



























	Grade	Color Code	Longitudinal Yield Strength		Circumferential	Tensile	Hardness	Charpy V-Notch (CVN) <sup>G,H</sup>			Source
			min. MPa	max. MPa	Compression Yield Strength min. MPa	Strength <sup>F</sup> min. MPa		max.	Value Joules	Temp. °C	
API General Service		H-40*	276	552		414					API
		J-55*	379	552		517					API
		K-55*	379	552		655					API
API Sour Service		L-80*	552	655		655	23 Rc				API
		C-90	621	724		690	25.4 Rc				API
		T-95	655	758		724	25.4 Rc				API
API High-Strength		N-80*	552	758		690					API
		C-95*	655	758		724					API
		P-110*	758	965		862					API
		Q-125*	862	1034		931		27	0	TW	API
LSS General Service		LS-65 <sup>*A</sup>	448	586		586	22 Rc	27	0	TW	LSS
LSS High Collapse		HCK-55*	379	655	517	655	21 Rc				LSS
		HCN-80*	552	758	655	690					LSS
		S-95*	655	862	655	758	31 Rc				LSS
LSS High-Collapse, Sour Service		HCL-80*	552	655	655	690 <sup>F</sup>	22 Rc				LSS
		H <sub>2</sub> S-90*	621	724	655	690	25 Rc				LSS
		H <sub>2</sub> S-95*	655	758	655	724	25 Rc				LSS
LSS Deep Well Service		HCP-110 <sup>*B</sup>	758	965		862					LSS
		HCQ-125 <sup>*C</sup>	862	965		931		27	0	TW	LSS
		LS-140*	965	1138		1034					LSS
LSS Arctic Service <sup>D</sup>		Arctic J-55*	379	552		517		27 <sup>I</sup>	-46	TW	LSS
		Arctic L-80*	552	655		655	22 Rc	27 <sup>I</sup>	-46	TW	LSS
		Arctic S-95*	655	862	655	758	31 Rc	27 <sup>I</sup>	-46	TW	LSS
		Arctic P-110*	758	965		862		27 <sup>I</sup>	-46	TW	LSS
		Arctic Q-125*	862	1034		931		27 <sup>I</sup>	-46	TW	LSS
Other		V-150	1034	1241		1103					Manuf.

#### Remarks

- A.** LS-65 meets NACE MRO175-97 requirements for use in sour service. LS-65 performance properties are based on use of L-80 coupling.
- B.** Grade LS-110 has been changed to High Collapse P-110 (HCP-110), no changes were made in any performance properties.
- C.** Grade LS-125 has been changed to High Collapse Q-125 (HCQ-125), no changes were made in any performance properties.
- D.** LSS Arctic Service grades have the same performance properties as their equivalent sizes and weights of API or LSS proprietary grades.
- E.** Minimum elongation for all products is based on API formula.
- F.** Tensile strength for pipe only. Effective for shipments January 1, 1998. HCL-80 uses API L-80 couplings.
- G.** API requires J-55 and K-55 coupling stock to have minimum CVN values of 15 ft-lbs transverse and 20 ft-lbs longitudinal.
- H.** API requires N-80 and higher grades of coupling stock to have minimum CVN values of 15 ft-lbs transverse and 30 ft-lbs longitudinal.
- I.** CVN minimum values are based on the average of three tests using 10 x 10 mm specimens. Higher minimum values are available.

\* Indicates items available from Lone Star Steel.