

4145H MODIFIED HIGH TENSILE STEEL

4145H Modified is a Chromium – Molybdenum high tensile steel produced specifically for the Oil and Gas Industry and combines ductility, shock resistance and wear resistance.
Produced to conform to the API Spec 7, 4145H is used to produce Drill Collars, Kelly Bars, Connecting Rods, shafts and gears etc.

Stocked Sizes - Rounds 116 mm – 285 mm Ø

Finishes - Hot Rolled, Peeled

Related Specifications

Australia	
International	API Spec 7

Chemical Composition

	Min. %	Max %
Carbon	0.42	0.49
Silicon	0.15	0.35
Manganese	0.90	1.25
Nickel	0	0.25
Chromium	0.90	1.35
Molybdenum	0.20	0.35
Phosphorous	0	0.035
Sulphur	0	0.04
Copper	0	0.35

Mechanical Properties – Hardened & Tempered

Mechanical Property Designation	API -7	
Limited Ruling Section mm*	N/A	
Tensile Strength Mpa	Min	970 (140,000 PSI)
	Max	
0.20% Proof Stress (Yield) Mpa	Min	755 (110,000 PSI)
Elongation on %	Min	13
Izod Impact J	Min	
Charpy Impact J	Min	54
Hardness Brinell HB	Min	
	Max	352

Annealing

Heat to 815-850 Deg C. Hold until temperature is uniform throughout the section and allow to cool in furnace.