Material properties

Material **A 537 Class 2 (USA / ASTM)**

Group Structural and constructional steels

Subgroup ASTM A 537 / A 537M Heat treated carbon-manganese-silicon steel plates intended for fusion welded pressure vessels and structures

Comment

Application

Yield Stress[MPa]			
Dimension	**Min**	**Max**	**Approx**
Plate; Quenched and tempered; t < 65 mm	415	-	-
Plate; Quenched and tempered; 65 mm < t < 100 mm	380	-	-
Plate; Quenched and tempered; 100 mm < t < 150 mm	315	-	-

Tensile Stress[MPa]			
Dimension	**Min**	**Max**	**Approx**
Plate; Quenched and tempered; t < 65 mm	550	690	-
Plate; Quenched and tempered; 65 mm < t < 100 mm	515	655	-
Plate; Quenched and tempered; 100 mm < t < 150 mm	485	620	-

Elongation A5 [%]			
Dimension	**Min**	**Max**	**Approx**
Plate; Quenched and tempered; t < 65 mm	22.0	-	-
Plate; Quenched and tempered; 65 mm < t < 100 mm	22.0	-	-
Plate; Quenched and tempered; 100 mm < t < 150 mm	20.0	-	-

Chemical Composition [%]			
Criterion	**Min**	**Max**	**Approx**
C	-	0.2400	-
Si	0.1500	0.5000	-
Mn	0.7000	1.3500	-
P	-	0.0350	-

Chemical Composition [%]			
Criterion	Min	Max	Approx
S	-	0.0350	-
Cr	-	0.2500	-
Mo	-	0.0800	-
Ni	-	0.2500	-
Cu	-	0.3500	-

- Mn Depending on thicknesses

Heat Treatment

The tempering temperature shall be not less than 595°C for not less than 1/2 hour.

Cross Reference Table		
Material	Standard	Country
A 537 Class 3	**ASTM**	USA
A 537 Class 1	**ASTM**	USA
K12437	**UNS**	USA