



API 2W Steel Plate

Overview API 2W Grade 50, Grade 50T & Grade 60

This grade is produced by the thermomechanical control process (TMCP) which yields a fine-grained steel with high strength combined with high toughness and excellent formability. The low carbon content and CEQ lead to excellent weldability. Toughness in the heat-affected zone (HAZ) and high resistance against cold cracking produce better welded structures. This can also be ABS certified.

Chemical Requirements

*Elements represented in percentage

Element	API 2W Grade 50 & 50T	API 2W Grade 60
Carbon (Max.)	0.16	0.16
Manganese		
to 1½ in. incl.	1.15-1.60	1.15-1.60
over 1 ½ in. incl.	1.15-1.60	1.15-1.60
Phosphorus (Max.)	0.03	0.03
Sulfur (Max.)	.010	.010
Silicon	0.05-0.50	0.05-0.50
Nickel (Max.)	0.75	1.0
Chromium (Max.)	0.25	0.25
Molybdenum (Max.)	0.08	0.15
Copper (Max.)	0.35	0.35
Titanium		
N 0.005	0.003-0.02	0.003-0.02
N 0.005	0.007-0.02	0.007-0.02
Columbium, max.	0.03	0.03
Nitrogen, max.	0.012	0.012
Aluminum		
Acid soluble or	0.015-0.055	0.015-0.055
total	0.02-0.06	0.02-0.06



Tensile Requirements

Property	API 2W Grade 50	API 2W Grade 50T	API 2W Grade 60
Yield Strength, ksi(MPa)			
t 1 in. (25mm)	50-75 (345-517)	50-80 (345-552)	60-90 (414-621)
t1 in. (25mm)	50-70 (345-483)	50-75 (345-517)	60-85 (414-586)
Tensile Strength, min., ksi(MPa)	65 (448)	70 (483)	75 (517)
Elongation in 2 in. (50 mm) min., %	23	23	22
Elongation in 8 in. (200 mm) min., %	18	18	16