ESTIMATED MECHANICAL PROPERTIES OF STEEL

Heat Treated Bars/Minimum Mechanical Properties

Tradename or Grade	Thermal Condition	Tensile Strength (KSI) Range or Min.		Min. Yield Strength (KSI)	Min. % Elong. in 2"	Min. % Red. of Area	Surface Hardness Brinell	HRC	Machinability Rating (1212 = 100)
(Continued)									
4150 Mod. RS HR Rounds	QTSR	Thru 1½"	130	110	16	50	262/311	27/33	62
		Over 1½-2½"	125	105	16	50	262/311	27/33	62
		Over 2½-4"	115	95	16	45	262/311	27/33	62
		Over 4-7"	110	85	16	45	262/311	27/33	62
		7-9½"	105	80	15	40	262/321	27/34	62
		Over 9½"**	—	—	—	—	—	—	—

** Not governed by agency requirements. Test results vary, but approach 7-9½" properties.

Plates — Actual Properties

Properties shown for annealed and as rolled alloy plate are based on single test result. They will vary considerably dependent on thickness.

Type	Condition of Steel	Tensile Strength KSI	Yield Strength KSI	% Elong. in 2"	% Elong. in 8"	Approx. Brinell Hardness
GENERAL PURPOSE						
1008/1010	As Rolled	—	—	—	—	—
STRUCTURAL QUALITY ALLOY						
ASTM A36, ASME SA36	As Rolled	58 to 80	36 Min.	23	20	137
EX-TEN 50 ASTM A572(50)	As Rolled	65 Min.	50 Min.	21	18	143
Cor-Ten A ASTM A242	As Rolled	70 Min.	50 Min.	—	16	156
Cor-Ten B ASTM A588(A)	As Rolled	70 Min.	50 Min.	19	16	156
ASTM A656 Gr. 50	As Rolled	60 Min.	50 Min.	—	20	123/159
ASTM A656 Gr. 80	As Rolled	95 Min.	80 Min.	18	12	212/255
RQC-100	Q & T	110	100	18	—	229
T-1 Type A ASTM A514 Gr. B	Q & T	110 to 130	100 Min.	16	—	235/293
T-1 Type B ASTM A514 Gr. H	Q & T	110 to 130	100 Min.	16	—	235/293
T-1 ASTM A514 Gr. F	Q & T	110 to 130	100 Min.	16	—	235/293
T-1 Type C ASTM A514 Gr. Q	Q & T	100 to 130	90 Min.	14	—	235/293

(Continued)