 02	-6.46972495E 02	9.06688881E 02	-3.25718817E 02	174
6.25176167E 02	-3.25718588E 02	9.06689179E 02	-6.46972400E 02	-6.06556910E 02	4.72422540E 02	180
2.11456956E 02	3.73195967E 02	5.08151901E 02	5.42990744E 02	5.08152050E 02	3.73196062E 02	186
-6.56804746E 02	1.42763765E 02	4.95286268E 01	-4.95285708E 01	-1.42763734E 02	6.56804770E 02	192
-5.40979999E 02	8.34766853E 02					

9-8

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 6

0.	-1.75307311E 02	5.04845899E 03	-1.26043914E 02	-5.04845887E 03	1.26043914E 02	6
0.	0.	0.	0.	-4.63925660E 03	4.63925668E 03	12
-1.18581115E 02	1.18581347E 02	0.	-2.16943169E 01	2.87137678E 02	-2.16943169E 01	18
-6.49830389E 03	-2.15253171E 03	6.49830395E 03	-2.62920928E 02	-5.03540039E-04	-2.62920195E 02	24
-7.44921672E 02	-5.18798828E-04	-7.44921672E 02	-5.03540039E-04	2.73389128E 02	0.	30
2.73390639E 02	7.76969355E 02	0.	7.76969355E 02	1.18931189E 03	0.	36
0.	0.	0.	0.	0.	-8.95467627E 02	42
-2.65558952E 03	-6.19409299E 02	-4.70082414E 03	5.68574989E 02	-4.55137748E 03	-3.35034401E 03	48
-1.82145011E 03	-6.28457135E 02	6.28458244E 02	1.82145114E 03	3.35054529E 03	-5.68572521E 02	54
4.55137789E 03	6.19408810E 02	4.70082378E 03	2.65558895E 03	-5.87916386E 02	8.95467162E 02	60
0.	4.95543545E-02	-3.88320923E-01	2.78086379E 03	1.56987311E-02	-3.87872136E-02	66
8.20497584E-03	0.	-8.20498073E-03	3.87872732E-02	-1.57030681E-02	-2.78086409E 03	72
3.88351440E-01	-4.9554342CE-02	4.38512820F 04	1.00016251E 03	2.85799554E 03	-3.77232999E 03	78
5.03347170E 03	-2.15595198E 03	4.91935235E 03	3.25197810E 03	1.69080910E 03	5.49733871E 02	84
-5.49736267E 02	-1.69081180E 03	-3.25197864E 03	2.15595153E 03	-4.91935283E 03	3.77233130E 03	90
-5.03347170E 03	-7.85799554E 03	-5.80269653E 02	-1.00016251E 03	-8.89669883E 02	-9.32205379E 02	96
6.16165268E 02	5.78842509E 02	5.78842503E 02	6.16165286E 02	-9.32205319E 02	-8.89669836E 02	102
-7.51370651F 02	-3.94749573F 02	4.44451958E 02	6.41923755E 02	4.44452024E 02	-3.94749999E 02	108
0.	5.74983782F 03	3.33717784E 03	0.	-3.33717850E 03	-5.74983853E 03	114
1.00432128E 01	0.	8.20468640E 02	0.	8.39495361E 02	0.	120
6.10351563E-04	5.17083740E 02	2.52972412E 02	-7.65039986E 03	-5.69812256E 02	2.20851278E 02	126
-3.69817612E 03	-7.25128955E 02	0.	1.87402833E-03	-5.69821531E 02	-2.20851341E 02	132
3.698177C1E 03	5.17083985E 02	-2.52972412E 02	7.65040004E 03	0.	0.	138
4.46717525E 04	3.67583114E 04	0.	0.	0.	3.67583808E 04	144
1.83791901E 04	0.	0.	1.83792405E 04	0.	0.	150
-2.25348634E 03	-2.25348634E 03	-1.26473327E 03	2.15253133E 03	2.54171306E 03	-1.26473008E 03	156
2.54171586E 03	-1.13431948E 03	3.37302503F 02	-2.13169020E 03	1.98527141E 03	-1.35365303E 03	162
8.83779144F 01	-5.68730491E-04	-8.83795023E 01	1.35365233E 03	-1.98527104E 03	2.13168961E 03	168
-3.37302774E 02	3.10452947E 02	2.45067698E 03	-2.53228596E 03	1.80487699E 03	2.02567318E 02	174
-1.47069083E-03	-2.02567244E 02	-1.80485709E 03	2.53228578E 03	-2.45067620E 03	-3.10452735E 02	180
0.	2.52973723E 02	2.20851728F 02	0.	-2.20851791E 02	-2.52973619E 02	186
-8.897118C9E 02	6.16184253E 02	5.78843379E 02	5.78843373E 02	6.16184264E 02	-8.89711761E 02	192
5.87915832E 02	5.80269307F 02					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 7

-6.52753788E 02	0.	-2.79514310E 03	0.	-2.79514307E 03	0.	6
0.	0.	0.	6.35953796E 02	2.77034310E 03	2.77034307E 03	12
2.22883230E 02	2.22883156E 02	-1.79798192E 03	0.	0.	0.	18
3.86514887E 03	-7.84314018E 02	3.86514878E 03	0.	-2.69406497E 03	0.	24
5.76468617E-04	-2.66179955E 03	5.76468617E-04	-2.58091354E 03	0.	2.46218815E 03	30
0.	3.27957273E-04	2.42232960E 03	3.27957273E-04	5.46597397E-04	2.32562685E 03	36
-5.51086611E-01	-1.11713703E 00	1.79090871E 01	2.61720043E 01	1.63748348E 04	2.15435499E 02	42
3.10168323E 02	2.39115965E 02	8.44385147E 02	-4.77370415E 02	6.29453808E 02	-2.95091331E 02	48
-1.17614260F 03	-1.51356599E 03	-1.51356594E 03	-1.17614248E 03	-2.95091224E 02	-4.77320313E 02	54
6.29454029E 02	7.39115724E 02	8.44385254E 02	3.10168803E 02	-1.06874084E 02	2.15435907E 02	60
1.51052979E 02	-1.65496685E-02	9.58404541E-02	-1.55709429E 03	-1.92760541E-02	7.75671005E-03	66
5.12536758E-03	-9.29784775E-03	5.12536806F-03	7.75623322E-03	-1.92760515E-02	-1.55709428E 03	72
9.58404541E-02	-1.65496565E-02	0.	2.84366533E 01	-3.18853664E 01	1.95832852E 03	78
-7.90319455E 02	1.23827608E 03	-4.82353848E 02	8.24272180E 02	1.72491904E 03	2.00502026E 03	84
2.00502020F 03	1.72491889E 03	8.24271953E 02	1.23827600E 03	-4.82354093E 02	1.95832904F 03	90
-7.90319550F 02	-3.18857554E 01	1.79000573E 02	7.84363163E 01	7.70681363E 01	4.44845885E 02	96
-5.24791682E 02	-1.71454048F 02	1.71454079E 02	5.24791718E 02	-4.44845855E 02	-7.70681125E 01	102
1.07149085E-03	-1.28382018E 02	-2.40610525E 02	0.	2.40610516E 02	1.28380431E 02	108
-2.39643776F 03	-1.16831234E 03	5.56083035F 02	1.82068750E 03	5.56082928E 02	-1.16831243E 03	114
5.18161213E-04	7.44003966F 02	0.	2.38172320E 03	-9.91687584E-04	-1.98850983E 03	120
1.75973102E 03	9.99357903E 01	-1.97688916E 03	2.47206119E 03	3.43156248E 02	-1.89116028E 03	126
-6.46006697E 02	0.	-1.83089755E 03	-2.52557456E 03	-3.43156126E 02	-1.89116025E 03	132
-6.46006614E 02	-9.99344468E 01	-1.97688904F 03	2.47206131E 03	1.66182397E 04	1.36744797E 04	138
0.	0.	4.76304924E 03	1.36744797E 04	6.83735979E 03	0.	144
0.	4.60939378E 03	6.83735979E 03	0.	2.30469060E 03	0.	150
0.	0.	7.62718207E 02	-7.84314108E 02	-1.13226606E 03	-7.62717831E 02	156
1.13226698E 03	9.60787380E-04	9.76634336E 01	6.30629879E 02	-4.81339759F 02	-6.14314020E 01	162
5.09042239E 02	-6.00525504E 02	5.09042168E 02	-6.14314520F 01	-4.81339747E 02	6.30629802E 02	168
9.76636136F 01	-3.38092589E 02	-8.57514024E 02	7.85405469E 02	-1.35431667E 02	-7.81703985E 02	174
9.01737785E 02	-7.81703848E 02	-1.35431524E 02	7.85405552E 02	-8.57513630E 02	-3.38092440E 02	180
-1.98910092E 03	-1.97688946E 03	-1.89116023E 03	-1.83089696E 03	-1.89116019E 03	-1.97688942E 03	186
7.70784360E 01	-5.24799979E 02	-1.71453601E 02	1.71453634E 02	5.24800003E 02	-7.70784134E 01	192
-1.06875080E 02	1.79001106E 02					

~~STATIC OR PRESSURE LOAD~~ 8

-7.78161097E 03	0.	3.89080545E 03	-1.56896001E 03	3.89080551E 03	-1.56896001E 03	12
0.	0.	0.	7.07730395E 03	-3.53865194E 03	-3.53865200E 03	12
-1.81390019E 03	-1.81390022E 03	4.44151300E 03	-2.65776244E 02	0.	2.65776247E 02	18
-2.26440719E 03	-3.17161766E 03	-2.26440731E 03	0.	-1.48847601E 04	0.	24
5.16142118E-04	-1.49057205E 04	5.16142118E-04	-1.49547063E 04	0.	2.23240569E 04	30
0.	0.	2.23174116E 04	0.	7.04794449E-04	2.23071289E 04	36
-1.87819816E 00	3.84469801E 00	3.59676498E 00	-5.89433563E 00	5.65773231E 04	8.20033073E 02	42
-1.33327833E 03	-1.07446474E 03	-2.27044266E 03	2.47159421E 02	-2.65629354E 03	-2.25488842E 03	48
-1.83241595E 03	-1.68627971E 03	-1.68627977E 03	-1.83241595E 03	-2.25488845E 03	2.47159788E 02	54
-2.65629315E 03	-1.07446517E 03	-2.27044246E 03	-1.33327806E 03	-7.21305728E 02	8.20033288E 02	60
5.67243958E 02	-1.81004240E-02	-1.92871094E-02	3.83410749E 02	-5.02209526E-03	-1.79351568E-02	66
1.05175695E-02	-1.09152794E-02	1.05175661E-02	-1.79355145E-02	-5.02207363E-03	3.83410749E 02	72
-1.92871094E-02	-1.81003983E-02	0.	-1.89513884E 03	3.66433594E 02	-3.90602627E 03	78
2.19404840E 03	-8.38850999F 01	3.28457797F 03	2.86102340E 03	2.38552836E 03	2.27478191E 03	84
2.27478188E 03	2.38552809E 03	2.86102310E 03	-8.38860309E 03	3.28457779E 03	-3.90602633E 03	90
2.19404840E 03	3.66433594E 02	1.11302137E 03	-1.89513895E 03	-8.75741947E 02	-9.69589627E 02	96
1.90350941E 02	6.60368973F 01	-6.60368043E 01	-1.90350880E 02	9.69589698E 02	8.75742006E 02	102
0.	-6.24307185E 02	-3.00364774E 02	0.	3.00365075E 02	6.24307311E 02	108
-1.51790698E 04	-1.49660841E 03	2.31298539E 03	1.76127513E 03	2.31298476E 03	-1.49660803E 03	114
-1.23875592E-03	6.22123837E 02	0.	-6.91200656E 02	0.	2.84159666E 02	120
2.33084857E 04	9.22919309E 02	4.97594482F 02	-2.54788578E 03	3.71894652E 02	6.77535546E 02	126
-2.83693793E 03	0.	7.23987371E 02	-2.14613947E 03	-3.71895140E 02	6.77535748E 02	132
-2.83693756E 03	-9.22919428E 02	4.97594601E 02	-2.54788560E 03	5.71972471E 04	4.70649594E 04	138
0.	0.	-1.38382117E 03	4.70649594E 04	2.35324791E 04	0.	144
0.	-1.33921193E 03	2.35324791F 04	0.	-6.69627655E 02	-3.10511997E 03	150
-9.96660960E 02	9.96660960F 02	-1.40701573E 03	-3.17161775E 03	6.01018304E 03	1.40701659E 03	156
-6.01018167E 03	8.60242534E-04	-7.09366781E 01	2.59279987E 02	1.17425179E 03	-7.60738814E 02	162
3.72030354E 07	-6.93111622E 02	3.72031012E 02	-7.60737532E 02	1.17425238F 03	2.59279308E 02	168
-7.09367222E 01	6.29897070E 02	-8.08742058E 02	-8.62629533E 02	1.20891875E 03	-4.34291381E 02	174
8.33568656E 07	-4.34291303E 02	1.20891871E 03	-8.62630105E 02	8.08742499E 02	6.29896533E 02	180
2.81942934E 02	4.97594535E 02	6.77535850F 02	7.23987645E 02	6.77536052E 02	4.97594631E 02	186
-8.75739658E 02	1.90351690E 02	6.60381770E 01	-6.60380846E 01	-1.90351632E 02	8.75739717E 02	192
-7.21306622E 02	1.11302206E 03					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 9

0.	-2.33743101E 02	6.73127854E 03	-1.68058594E 02	-6.73127854E 03	1.68058594E 02	6
0.	0.	0.	0.	-6.18567532E 03	6.18567532E 03	12
-1.58108550E 02	1.58108577E 02	0.	-2.89257559E 01	3.82850242E 02	-2.89257559E 01	18
-8.66440523E 03	-2.87004223E 03	8.66440535E 03	-3.50561959E 02	0.	-3.50560978E 02	24
-9.93231058E 02	0.	-9.93231058E 02	0.	3.64518705E 02	0.	30
3.64520690E 02	1.03595874E 03	0.	1.03595874E 03	1.58574842E 03	0.	36
0.	0.	0.	0.	0.	-1.19395593E 03	42
-3.54078493E 03	-8.25877357E 02	-6.26776457E 03	-7.58097684E 02	-6.06850344E 03	-4.46739239E 03	48
-2.42860061F 03	-8.37943244E 02	8.37944007E 02	2.42860124E 03	4.46739340E 03	-7.58097285E 02	54
6.06850374F 03	8.25878656E 02	6.26776505E 03	3.54078543E 03	-7.83890319E 02	1.19395651E 03	60
0.	6.60724658E-02	-5.17791748E-01	3.70781875E 03	2.09316000E-02	-5.17162722E-02	66
1.09399679E-02	0.	-1.09399721E-02	5.17163628E-02	-2.09374300E-02	-3.70781875E 03	72
5.17761230E-01	-6.60724694E-02	5.84683764E 04	1.33355010E 03	3.81066051E 03	-5.02977377E 03	78
6.71129549E 03	-2.87460092F 03	6.55913681E 03	4.33597147E 03	2.25441295E 03	7.32979339E 02	84
-7.32980907E 02	-2.25441507E 03	-4.33597088E 03	2.87460190E 03	-6.55913633E 03	5.02977383E 03	90
-6.71129525E 03	-3.81066027E 03	-7.73692870E 02	-1.33354968E 03	-1.18622646E 03	-1.24294043E 03	96
8.21553695E 02	7.71790028E 02	7.71790022E 02	8.21553719E 02	-1.24294047E 03	-1.18622649E 03	102
-1.00182764E 03	-5.26332760E 02	5.92602462E 02	8.55898761E 02	5.92602658E 02	-5.26333493E 02	108
0.	7.66645086E 03	4.44957018F 03	0.	-4.44957113E 03	-7.66645169E 03	114
1.33908691E 01	0.	1.09395799E 03	0.	1.11932763E 03	0.	120
0.	6.89445066E 02	3.37296385E 02	-1.02005339E 04	-7.59749508E 02	2.94468370E 02	126
-4.93090183F 03	-9.66838574E 02	0.	1.92531902E-03	-7.59761715E 02	-2.94468391E 02	132
4.93090159E 03	6.89445311E 02	-3.37296385E 02	1.02005333E 04	0.	0.	138
5.95623362E 04	4.90110821E 04	0.	0.	0.	4.90111744E 04	144
2.45055869F 04	0.	0.	2.45056537F 04	0.	0.	150
-3.00464845E 03	-3.00464845E 03	-1.68630676E 03	2.87004212E 03	3.38895425E 03	-1.68630767E 03	156
3.38895285E 03	-1.51242957E 03	4.49737555E 02	-2.84225249E 03	2.64702749E 03	-1.80487046E 03	162
1.17837515E 02	-9.59805012E-04	-1.17839266E 02	1.80486973E 03	-2.64702830E 03	2.84225294E 03	168
-4.49738002E 02	4.13937175E 02	3.26756981E 03	-3.37638018E 03	2.40647623E 03	2.70089287F 02	174
-2.09556869F-03	-2.70089826E 02	-2.40647542E 03	3.37638089E 03	-3.26756957E 03	-4.13937950E 02	180
0.	3.37298110E 02	2.94468975E 02	0.	-2.94468993E 02	-3.37298161E 02	186
-1.18628237E 03	8.21579015E 02	7.71791196E 02	7.71791184E 02	8.21579015E 02	-1.18628240E 03	192
7.83889694E 02	7.73691630E 02					

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INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 10							
-8.15942216E 02	0.	-3.49392885E 03	0.	-3.49392882E 03	0.	6	
0.	0.	0.	7.94942218E 02	3.46292889E 03	3.46292886E 03	12	
2.78604004E 02	2.78603888E 02	-2.24747717E 03	0.	0.	0.	18	
4.83143622E 03	-9.80392838E 02	4.83143610E 03	2.78626728E-04	-3.36758104E 03	2.78625947E-04	24	
8.35905409E-04	-3.32724929E 03	8.35905409E-04	-3.22614178E 03	0.	3.07773513E 03	30	
0.	4.42284912E-04	3.02791193E 03	4.42284912E-04	7.37144148E-04	2.90703347E 03	36	
-6.88858247E-01	-1.39642128E 00	2.23863584E 01	3.27150050E 01	2.04685435E 04	2.69294310E 02	42	
3.87710312E 02	2.98894727E 02	1.05548143E 03	-5.96650463E 02	7.86817294E 02	-3.68864128E 02	48	
-1.47017823E 03	-1.89195749E 03	-1.89195746E 03	-1.47017816E 03	-3.68864065E 02	-5.96650791E 02	54	
7.86817551E 02	2.98894599E 02	1.05548169E 03	3.87711042E 02	-1.33592626E 02	2.69294882E 02	60	
1.88816211E 02	-2.06870893E-02	1.19827271E-01	-1.94636802E 03	-2.40950650E-02	9.69552994E-03	66	
6.40670991F-03	-1.16219521E-C2	6.40671009E-03	9.69552994E-03	-2.40950713E-02	-1.94636796E 03	72	
1.19827271E-01	-2.06870747E-02	0.	3.55456850E 01	-3.98567253E 01	2.44791058E 03	78	
-9.87899315E 02	1.54784489F 03	-6.02942318E 02	1.03034018E 03	2.15614870E 03	2.50627530E 03	84	
2.50627524E 03	2.15614858E 03	1.03033993E 03	1.54784532E 03	-6.02942657E 02	2.44791126E 03	90	
-9.87899590E 02	-3.98573533E 01	2.23751214E 02	3.55457129E 01	9.63351655E 01	5.56057346E 02	96	
-6.55989611F 02	-2.14317566E 02	2.14317593E 02	6.55989629E 02	-5.56057334E 02	-9.63351607E 01	102	
1.34046440E-03	-1.60477538E 02	-3.00763166E 02	0.	3.00763133E 02	1.60475463E 02	108	
-2.99554697E 03	-1.46039076E 03	6.95103800E 02	2.27585936E 03	6.95103574E 02	-1.46039078E 03	114	
7.43671131F-04	3.05004930E 02	0.	2.97715396E 03	-1.20811819E-03	-2.48563731E 03	120	
2.19966352E 03	1.24919677F 02	-2.47111133E 03	3.09007689E 03	4.28945434E 02	-2.36395034E 03	126	
-8.07508385E 02	0.	-2.28862193E 03	-3.15696818E 03	-4.28945190E 02	-2.36395025E 03	132	
-8.07508147E 02	-1.24917968E 02	-2.47111121E 03	3.09007689E 03	2.07727996E 04	1.70930995E 04	138	
0.	0.	5.95381159E 03	1.70930995E 04	8.54669964F 03	0.	144	
0.	5.76174223F 03	8.54669964E 03	0.	2.88086325E 03	0.	150	
0.	0.	9.53397453E 02	-9.80392945F 02	-1.41533282E 03	-9.53397655E 02	156	
1.41533317E 03	1.39318487E-03	1.22079210E 02	7.88287312E 02	-6.01674718E 02	-7.67893010E 01	162	
6.36302769E 02	-7.50656891E 02	6.36302763E 02	-7.67892385E 01	-6.01674879E 02	7.88287288E 02	168	
1.22079515E 02	-4.22615588E 02	-1.07189289F 03	9.81756711E 02	-1.69289525E 02	-9.77129889E 02	174	
1.12717226F 03	-9.77129757F 02	-1.69289389E 02	9.81757176E 02	-1.07189214E 03	-4.22615242E 02	180	
-2.48637617E 03	-2.47111177E 03	-2.36395031F 03	-2.28862119F 03	-2.36395022E 03	-2.47111171E 03	186	
9.63480401E 01	-6.55999976E 02	-2.14317009F 02	2.14317036E 02	6.55999988E 02	-9.63480353E 01	192	
-1.33594070E 02	2.23751935E 02						

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 11

-9.72701371E 03	0.	4.86350685E 03	-1.96120003E 03	4.86350691E 03	-1.96120003E 03	6
0.	0.	0.	8.84662974E 03	-4.42331487E 03	-4.42331493E 03	12
-2.26737520E 03	-2.26737508E 03	5.55189109E 03	-3.32220310E 02	0.	3.32220313E 02	18
-2.83050904E 03	-3.96452197E 03	-2.83050913E 03	0.	-1.86093292E 04	0.	24
0.	-1.86321503E 04	0.	-1.86933827E 04	0.	2.79050711E 04	30
0.	1.11771147E-03	2.78967640E 04	1.11771147E-03	1.86285909E-03	2.78839111E 04	36
-2.34774768F 00	-4.80587250E 00	-4.49595618E 00	-7.36791945E 00	7.07216531E 04	1.02504131E 03	42
-1.66659793F 03	-1.34308076E 03	-2.83805335F 03	3.08949369E 02	-3.32036701E 03	-2.81861052E 03	48
-2.29051995E 03	-2.10784966E 03	-2.10784978E 03	-2.29052004E 03	-2.81861070E 03	3.08949316E 02	54
-3.32036659E 03	-1.34308110E 03	-2.83805305E 03	-1.66659749E 03	-9.01632106E 02	1.02504162E 03	60
7.09054929E 02	-2.26255387E-02	-2.40783691E-02	4.79263473E 02	-6.27762496E-03	-2.24189758E-02	66
1.31469627E-02	-1.36442184E-02	1.31469573F-02	-2.24194527E-07	-6.27760798E-03	4.79263502E 02	72
-2.40783691E-02	-2.26255026E-02	0.	-2.36892340E 03	4.58042151E 02	-4.88253242E 03	78
2.74256057F 03	-1.04855987E 02	4.10572255E 03	3.57627934E 03	2.98191053E 03	2.84347761E 03	84
2.84347758E 03	2.98191032E 03	3.57627904E 03	-1.04856536E 02	4.10572225E 03	-4.88253307E 03	90
2.74256027F 03	4.58041835E 02	1.39127667E 03	-2.36892369E 03	-1.09467743E 03	-1.71198703E 03	96
2.37938672F 02	8.25461125F 01	-8.25460243E 01	-2.37938631E 02	1.71198709E 03	1.09467748E 03	102
0.	-7.80384153F 02	-3.75456035F 02	0.	3.75456291F 02	7.80384034E 02	108
-1.89738370E 04	-1.87076044E 03	2.89123183F 03	2.20159391F 03	2.89123097E 03	-1.87075987E 03	114
-1.12591073F-03	7.77655125F 02	0.	-8.64000833E 02	0.	3.55199462E 02	120
2.91356069F 04	1.15364940E 03	6.21993160E 02	-3.18485725E 03	4.64868408E 02	8.46919465E 02	126
-3.54617274F 03	0.	9.04984272E 02	-2.68267423F 03	-4.64868891E 02	8.46919787E 02	132
-3.54617256E 03	-1.15364917E 03	6.21993405F 02	-3.18485713E 03	7.14965582E 04	5.88311988E 04	138
0.	0.	-1.72977647E 03	5.88311988E 04	2.94155991E 04	0.	144
0.	-1.67401491E 03	2.94155991F 04	0.	-8.37034559E 02	-3.88139993E 03	150
-1.24582620F 03	1.24582620E 03	-1.75876959E 03	-3.96452200E 03	7.51272869E 03	1.75876988E 03	156
-7.51272887E 03	1.29278165E-03	-8.86708701E 01	3.24100074E 02	1.46781474E 03	-9.50923669F 02	162
4.65037876F 02	-8.66389525E 02	4.65038836E 02	-9.50921881E 02	1.46781532E 03	3.24099383E 02	168
-8.86708707E 01	7.87371916E 02	-1.01092714E 03	-1.07828651E 03	1.51114902E 03	-5.42864180E 02	174
1.04196051E 03	-5.42864233E 02	1.51114874E 03	-1.07828689E 03	-1.01092795E 03	7.87370801E 02	180
3.52428377E 02	6.21993268F 02	8.46919835E 02	9.04984605E 02	8.46920156E 02	6.21993351E 02	186
-1.09467456E 03	2.37939611E 02	8.25477123E 01	-8.25476241F 01	-2.37939575E 02	1.09467460E 03	192
-9.01633441E 02	1.39127849E 03					

INTERNAL LOADS DUE TO PRESSURE AND/OR STATIC LOADS

STATIC OR PRESSURE LOAD 12

0.	-2.92178893E 02	8.41409826E 03	-2.10073179E 02	-8.41409802E 03	2.10073179E 02	6
0.	0.	0.	0.	-7.73209429E 03	7.73209417E 03	12
-1.97635162E 02	1.97634700E 02	0.	-3.61571947E 01	4.78562796E 02	-3.61571947E 01	18
-1.08305064E 04	-3.58755255E 03	1.08305064E 04	-4.38201392E 02	0.	-4.38200164E 02	24
-1.24153566E 03	0.	-1.24153566E 03	0.	4.55647761E 02	0.	30
4.55650264E 02	1.29494654E 03	0.	1.29494654E 03	1.98218249E 03	0.	36
0.	0.	0.	0.	0.	-1.49244581E 03	42
-4.42598236E 03	-1.03234802E 03	-7.83470678E 03	9.47623789E 02	-7.58562958E 03	-5.58424044E 03	48
-3.03575060E 03	-1.04742898E 03	1.04743007E 03	3.03575167E 03	5.58424205E 03	-9.47622275E 02	54
7.58562994E 03	1.03234918E 03	7.83470696E 03	4.42598230E 03	-9.79859626E 02	1.49244575E 03	60
0.	8.25905955E-02	-6.47186279E-01	4.63477314E 03	2.61645165E-02	-6.46453470E-02	66
1.36749585E-02	0.	-1.36749674E-02	6.46454614E-02	-2.61718065E-02	-4.63477331E 03	72
6.47216797E-01	-8.25905883E-02	7.30854708E 04	1.66693699E 03	4.76332498E 03	-6.28721672E 03	78
8.38911867E 03	-3.59325141E 03	8.19892013E 03	5.41996318E 03	2.81801495E 03	9.16222954E 02	84
-9.16227400E 02	-2.81802016E 03	-5.41996509E 03	3.59325323E 03	-8.19892180E 03	6.28722000E 03	90
-8.38911998E 03	-4.76332605E 03	-9.67114747E 02	-1.66693750E 03	-1.48278314E 03	-1.55367559E 03	96
1.02694213E 03	9.64737546E 02	9.64737523E 02	1.02694213E 03	-1.55367564E 03	-1.48278315E 03	102
-1.25224459E 03	-6.57916135E 02	7.40753096E 02	1.06987286E 03	7.40753174E 02	-6.57916749E 02	108
0.	9.58306313E 03	5.56196338E 03	0.	-5.56196409E 03	-9.58306408E 03	114
1.67390135E 01	0.	1.36744766E 03	0.	1.39915918E 03	0.	120
1.70898438E-03	8.61806393E 02	4.21620601E 02	-1.27506666E 04	-9.49687004E 02	3.68085536E 02	126
-6.16362643E 03	-1.20854798E 03	0.	3.93831456E-03	-9.49702144E 02	-3.68085390E 02	132
6.16362840E 03	8.61806631E 02	-4.21620601E 02	1.27506670E 04	0.	0.	138
7.44529206E 04	6.12638521E 04	0.	0.	0.	6.12639683E 04	144
3.06319834E 04	0.	0.	3.06320673E 04	0.	0.	150
-3.75581056E 03	-3.75581056E 03	-2.10788664E 03	3.58755213E 03	4.23619151E 03	-2.10788620E 03	156
4.23619390E 03	-1.89053167E 03	5.62171119E 02	-3.58755213E 03	3.30878517E 03	-2.25608853E 03	162
1.47296882E 02	0.	-1.47298935E 02	2.25608698E 03	-3.30878592E 03	3.55281684E 03	168
-5.62170726E 02	5.17420822E 02	4.08446187E 03	-4.22047490E 03	3.00809568E 03	3.37612411E 02	174
-2.92236942E-03	-3.37611556E 02	-3.00809413E 03	4.22047734E 03	-4.08445942E 03	-5.17420131E 02	180
0.	4.21622735E 02	3.68086287E 02	0.	-3.68086147E 02	-4.21622837E 02	186
-1.48285303E 03	1.02697381E 03	9.64739001E 02	9.64738965E 02	1.02697375E 03	-1.48285303E 03	192
9.79859912E 02	9.67112875E 02					

APPENDIX C

EXTERNAL DEFLECTIONS DUE TO STATIC LOADS

Static Load 1 = X-direction, 1g load

"	"	2	=	Y-	"	,	1g	"
"	"	3	=	Z-	"	,	1g	"
"	"	4	=	X-	"	,	60g	"
"	"	5	=	Y-	"	,	60g	"
"	"	6	=	Z-	"	,	60g	"
"	"	7	=	X-	"	,	80g	"
"	"	8	=	Y-	"	,	80g	"
"	"	9	=	Z-	"	,	80g	"
"	"	10	=	X-	"	,	100g	"
"	"	11	=	Y-	"	,	100g	"
"	"	12	=	Z-	"	,	100g	"

Deflections (inches) in X-, Y-, and Z- directions
are printed at mass points for static loads computed.

EXTERNAL DEFLECTIONS DUE TO PRESSURE AND/OR STATIC LOADS FOR THIS SUPPORTED STRUCTURE

STATIC OR PRESSURE LOAD 1

0.	0.	0.	0.	0.	0.	6
0.	0.	5.96326631E-20	4.71379930E-06	-1.37129882E-05	5.96326631E-20	12
2.82C14790E-05	6.07124668E-05	-8.11168373E-05	2.82014790E-05	6.07124668E-05	8.11168373E-05	18
2.45802996E-04	-7.29057217E-05	-7.77614397E-06	2.22505990E-04	-7.98179704E-05	5.19793087E-05	24
2.45802996E-04	-7.29057187E-05	7.77614218E-06	2.22505990E-04	-7.98179698E-05	-5.19793105E-05	30
1.73769324E-04	-3.91901985E-05	8.01620150E-12	1.66253793E-04	-6.50567913E-05	4.09466654E-12	36
2.53071833E-04	-6.34196001E-05	9.65839052E-12	2.48307973E-04	-7.98031867E-05	-1.27222390E-11	42
2.56605381E-04	-7.79417431E-05	-3.78091085E-12	2.41874579E-04	-7.45112997E-05	-1.45143875E-07	48
2.95530686E-04	-7.90680975E-05	-1.22542208E-05	3.37714338E-04	-1.06832644E-04	1.06954516E-12	54
2.95530644E-04	-7.90680951E-05	1.22542158E-05	2.41874582E-04	-7.45112956E-05	1.45143677E-07	60
2.59654880E-04	-7.06556261E-05	-8.87288558E-12	2.42296320E-04	-7.30626786E-05	1.21729736E-05	66
2.87206325E-04	-1.07717651E-04	1.85391617E-05	3.39432761E-04	-1.00918141E-04	-5.12842083E-12	72
2.87206292E-04	-1.07717653E-04	-1.85391581E-05	2.42296335E-04	-7.30626869E-05	-1.21729782E-05	78
3.067803C8E-03	-9.16862941E-04	-6.28777403E-12	3.08029380E-03	-8.73874557E-04	4.05340779E-12	84
3.09040460E-03	-8.39073634E-04	2.75324276E-12	3.11467054E-03	-7.5553430E-04	-1.45412564E-11	90
3.16320410E-03	-5.88513112E-04	1.80528988E-11				

STATIC OR PRESSURE LOAD 2

0.	0.	0.	0.	0.	0.	6
0.	0.	0.	5.24581975E-05	1.27761889E-04	-1.95128684E-12	12
-3.60726929E-05	-1.81181011E-04	2.00381052E-04	-3.60226929E-05	-1.81181012E-04	-2.00381052E-04	18
-5.55856127E-04	1.06081417E-05	3.57809490E-05	-5.37399566E-04	7.67702729E-04	-1.06031434E-04	24
-5.55856138E-04	1.06081407E-05	-3.57809424E-05	-5.37399566E-04	7.67702729E-04	1.06031439E-04	30
9.01559365E-04	-4.84710926E-06	2.77525631E-12	8.74413431E-04	-9.82771397E-05	-5.59935343E-12	36
7.34123248E-04	-8.18571317E-05	1.16992643E-11	7.81750494E-04	8.21029437E-05	1.08490112E-11	42
1.02986550E-05	-9.45927250E-05	5.87400335E-12	-4.31954587E-04	-2.24678749E-05	3.13028842E-05	48
-1.65939292E-03	2.97894120E-04	-2.81280240E-06	-2.33815873E-03	4.63601500E-04	-3.40333092E-12	54
-1.65939291E-03	2.97894120E-04	2.81279957E-06	-4.31954598E-04	-2.24678788E-05	-3.13028786E-05	60
1.68788673E-04	4.38819033E-04	8.13529551E-12	-2.31220174E-04	6.68385339E-04	-8.28747153E-05	66
-1.43737778E-03	1.06198764E-03	3.71161962E-06	-2.09719083E-03	1.29292260E-03	-5.74640518E-12	72
-1.43737778E-03	1.06198762E-03	-3.71162337E-06	-2.31220183E-04	6.68385345E-04	8.28747261E-05	78
-1.91589893E-03	3.24627805E-04	-3.24428874E-12	-1.66524659E-03	1.18727945E-03	1.91029193E-13	84
-1.46235217E-03	1.88563275E-03	4.19677466E-12	-9.75405598E-04	3.56163970E-03	3.61320728E-12	90
-1.47827949E-06	6.91365355E-03	-1.04845251E-10				

STATIC OR PRESSURE LOAD 3

0.	0.	0.	0.	0.	0.	6
0.	0.	-1.71112444E-13	5.09814161E-12	1.74350631E-12	-1.71112444E-13	12
-6.29688042E-05	-2.65644678E-05	4.48529845E-05	6.29688054E-05	2.65644628E-05	4.48529798E-05	18
-2.05275112E-04	1.78919318E-04	1.14749326E-05	-1.70681250E-04	1.57713404E-04	1.50818251E-04	24
2.05275106E-04	-1.78919326E-04	1.14749299E-05	1.70681244E-04	-1.57713398E-04	1.50818253E-04	30
1.08329161E-11	1.28949161E-14	6.31093842E-05	1.02586110E-11	-1.65258999E-12	1.05720142E-04	36
1.12692159E-11	-2.36492926E-12	1.13397384E-04	1.03671844E-11	-1.78609645E-13	2.41043285E-04	42
3.30475825E-12	-2.08219686E-12	9.93411183E-05	-1.93134974E-04	1.82294314E-04	3.20895532E-06	48
-2.77308536E-04	1.24541353E-04	-1.24207951E-04	-1.28292245E-11	3.39454266E-12	-1.35189304E-04	54
2.77308512E-04	-1.24541348E-04	-1.24207948E-04	1.93134972E-04	-1.82294321E-04	3.20895362E-06	60
6.46315485E-12	2.40974483E-12	3.11221558E-04	-2.11245564E-04	1.19980116E-04	2.85562661E-04	66
-2.44164068E-04	2.38613331E-04	-2.13995150E-04	-9.40695798E-12	6.03206587E-12	1.17651306E-04	72
2.44164044E-04	-2.38613325E-04	2.13995147E-04	2.11245567E-04	-1.19980116E-04	2.85562661E-04	78
-9.54234231E-12	1.72705205E-12	-1.45417137E-04	-6.62948722E-12	4.37743437E-12	3.57607007E-04	84
-3.52481759E-12	5.40516359E-12	7.64822185E-04	-4.65643096E-12	1.40658419E-11	1.74211472E-03	90
1.26976286E-12	3.51340529E-11	3.69669977E-03				

EXTERNAL DEFLECTIONS DUE TO PRESSURE AND/OR STATIC LOADS FOR THIS SUPPORTED STRUCTURE

STATIC OR PRESSURE LOAD 4

0.	0.	0.	0.	0.	4.64577502E-18	6
0.	0.	0.	0.	0.	0.	0.
1.69208875E-03	3.64274797E-03	4.64577502E-18	2.82827958E-04	-8.22779274E-04	2.00406650E-10	12
1.47481798E-02	-4.37434322E-03	-4.86701030E-03	1.69208874E-03	3.64274797E-03	4.86701030E-03	18
1.47481798E-02	-4.37434304E-03	-4.66568643E-04	1.33503595E-02	-4.78907824E-03	3.11875853E-03	24
1.04261594E-02	-2.35141188E-03	4.66568524E-04	1.33503595E-02	-4.78907818E-03	-3.11875859E-03	30
1.51843099E-02	-3.80517599E-03	5.22917533E-10	9.97522759E-03	-3.90340748E-03	1.11773974E-10	36
1.53963228E-02	-4.67650455E-03	5.92696828E-10	1.48984782E-02	-4.78819114E-03	-8.16207647E-10	42
1.77318414E-02	-4.74408579E-03	-2.35441044E-10	1.45124745E-02	-4.47067797E-03	-8.70863843E-06	48
1.77318385E-02	-4.74408561E-03	-7.35252941E-04	2.02628604E-02	-6.40995872E-03	4.48163778E-11	54
1.55792928E-02	-4.23933756E-03	7.35252941E-04	1.45124748E-02	-4.47067767E-03	8.70861804E-06	60
1.72123796E-02	-6.46305907E-03	-5.30982566E-10	1.45377792E-02	-4.38376063E-03	7.30378407E-04	66
1.72123775E-02	-6.46305919E-03	1.11234969E-03	2.03659657E-02	-6.05508840E-03	-3.14989179E-10	72
1.84068185E-01	-5.50117767E-02	-1.11234948E-03	1.45377800E-02	-4.38376117E-03	-7.30378693E-04	78
1.85424277E-01	-5.03444177E-02	-3.80056661E-10	1.84817629E-01	-5.24324739E-02	2.27472100E-10	84
1.89792247E-01	-3.53107870E-02	1.38983981E-10	1.86880234E-01	-4.53332061E-02	-9.23832965E-10	90
		9.81522036E-10				

STATIC OR PRESSURE LOAD 5

0.	0.	0.	0.	0.	7.72925514E-18	6
0.	0.	0.	0.	0.	0.	0.
-2.16136158E-03	-1.08708607E-02	7.72925514E-18	3.14749187E-03	7.66571331E-03	-2.69249791E-11	12
-3.33513680E-02	6.36488277E-04	1.20228632E-02	-2.16136158E-03	-1.08708605E-02	-1.20228632E-02	18
-3.33513680E-02	6.36488783E-04	2.14685684E-03	-3.22439739E-02	4.60621637E-02	-6.36188626E-03	24
5.40935618E-02	-2.90826494E-04	-2.14685667E-03	-3.22439739E-02	4.60621643E-02	6.36188632E-03	30
4.40473944E-02	-4.91142792E-03	2.27933532E-10	5.24648052E-02	-5.89667838E-03	-5.42834002E-10	36
6.17919254E-04	-5.67556351E-03	1.83136989E-10	4.69050294E-02	4.92617667E-03	-4.24124408E-10	42
-9.95635760E-02	1.78736471E-02	1.30722815E-10	-2.59172755E-02	-1.34807272E-03	1.87817296E-03	48
-9.95635748E-02	1.78736475E-02	-1.68767974E-04	-1.40289524E-01	2.78160900E-02	1.11806715E-10	54
1.01273203E-02	2.63791419E-02	1.68768150E-04	-7.59177758E-02	-1.34807238E-03	-1.87817281E-03	60
-8.62426662E-02	6.37192577E-02	2.13156143E-10	-1.38732105E-02	4.01031202E-02	-4.97248310E-03	66
-8.62426662E-02	6.37192583E-02	2.22697306E-04	-1.25831451E-01	7.75753564E-02	-5.25640237E-11	72
-1.14953935E-01	1.94776680E-02	-2.22697255E-04	-1.38732110E-02	4.01031208E-02	4.97248340E-03	78
-8.77411294E-02	1.13137965E-01	2.40082851E-10	-9.99147940E-02	7.12367666E-02	2.62571332E-11	84
-8.86952448E-05	4.14819211E-01	2.41809931E-10	-5.85243350E-02	2.13698381E-01	1.47296897E-10	90
		-6.47920763E-09				

STATIC OR PRESSURE LOAD 6

0.	0.	0.	0.	0.	-1.02667591E-11	6
0.	0.	0.	0.	0.	0.	0.
-3.77812836E-03	-1.59386788E-03	-1.02667591E-11	-4.15665394E-11	9.06087255E-11	1.67709114E-03	12
-1.23165064E-02	1.07351594E-02	2.69117868E-03	3.77812830E-03	1.59386794E-03	2.69117916E-03	18
1.23165068E-02	-1.07351592E-02	6.88495880E-04	-1.02408746E-02	9.46280360E-03	9.04909503E-03	24
-8.05621040E-10	1.71950068E-10	6.88495845E-04	1.02408752E-02	-9.46280444E-03	9.04909515E-03	30
-5.87042040E-10	1.46507177E-10	3.78656301E-03	-8.04657829E-10	1.93937241E-10	6.34320855E-03	36
-1.37239955E-10	2.00577125E-10	6.80384296E-03	-6.98929453E-10	7.88739836E-11	1.44625972E-02	42
-1.66385105E-02	7.47248107E-03	5.96046710E-03	-1.15880981E-02	1.09376591E-02	1.92537268E-04	48
1.66385125E-02	-7.47248101E-03	-7.45247716E-03	1.72351956E-09	1.01406589E-10	-8.11135817E-03	54
-1.82735310E-10	-1.92017265E-10	1.72351956E-09	1.15880986E-02	-1.09376589E-02	1.92537263E-04	60
-1.46498425E-02	1.43167990E-02	1.86732934E-02	-1.26747338E-02	7.19880652E-03	1.71337596E-02	66
1.46498442E-02	-1.43168004E-02	1.28397089E-02	1.63653414E-09	-7.46404678E-10	7.05907840E-03	72
7.25383478E-10	8.99091411E-11	1.28397089E-02	1.26747340E-02	-7.19880742E-03	1.71337597E-02	78
6.73108786E-10	-1.11197978E-09	-8.72502816E-03	6.71730590E-10	-5.37220007E-10	2.14564204E-02	84
-3.70541602E-10	-3.91038746E-09	4.58893305E-02	1.61446716E-10	-2.11971918E-09	1.04526883E-01	90
		2.21801984E-01				

EXTERNAL DEFLECTIONS DUE TO PRESSURE AND/OR STATIC LOADS FOR THIS SUPPORTED STRUCTURE

STATIC OR PRESSURE LOAD 7

0.	0.	0.	0.	0.	8.69611478E-18	6
0.	0.	8.69611478E-18	3.77103943E-04	-1.09703904E-03	2.64159870E-10	12
2.25611833E-03	4.85699731E-03	-6.48934704E-03	2.25611833E-03	4.85699731E-03	6.48934704E-03	18
1.96642397E-02	-5.83245772E-03	-6.22091508E-04	1.78004794E-02	-6.38543773E-03	4.15834475E-03	24
1.96642397E-02	-5.83245748E-03	6.22091371E-04	1.78004794E-02	-6.38543761E-03	-4.15834481E-03	30
1.39015459E-02	-3.13521585E-03	7.92502028E-10	1.33003034E-02	-5.20454335E-03	1.50210343E-10	36
2.02457467E-02	-5.07356799E-03	8.35027194E-10	1.98646376E-02	-6.38425487E-03	-1.07979204E-09	42
2.05284303F-02	-6.23533940E-03	-3.00916529E-10	1.93499662E-02	-5.96090400E-03	-1.16115056E-05	48
2.36424550F-C2	-6.32544780E-03	-9.80337667E-04	2.70171472E-02	-8.54661155E-03	8.67394769E-11	54
2.36424515F-02	-6.32544756E-03	9.80337274E-04	1.93499666E-02	-5.96090364E-03	1.16114947E-05	60
2.077239C4E-02	-5.65245008E-03	-6.97162610E-10	1.93837056E-02	-5.84501427E-03	9.73837888E-04	66
2.29765064E-02	-8.61741209E-03	1.48313296E-03	2.71546712E-02	-8.07345128E-03	-4.06864089E-10	72
2.29765037E-02	-8.61741233E-03	-1.48313263E-03	1.93837067E-02	-5.84501499E-03	-9.73838234E-04	78
2.45424250E-01	-7.33490360F-02	-5.0415175CE-10	2.46423507E-01	-6.99099654E-02	3.38070461E-10	84
2.47232372E-01	-6.71258909F-02	2.46141544F-10	2.49173644E-01	-6.04442751E-02	-1.10841624E-09	90
2.53056332E-01	-4.70810491E-02	1.55712201E-09				

STATIC OR PRESSURE LOAD 8

0.	0.	0.	0.	0.	7.78608060E-18	6
0.	0.	7.78608060E-18	4.19665587E-03	1.02209510E-02	-3.42669851E-11	12
-2.88181546E-03	-1.44944809E-02	1.60304843E-02	-2.88181546E-03	-1.44944808E-02	-1.60304843E-02	18
-4.44684905E-02	8.48650920E-04	2.86247578E-03	-4.29919654E-02	6.14162183E-02	-8.48251498E-03	24
-4.44684905E-02	8.48651600E-04	-2.86247551E-03	-4.29919654E-02	6.14162189E-02	8.48251510E-03	30
7.21274750CE-02	-3.87768725E-04	2.13731793E-10	6.99530745E-02	-7.86217123E-03	-6.07659250E-10	36
5.87798596E-02	-6.54857069E-03	2.17320511E-10	6.25400394E-02	6.56823552E-03	-3.25316864E-10	42
8.23892522E-04	-7.56741816E-03	1.85096750E-10	-3.45563674E-02	-1.79743044E-03	2.50423062E-03	48
-1.32751435E-01	2.38315293E-02	-2.25023982F-04	-1.87052700F-01	3.70881197E-02	1.57141449E-10	54
-1.32751432E-01	2.38315302E-02	2.25024223F-04	-3.45563677E-02	-1.79742996E-03	-2.50423041E-03	60
1.35030939E-02	3.51055226E-02	2.91602722E-10	-1.84976141E-02	5.34708273E-02	-6.62997746E-03	66
-1.14990221E-01	8.49590099E-02	2.96929756E-04	-1.67775269E-01	1.03433807E-01	-7.10428935E-11	72
-1.14990221E-01	8.49590099E-02	-2.96929699E-04	-1.84976146E-02	5.34708279E-02	6.62997788E-03	78
-1.53271914E-01	2.59702235E-02	3.21799526E-10	-1.33219723E-01	9.49823558E-02	1.71496962E-11	84
-1.16988172E-01	1.50850619E-01	2.79679659E-10	-7.80324459E-02	2.84931177E-01	1.05966663E-10	90
-1.18259135E-04	5.53092283E-01	-8.82476187E-09				

STATIC OR PRESSURE LOAD 9

0.	0.	0.	0.	0.	-1.36890446E-11	6
0.	0.	-1.36890446E-11	2.86301437E-11	6.80451238E-11	2.23612151E-03	12
-5.03750437E-03	-2.12515736E-03	3.58823866E-03	5.03750437E-03	2.12515709E-03	3.58823848E-03	18
-1.64220090E-02	1.43135455E-02	9.17994571E-04	-1.36544999E-02	1.26170723E-02	1.20654601E-02	24
1.64220087E-02	-1.43135460E-02	9.17994344E-04	1.36544997E-02	-1.26170717E-02	1.20654601E-02	30
6.60515910E-10	-3.71210089E-11	5.04875064E-03	6.05155021E-10	-2.02777681E-10	8.45761132E-03	36
9.18836629E-10	-1.58056033E-10	9.07179058E-03	8.27400208E-10	-4.94859582E-11	1.92834629E-02	42
4.77121115E-10	-7.43353170E-11	7.94728947E-03	-1.54507978E-02	1.45835452E-02	2.56716388E-04	48
-2.21846828E-02	9.96330833E-03	-9.93663609E-03	-1.06401183E-09	3.71516234E-10	-1.08151443E-02	54
2.21846810F-02	-9.96330786E-03	-9.93663385F-03	1.5457978E-02	-1.45835455F-02	2.56716242E-04	60
6.76186097E-10	1.98707379E-10	2.48977244E-02	-1.68996453E-02	9.59840930E-03	2.28450125E-02	66
-1.95331253E-02	1.90890665E-02	1.71196118E-02	-7.80212426E-10	6.17001730E-10	9.41210461E-03	72
1.95331234F-02	-1.90890659E-02	1.71196118E-02	1.68996455E-02	-9.59840906E-03	2.28450128E-02	78
2.75529298F-10	-1.03314042E-10	-1.16333711F-02	5.21336812E-10	1.52693130E-10	2.86085606E-02	84
7.80053568E-10	2.70512292E-10	6.11857748E-02	7.14347237E-10	1.04880604E-09	1.39369178E-01	90
1.23809151F-09	2.90514201F-09	2.95735979E-01				

EXTERNAL DEFLECTIONS DUE TO PRESSURE AND/OR STATIC LOADS FOR THIS SUPPORTED STRUCTURE

STATIC OR PRESSURE LOAD 10

0.	0.	0.	0.	0.	1.26097572E-17	6
0.	0.	1.26097572E-17	4.71379924E-04	-1.37129882E-03	3.56690708E-10	12
2.82014790E-03	6.07124662E-03	-8.11168373E-03	2.82014790E-03	6.07124662E-03	8.11168373E-03	18
2.45802996E-02	-7.29057217E-03	-7.77614379E-04	2.22505990E-02	-7.98179704E-03	5.19793087E-03	24
2.45802996E-02	-7.29057181E-03	7.77614218E-04	2.22505990E-02	-7.98179686E-03	-5.19793099E-03	30
1.73769322E-02	-3.91901982E-03	5.92528808E-10	1.66253793E-02	-6.50567913E-03	1.77745531E-10	36
2.53071833E-02	-6.34195995E-03	8.74240994E-10	2.48307970E-02	-7.98031861E-03	-1.37939651E-09	42
2.56605381E-02	-7.79417425E-03	-3.85765842E-10	2.41874576E-02	-7.45113003E-03	-1.45143802E-05	48
2.95530686E-02	-7.90680963E-03	-1.22542204E-03	3.37714338E-02	-1.06832646E-02	1.57448767E-10	54
2.95530641E-02	-7.90680945E-03	1.22542161E-03	2.41874579E-02	-7.45112944E-03	1.45143755E-05	60
2.59654480E-02	-7.06556261E-03	-9.01873541E-10	2.42296317E-02	-7.30626780E-03	1.21729735E-03	66
2.87206325E-02	-1.07717651E-02	1.85391620E-03	3.39432758E-02	-1.00918140E-02	-4.78023082E-10	72
2.87206289E-02	-1.07717653E-02	-1.85391578E-03	2.42296332E-02	-7.30626857E-03	-1.21729781E-03	78
3.06780308E-01	-9.16862941E-02	-6.06966019E-10	3.08029377E-01	-8.73874557E-02	4.13681048E-10	84
3.09040460E-01	-8.39073634E-02	2.72759071E-10	3.11467054E-01	-7.55553430E-02	-1.48286280E-09	90
3.16320410E-01	-5.88513106E-02	1.72420897E-09				

STATIC OR PRESSURE LOAD 11

0.	0.	0.	0.	0.	1.17010047E-17	6
0.	0.	1.17010047E-17	5.24581969E-03	1.27761887E-02	-1.65132433E-10	12
-3.60226929E-03	-1.81181011E-02	2.00381055E-02	-3.60226932E-03	-1.81181011E-02	-2.00381055E-02	18
-5.55856133E-02	1.06081407E-03	3.57809487E-03	-5.37399560E-02	7.67702734E-02	-1.06031436E-02	24
-5.55856138E-02	1.06081407E-03	-3.57809427E-03	-5.37399566E-02	7.67702734E-02	1.06031439E-02	30
9.01559365E-02	-4.84710950E-04	8.94272602E-10	8.74413419E-02	-9.82771397E-03	-7.00080055E-10	36
7.34123248E-02	-8.18571329E-03	2.39959338E-09	7.81750488E-02	8.21029425E-03	9.87488222E-10	42
1.02986576E-03	-9.45927262E-03	5.23057479E-10	-4.31954587E-02	-2.24678761E-03	3.13028842E-03	48
-1.65939294E-01	2.97894123E-02	-2.81280217E-04	-2.33815873E-01	4.63601500E-02	-2.78751698E-10	54
-1.65939291E-01	2.97894123E-02	2.81280002E-04	-4.31954598E-02	-2.24678791E-03	-3.13028789E-03	60
1.68788674E-02	4.38819033E-02	7.73233449E-10	-2.31220174E-02	6.68385345E-02	-8.28747153E-03	66
-1.43737778E-01	1.06198762E-01	3.71161973E-04	-2.09719086E-01	1.79292260E-01	-5.35596508E-10	72
-1.43737778E-01	1.06198762E-01	-3.71162328E-04	-2.31220180E-02	6.68385345E-02	8.28747261E-03	78
-1.91589895E-01	3.24627802E-02	3.40435913E-10	-1.66524659E-01	1.18727945E-01	2.14065874E-11	84
-1.46235217E-01	1.88563275E-01	4.10887748E-10	-9.75405610E-02	3.56163973E-01	3.25908905E-10	90
-1.47827375E-04	6.91365361E-01	-1.05731831E-08				

STATIC OR PRESSURE LOAD 12

0.	0.	0.	0.	0.	-1.71112579E-11	6
0.	0.	-1.71112579E-11	-8.37186301E-11	2.11147523E-10	2.79515183E-03	12
-6.29688054E-03	-2.65644643E-03	4.48529774E-03	6.29688054E-03	2.65644649E-03	4.48529869E-03	18
-2.05275103E-02	1.78919320E-02	1.14749312E-03	-1.70681241E-02	1.57713395E-02	1.50818253E-02	24
2.05275118E-02	1.78919323E-02	1.14749299E-03	1.70681255E-02	-1.57713406E-02	1.50818253E-02	30
-9.40758336E-10	3.06836215E-10	6.31093924E-03	-9.57377664E-10	2.80926311E-10	1.05720142E-02	36
-3.23471451E-10	2.53026217E-10	1.13397382E-02	-5.27955329E-10	7.83384836E-11	2.41043288E-02	42
4.86060166E-10	3.37561953E-10	9.93411183E-03	-1.93134965E-02	1.82294317E-07	3.20895413E-04	48
-2.77308512E-02	1.24541350E-02	-1.24207951E-02	1.93145077E-09	4.61970919E-10	-1.35189304E-02	54
2.77308536E-02	-1.24541350E-02	-1.24207948E-02	1.93134981E-02	-1.82294318E-02	3.20895365E-04	60
4.39239252E-10	-3.39485034E-10	3.11221558E-02	-2.11245561E-02	1.19980110E-02	2.85562658E-02	66
-2.44164050E-02	2.38613322E-02	2.13995150E-02	1.83291355E-09	-7.91215456E-10	1.17651309E-02	72
2.44164065E-02	-2.38613337E-02	2.13995150E-02	2.11245573E-02	-1.19980121E-02	2.85562661E-02	78
-9.94281828E-10	7.76493168E-10	-1.45417137E-07	-1.03419521E-09	-9.83342969E-11	3.57607010E-02	84
-9.91822755E-10	-9.18331361E-10	7.64822185E-02	-1.74841374E-09	-2.26685947E-09	1.74211474E-01	90
-2.44269454E-09	-4.58972827E-09	3.69669977E-01				

APPENDIX D
UNDAMPED FREQUENCIES

UNDAMPED FREQUENCIES
(CYCLES/SECOND)

4.09080088F 01	5.65201145E 01	5.66603857F 01	4.42937487E 02	5.02733856E 02	5.50891989E 02	6
7.06884283E 02	8.33026969E 02	1.26813689F 03	1.64946978E 03	1.79510072F 03	1.95660125F 03	12
2.44483963E 03	2.53891355E 03	2.61787236E 03	2.75461158E 03	3.19691455F 03	3.22849110E 03	18
3.51544234E 03	3.54004815E 03	3.78924617F 03	3.95589840F 03	4.13917094E 03	4.33009398F 03	24
4.68848276E 03	5.06174594F 03	5.25323302F 03	5.45308816E 03	5.60541117E 03	5.75608939E 03	30
5.78734756E 03	5.87303561E 03	5.89717376F 03	6.23709154F 03	6.31195527E 03	6.45382649F 03	36
6.57885283E 03	6.59990239E 03	6.69282466F 03	6.71587157F 03	6.72881854E 03	6.87217808E 03	42
7.02602649E 03	7.10141188E 03	7.10141474E 03	7.12373221E 03	7.19333231E 03	7.32298690E 03	48
7.42914778E 03	7.67438287E 03	8.22518086E 03	8.36210990E 03	8.47427523E 03	8.47795367F 03	54
8.47795711E 03	8.94956899E 03	1.17214039E 04	1.20667811F 04	1.20778450F 04	1.24997863F 04	60
1.25077730E 04	1.44105311E 04	1.45490043E 04	1.45560952E 04	1.52025583E 04	2.10309052E 04	66
2.15264165E 04	2.55738690E 04	2.55963555E 04	2.95147469F 04	2.95186922E 04	3.67861903F 04	72
4.24525243E 04	4.24562740E 04	0.	0.	0.	0.	78
0.	0.	0.	0.	0.	0.	84
0.	0.	0.	0.	0.	0.	90
0.	0.	0.	0.	0.	0.	

APPENDIX E

RENORMALIZED MODE SHAPES

Renormalized deflections in X-, Y-, and Z-directions are printed at mass points for 6 modes. Deflections in each mode are renormalized to 1.0 for maximum value listed.

RENORMALIZED MODE SHAPE

MODE 1						
-0.	-0.	-0.	-0.	-0.	-0.	6
-2.17446658E-31	C.	6.00947720E-14	7.00320971E-03	1.55537643E-07	2.77587792E-06	12
-5.52370739E-03	-2.69897631E-02	3.11797148E-02	-5.52302665E-03	-2.69879800E-02	-3.11796564E-02	18
-8.30168128E-02	-2.47362223E-03	5.13139981E-03	-8.00437450E-02	1.06553112E-01	-1.59457019E-02	24
-8.30166185E-02	-2.47380921E-03	-5.13146818E-03	-8.00435746E-02	1.06552893E-01	1.59456892E-02	30
1.27693576E-01	-3.62275252E-03	9.39991689E-09	1.23851919E-01	-1.68457364E-02	2.52630511E-08	36
1.02717385E-01	-1.50272408E-02	2.30311677E-08	1.09614335E-01	8.71009517E-03	7.21027392E-09	42
-1.61771585E-03	-1.71523783E-02	1.64391112E-09	-6.51420057E-02	-7.26512992E-03	4.59397876E-03	48
-2.42521617E-01	3.89794260E-02	-3.21007493E-04	-3.40813822E-01	6.30764699E-02	-1.69733910E-07	54
-2.42521346E-01	3.89792386E-02	3.20759737E-04	-6.51418310E-02	-7.26531094E-03	-4.59404664E-03	60
2.12053036E-02	5.94646782E-02	8.26015985E-08	-3.62602252E-02	9.21351945E-02	-1.19391660E-02	66
-2.10471320E-01	1.49284647E-01	2.05546835E-04	-3.06171149E-01	1.82303552E-01	-5.66037726E-08	72
-2.10471058E-01	1.49284394E-01	-2.05595091E-04	-3.62600547E-02	9.21350062E-02	1.19392432E-02	78
-3.26216319E-01	5.66722941E-02	-8.77616429E-08	-2.90331307E-01	1.80175105E-01	2.01195341E-08	84
-2.61283624E-01	2.80155900E-01	1.08605871E-07	-1.91569191E-01	5.20103931E-01	3.19591033E-07	90
-5.21354324E-02	9.95999988E-01	7.24847949E-07				

MODE 2						
0.	C.	0.	0.	0.	0.	6
-1.61121666E-30	C.	3.67438078E-14	4.40998137E-03	1.95785417E-03	-3.67764249E-07	12
5.43484336E-03	4.52979457E-03	-7.73190939E-03	5.43490023E-03	4.52955186E-03	7.73227131E-03	18
3.12635371E-02	-2.51350254E-02	2.91999364E-04	2.59010476E-02	2.58435538E-02	7.28344542E-03	24
3.12662452E-02	-2.51374003E-02	-2.92322999E-04	2.59033036E-02	2.58413914E-02	-7.28211129E-03	30
1.11837217E-01	-1.48626432E-02	2.79892516E-07	1.07787985E-01	-2.88000956E-02	5.46816844E-07	36
1.23025581E-01	-2.77642393E-02	5.28875691E-07	1.24963322E-01	-2.10949916E-02	1.33067985E-06	42
7.35139734E-02	-3.34036097E-02	3.78113249E-07	3.87515271E-02	-2.79497311E-02	2.37651953E-03	48
-3.16157982E-02	-6.87632203E-03	-3.86680284E-03	-6.71611935E-02	3.52941403E-03	-1.24970984E-06	54
3.16122591E-02	-6.87804741E-03	3.86456883E-03	3.87560522E-02	-2.79527343E-02	-2.37694544E-03	60
8.55514407E-02	5.98350883E-03	1.73112161E-06	5.29197323E-02	2.08110651E-02	-2.34472555E-03	66
-1.84360823E-02	3.84832993E-02	5.56312400E-03	-4.96736979E-02	5.66560960E-02	3.59694654E-07	72
-1.84329410E-02	3.84801877E-02	-5.56116486E-03	5.29224676E-02	2.08093703E-02	2.34774444E-03	78
8.37120068E-01	-2.72412825E-01	-1.18484642E-06	9.58445704E-01	-1.99017976E-01	1.88279566E-06	84
8.75708079E-01	-1.39601709E-01	4.36369389E-06	9.17137754E-01	2.99384069E-03	1.03118588E-05	90
9.99999988E-01	2.88184905E-01	2.22275443E-05				

MODE 3						
-0.	-0.	-0.	-0.	-0.	-0.	6
-2.94602451E-34	-0.	-4.98066247E-11	-6.37765110E-08	-2.52474743E-08	4.39464575E-03	12
-1.56050253E-02	-2.13281417E-03	8.52100921E-03	1.56033404E-02	2.13220716E-03	8.52081823E-03	18
-6.04970455E-02	5.24487120E-02	-7.13777727E-03	-5.03156873E-02	4.73754191E-02	4.02095473E-02	24
6.04962450E-02	-5.24479735E-02	-7.13775784E-03	5.03150290E-02	-4.73761988E-02	3.02097291E-02	30
-1.63426164E-06	2.22152275E-07	1.22987887E-02	-1.57564484E-06	4.24013966E-07	2.43722388E-02	36
-1.77114283E-06	4.10871989E-07	2.30648553E-02	-1.80301201E-06	3.02596474E-07	5.93144110E-02	42
-1.01395772E-06	4.92888933E-07	1.66799882E-02	-5.64261562E-02	5.31269759E-02	-9.51902127E-03	48
-7.91954738E-02	3.77062240E-02	-4.90384066E-02	1.09178491E-06	5.17960894E-08	-5.43443805E-02	54
7.91965526E-02	-3.77060202E-02	-4.90385187E-02	5.64251381E-02	-5.31261551E-02	-9.51894271E-03	60
-1.19611986E-06	-1.04735859E-07	7.72179383E-02	-6.11355656E-02	3.69231430E-02	6.78105098E-02	66
-7.01933706E-02	6.86884212E-02	4.48778653E-02	8.25179219E-07	-8.68132877E-07	1.74914372E-02	72
7.01940429E-02	-6.86895871E-02	4.48780191E-02	6.11341250E-02	-3.69237736E-02	6.78104246E-02	78
-1.04311039E-05	3.48985615E-06	-5.27144009E-02	-1.07543389E-05	2.37544760E-06	8.51108968E-02	84
-1.10157821E-05	1.47299002E-06	1.96685129E-01	-1.16455427E-05	-6.91211563E-07	4.64456755E-01	90
-1.29029280E-05	-5.01858068E-06	9.99999976E-01				

RENORMALIZED MODE SHAPES

MODE 4					
-0.	-0.	-0.	-0.	-0.	-0.
-2.36958796E-33	0.	3.29276726E-10	-3.01271674E-06	-3.09753752E-05	1.29344504E-01
-6.16848695E-02	-2.54727283E-01	1.64352165E-01	6.16985238E-02	2.54747111E-01	1.64393882E-01
2.55140624E-01	-3.20478386E-01	4.44634563E-01	2.15642485E-01	-3.61363864E-01	4.62654680E-01
-2.54946023E-01	3.20349249E-01	4.44640434E-01	-2.15464666E-01	3.61194113E-01	4.62612844E-01
4.99000812E-05	-4.15714836E-05	1.49749215E-01	4.74421406E-05	-5.00386178E-05	1.15417592E-01
7.81546533E-05	-5.39955121E-05	2.13908598E-01	7.60176921E-05	-6.13807875E-05	1.07735400E-01
8.46849525E-05	-6.23215878E-05	3.68318892E-01	2.18138099E-01	-3.07177874E-01	4.43788785E-01
2.22416051E-01	-3.14983863E-01	8.14482069E-01	1.75652483E-04	-9.31367540E-05	9.09992976E-01
-2.22128162E-01	3.14833599E-01	8.14493930E-01	-2.17954695E-01	3.07049911E-01	4.43785882E-01
8.45024109E-05	-6.57890975E-05	1.76508953E-01	2.08517596E-01	-3.40287834E-01	3.71437657E-01
2.20479454E-01	-3.21653968E-01	6.72362107E-01	1.72539343E-04	-1.03853624E-04	7.98148334E-01
-2.20206112E-01	3.21448466E-01	6.72339499E-01	-2.08342740E-01	3.40129420E-01	3.71426487E-01
-1.56406954E-05	-4.55952966E-05	6.47135228E-01	-1.32741691E-05	-3.74529599E-05	5.45844001E-01
-1.13588676E-05	-7.08618885E-05	4.63848716E-01	-6.76336920E-06	-1.50441952E-05	2.67064744E-01
2.42931938E-06	1.65902567E-05	-1.26502921E-01			

MODE 5					
0.	0.	0.	0.	0.	0.
-5.66847128E-29	-0.	-3.28979349E-13	-4.33061612E-02	-4.04631960E-01	-6.07313584E-05
7.58994156E-02	1.81367196E-01	-7.69856131E-02	7.58457935E-02	1.81216888E-01	7.68802714E-02
7.08165228E-01	-7.93285709E-01	-4.16584182E-02	6.45210806E-01	-8.30507188E-01	1.44003296E-01
7.08270609E-01	-7.93344504E-01	4.13631618E-02	6.45294684E-01	-8.30555034E-01	-1.44303594E-01
5.35250539E-01	-5.30463147E-01	-7.05409437E-05	5.09770310E-01	-6.18371677E-01	-6.69131023E-05
7.64396358E-01	-6.75547695E-01	-1.22416264E-04	7.50241315E-01	-7.24771607E-01	-1.09754171E-04
7.38137829E-01	-7.69371599E-01	-1.61003521E-04	6.90760612E-01	-8.03194857E-01	5.41105795E-03
8.67809904E-01	-8.12396085E-01	-4.70702839E-02	9.99999988E-01	-9.12250113E-01	-2.01016244E-04
8.67861760E-01	-8.12437534E-01	4.66858721E-02	6.90850067E-01	-8.03251084E-01	-6.71506673E-03
7.54553115E-01	-7.49347401E-01	-1.27281864E-04	6.87905180E-01	-9.13038313E-01	5.30953318E-02
8.38549829E-01	-9.13122308E-01	4.27091420E-02	9.98985481E-01	-9.15741193E-01	-1.80376367E-04
8.38547453E-01	-9.13154709E-01	-4.30454469E-02	6.87995261E-01	-8.13092434E-01	-5.33808106E-02
-1.94108032E-01	-6.21464556E-01	-1.85874610E-04	-1.64398943E-01	-5.14217259E-01	-1.56207635E-04
-1.40350555E-01	-4.36443669E-01	-1.32190341E-04	-8.26343358E-02	-2.37791932E-01	-7.45296270E-05
3.28020793E-02	1.59511310E-01	4.07111031E-05			

MODE 6					
0.	0.	0.	0.	0.	0.
2.05106592E-29	0.	2.50731426E-13	4.08313870E-02	2.06446353E-01	-2.75514910E-05
5.23243028E-02	1.39927958E-01	-2.85437122E-01	5.23009807E-02	1.39867577E-01	2.95408130E-01
5.04114854E-01	2.89143358E-01	-1.06120081E-02	4.60008827E-01	1.45637756E-01	1.10312305E-01
5.04083127E-01	2.89064395E-01	1.05893067E-02	4.59979582E-01	1.45650309E-01	-1.10346974E-01
1.72520344E-01	2.12793496E-01	7.86763412E-07	1.65687233E-01	1.89325675E-01	-8.47792068E-07
3.13200152E-01	2.33973077E-01	2.05737278E-05	3.00581521E-01	1.90948741E-01	1.72278871E-05
4.22223127E-01	2.55352619E-01	1.35118264E-05	4.73960966E-01	2.97004148E-01	-1.39209425E-02
7.93988854E-01	2.24990204E-01	-1.71380126E-02	9.99999988E-01	1.52270325E-01	-7.25253344E-05
7.93932050E-01	2.24527112E-01	1.70295930E-02	4.73933429E-01	2.96925253E-01	1.39027391E-02
3.49619064E-01	1.95196149E-01	1.37836273E-05	4.39828008E-01	1.79530972E-01	2.32147279E-02
7.40838623E-01	4.20482987E-02	4.19243103E-02	9.62747061E-01	2.40602610E-02	-8.47351730E-05
7.40777791E-01	4.19898200E-02	-4.20360649E-02	4.39803547E-01	1.79462709E-01	-2.32306249E-02
1.05484357E-01	3.84828764E-01	-3.6597451E-05	8.85691869E-02	3.78613313E-01	-3.06861727E-05
7.48770155E-02	2.79485393E-01	-2.59130305E-05	4.20157379E-02	1.66391128E-01	-1.44114360E-05
-2.37050489E-02	-5.98271614E-02	8.56979215E-06			