

## AISI 317/317L –UNS S31703 –TP317L –F317L –1.4438

ASTM/ASME UNS S31703

EURONORM 1.4438 X2CrNiMo18-15-4

DIN: w 1.4438

### PRODUCTS OF 317L AVAILABLE @KAYSUNS

- Buttwelded Pipe Fittings to ASME B16.9, MSS SP-95, EN(i.e. 45/90 elbows, tees, stub ends, return bends, caps, crosses, reducers, and pipe nipples)
- Forged Flanges to ASME B16.5/B16.47, EN1092-1, JIS B2220, (i.e. slip on, blind, weld-neck, lap joint, socket weld, Threaded, orifice flange etc)
- Forged Socket-weld Fittings, Threaded Fittings to ASME B16.11, MSS-SP 97, BS3799, JIS B2316 etc.
- Pipe & Tube (welded & seamless)
- Bars (round bars)

### GENERAL PROPERTIES

Stainless steel grade 317L is an austenitic stainless steel with a 3% minimum Molybdenum content. Low carbon version of grade 317L stainless steel with increased additions of chromium, nickel, and molybdenum for better corrosion resistance and increased resistance to chemical attack for sulfurous, acetic, formic, citric, and tartaric acids. It has the same high strength and corrosion resistance as 317 steel but can produce stronger welds due to the low carbon content. It is non-magnetic in the annealed condition but may become slightly magnetic after welding.

### CHARACTERISTICS

SS317L is a molybdenum-based austenitic stainless steel. It has stronger chemical resistance than conventional chromium-nickel austenitic stainless steels such as 304 alloy. In addition, 317L stainless steel has higher ductility, stress corrosion resistance, compressive strength and high temperature resistance than conventional stainless steel. It is a low carbon grade or “L” grade which has anti-sensitization properties during welding and during heat treatment.

Compared to traditional chrome-nickel stainless steel 304/316L, 317L stainless steel has a better resistant performance in the atmospheric and other mild corrosion. The corrosion resistance of 317L stainless steel increases with the composition increasing of molybdenum in the material. It has been verified that 317L can withstand corrosion of 5% sulfuric acid in a 120°F(49°C) environment - showing its strong corrosion resistance.

### CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Ni	Mo	N	Ti	PREN
≦0.035	≦1.00	≦2.0	≦0.045	≦0.03	18.0-20.0	11.0-15.0	3.0-4.0	-	-	-

### ASTM SPECIFICATION

Pipe Smls & Welded	Tube Smls & Weld	Sheet/Plate	Forgings	Castings	Fittings
A312	A269	A240	A182	A890	A403

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### MECHANICAL PROPERTIES PARAMETER OF ASTM 317L

Tensile Strength, Min. MPA	0.2% Yield Strength, Min. MPA	Longitudinal Min. %
515	205	35

### EQUIVALENT GRADE OF SS317L

No.	China - GB		Japan	USA		KS	EN/DIN	AS	CNS	DIN
	Grade	New(GB24511)	JIS	ASTM	UNS					Grade
1	S31708	06Cr19Ni13Mo3	SUS317	317	S31700			317	317	
2	S31703	022Cr19Ni13Mo3	SUS317L	317L	S31703	STS317L	1.4438	317L	317L	X2CrNiMo18-15-4

### IN WHAT APPLICATIONS IS 317/317L?

- Paper and pulp handling equipment
- Chemical and petrochemical processing equipment
- Condensers in fossil and nuclear fueled power generation stations
- Food processing equipment
- Textile equipment
- Power generation
- Petrochemical

