

Plate (thickness between 6 to 20 mm)

FEA Model.std - Whole Structure

FEA Model.std - Plate Center Stress:

Shear, Membrane and Bending / Summary / Principal and Von Mis / Summary / Global Moments / Combined Stresses /

Plate	L/C	Shear			Membrane			Bending Moment		
		SQX (local) MPa	SQY (local) MPa	SX (local) MPa	SY (local) MPa	SXY (local) MPa	Mx Kip-in/in	My Kip-in/in	Mxy Kip-in/in	
32	1 LOAD CAS	0.467	-4.421	0.197	1.311	-0.245	-0.018	-0.172	0.012	
	2 LOAD CAS	-0.008	0.346	-0.231	-0.430	0.405	0.000	0.016	-0.001	
	3 COMBINATI	0.459	-4.075	-0.034	0.881	0.160	-0.018	-0.156	0.010	
33	1 LOAD CAS	3.845	0.266	0.673	0.131	-1.983	0.158	-0.060	0.112	
	2 LOAD CAS	-0.276	-0.116	-1.330	-0.102	1.135	-0.005	0.002	-0.015	
	3 COMBINATI	3.569	0.150	-0.657	0.028	-0.848	0.152	-0.058	0.098	
34	1 LOAD CAS	-2.208	1.173	8.231	0.548	-2.739	-0.025	-0.022	0.243	
	2 LOAD CAS	-0.185	0.249	-5.128	-0.706	1.151	0.023	0.004	-0.011	
	3 COMBINATI	-2.393	1.422	3.106	-0.158	-1.588	-0.002	-0.019	0.231	

FEA Model.std - Plate Corner Stress:

Shear, Membrane and Bending /

Plate	L/C	Node	Shear			Membrane			Bending Moment		
			SQX (local) MPa	SQY (local) MPa	SX (local) MPa	SY (local) MPa	SXY (local) MPa	Mx Kip-in/in	My Kip-in/in	Mxy Kip-in/in	
32	1 LOAD CAS	5	2.615	-3.071	-0.173	-0.749	-0.048	0.013	-0.223	0.000	
		77	2.574	-5.828	-0.116	3.223	-0.060	0.074	-0.010	-0.081	
		66	-1.682	-5.848	0.687	3.415	-0.615	-0.122	-0.280	-0.005	
		74	-1.639	-2.937	0.396	-0.648	-0.603	-0.041	-0.190	0.103	
	2 LOAD CAS	5	-0.245	0.186	0.457	0.674	-0.732	0.003	0.023	-0.004	
		77	-0.240	0.511	-0.110	0.058	-0.276	-0.003	0.002	0.005	
		66	0.229	0.515	-0.886	-1.619	1.512	0.005	0.028	0.001	
		74	0.224	0.171	-0.391	-0.943	0.961	-0.004	0.013	-0.008	
	3 COMBINATI	5	2.370	-2.885	0.283	-0.075	-0.780	0.016	-0.199	0.026	
		77	2.334	-5.317	-0.225	3.281	-0.335	0.070	-0.008	-0.076	
		66	-1.453	-5.333	-0.200	1.796	0.897	-0.117	-0.252	-0.004	
		74	-1.415	-2.765	0.005	-1.991	0.358	-0.045	-0.177	0.095	

Option 1: Which values (stress or bending) should I use to determine plate thickness ok or not?

Option 2: Use plate bending Moment Mx and My to calculate Max Plate Stress and compare with allowable code-based plate stress
 → Determine steel plate thickness required

How to determine weld size using plate element output? Which values should I select in order to compare with allowable outline weld capacity?