

Table 70 Optimized **"perfect" isogrid-stiffened** equivalent elliposidal shell. Design margins from Load Set 1 (+mode 1 and +mode 2 imperfection shapes) corresponding to the design optimized with the use of only mode 1 and mode 2 imperfection shapes. These margins are developed via the seven analyses of the type listed in Table 30. Wimp = 0.0001 inch.

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A typical margin with the meanings of the indices, a, b, c, d, e, explained:

					a		b
5	3.895E-03	(STFBK1(1,1)/STFBK1A(1,1))/STFBK1F(1,1)-1; F.S.= 1.00					
		c d e	c d e		c d e	c d e	

"STFBK" means "Stiffener buckling"

a = "A" means "Allowable value"

b = "F" means "Factor of safety"

c = Imperfection mode number, (1 or 2 in the cases explored here)

d = Load set number (1 or 2 in the cases explored here)

Load set 1 means "use +mode 1 and +mode 2 imperfection shapes"

Load set 2 means "use -mode 1 and -mode 2 imperfection shapes"

e = Region number:

(1 or 2 Region 1 is from the axis of revolution to xlimit,
that is, $0 < x < xlimit$.)

Region 2 is from xlimit to the equator,

that is, $xlimit < x < \text{semi-major axis}$.)

*** RESULTS FOR LOAD SET NO. 1 (+mode 1 and +mode 2 imperfections) ***
MARGINS CORRESPONDING TO CURRENT DESIGN (F.S.= FACTOR OF SAFETY)

MARGIN CURRENT

NO.	VALUE	DEFINITION
1	-5.564E-03	(CLAPS1(1)/CLAPS1A(1)) / CLAPS1F(1)-1; F.S.= 1.00
2	2.324E-01	(GENBK1(1)/GENBK1A(1)) / GENBK1F(1)-1; F.S.= 1.00
3	1.510E+00	(SKNBK1(1,1)/SKNBK1A(1,1))/SKNBK1F(1,1)-1; F.S.= 1.00
4	1.726E+00	(SKNBK1(1,2)/SKNBK1A(1,2))/SKNBK1F(1,2)-1; F.S.= 1.00
5	3.895E-03	(STFBK1(1,1)/STFBK1A(1,1))/STFBK1F(1,1)-1; F.S.= 1.00
6	4.329E-01	(STFBK1(1,2)/STFBK1A(1,2))/STFBK1F(1,2)-1; F.S.= 1.00
7	1.821E-01	(SKNST1A(1,1)/SKNST1(1,1))/SKNST1F(1,1)-1; F.S.= 1.00
8	-1.323E-02	(SKNST1A(1,2)/SKNST1(1,2))/SKNST1F(1,2)-1; F.S.= 1.00
9	5.500E-03	(STFST1A(1,1)/STFST1(1,1))/STFST1F(1,1)-1; F.S.= 1.00
10	-2.193E-02	(STFST1A(1,2)/STFST1(1,2))/STFST1F(1,2)-1; F.S.= 1.00
11	6.640E-01	(WAPEx1A(1)/WAPEx1(1)) / WAPEx1F(1)-1; F.S.= 1.00
12	-5.564E-03	(CLAPS2(1)/CLAPS2A(1)) / CLAPS2F(1)-1; F.S.= 1.00
13	2.326E-01	(GENBK2(1)/GENBK2A(1)) / GENBK2F(1)-1; F.S.= 1.00
14	1.510E+00	(SKNBK2(1,1)/SKNBK2A(1,1))/SKNBK2F(1,1)-1; F.S.= 1.00
15	1.726E+00	(SKNBK2(1,2)/SKNBK2A(1,2))/SKNBK2F(1,2)-1; F.S.= 1.00
16	4.598E-04	(STFBK2(1,1)/STFBK2A(1,1))/STFBK2F(1,1)-1; F.S.= 1.00
17	4.367E-01	(STFBK2(1,2)/STFBK2A(1,2))/STFBK2F(1,2)-1; F.S.= 1.00
18	1.824E-01	(SKNST2A(1,1)/SKNST2(1,1))/SKNST2F(1,1)-1; F.S.= 1.00
19	-1.567E-02	(SKNST2A(1,2)/SKNST2(1,2))/SKNST2F(1,2)-1; F.S.= 1.00
20	2.061E-03	(STFST2A(1,1)/STFST2(1,1))/STFST2F(1,1)-1; F.S.= 1.00
21	-2.219E-02	(STFST2A(1,2)/STFST2(1,2))/STFST2F(1,2)-1; F.S.= 1.00
22	6.645E-01	(WAPEx2A(1)/WAPEx2(1)) / WAPEx2F(1)-1; F.S.= 1.00