

Table 64 Optimized **imperfect unstiffened** equivalent ellipsoidal shell. Design margins from Load Set 3 (+mode 3 and +mode 4 imperfection shapes) and from Load Set 4 (-mode 3 and -mode 4 imperfection shapes) corresponding to the design optimized with the use of only mode 1 and mode 2 imperfection shapes. Only the significantly negative margins are included in the lists of margins. Critical margins are in **boldface**.

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

	a		b
6	-4.265E-01	(SKNST2A(3,1)/SKNST2(3,1))/SKNST2F(3,1)-1; F.S.= 1.00	
	c d e	c d e	c d e

"SKNST" means "local skin stress"

a = "A" means "Allowable value"

b = "F" means "Factor of safety"

c = Imperfection mode number, [1 = odd (mode 3); 2 = even (mode 4)]

d = Load set number (3 or 4 in the cases explored here)

Load set 3 means "use +mode 3 and +mode 4 imperfection shapes"

Load set 4 means "use -mode 3 and -mode 4 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. 3 (+mode 3 and +mode 4 imperfections) ***

THOSE MARGINS LESS THAN UNITY CORRESPONDING TO CURRENT DESIGN

MARGIN CURRENT

NO.	VALUE	DEFINITION
1	-4.310E-01	(CLAPS1(3)/CLAPS1A(3)) / CLAPS1F(3)-1; F.S.= 1.00
2	-4.417E-01	(GENBK1(3)/GENBK1A(3)) / GENBK1F(3)-1; F.S.= 1.00
3	-1.394E-01	(CLAPS2(3)/CLAPS2A(3)) / CLAPS2F(3)-1; F.S.= 1.00
4	-1.188E-01	(GENBK2(3)/GENBK2A(3)) / GENBK2F(3)-1; F.S.= 1.00
6	-4.265E-01	(SKNST2A(3,1)/SKNST2(3,1))/SKNST2F(3,1)-1; F.S.= 1.00
7	-4.028E-01	(SKNST2A(3,2)/SKNST2(3,2))/SKNST2F(3,2)-1; F.S.= 1.00
8	-3.331E-01	(STFST2A(3,1)/STFST2(3,1))/STFST2F(3,1)-1; F.S.= 1.00
9	-2.651E-01	(STFST2A(3,2)/STFST2(3,2))/STFST2F(3,2)-1; F.S.= 1.00
10	-4.884E-01	(WAPEX2A(3)/WAPEX2(3)) / WAPEX2F(3)-1; F.S.= 1.00

*** RESULTS FOR LOAD SET NO. 4 (-mode 3 and -mode 4 imperfections) ***

THOSE MARGINS LESS THAN UNITY CORRESPONDING TO CURRENT DESIGN

MARGIN CURRENT

NO.	VALUE	DEFINITION
1	-4.634E-01	(CLAPS1(4)/CLAPS1A(4)) / CLAPS1F(4)-1; F.S.= 1.00
2	-4.990E-01	(GENBK1(4)/GENBK1A(4)) / GENBK1F(4)-1; F.S.= 1.00
3	-2.556E-01	(CLAPS2(4)/CLAPS2A(4)) / CLAPS2F(4)-1; F.S.= 1.00
4	-1.281E-01	(GENBK2(4)/GENBK2A(4)) / GENBK2F(4)-1; F.S.= 1.00

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