

## **SS 216L, TYPE 216L, XM-18, UNS S21603, AISI 216L, ASTM XM-18**

### **Introduction :**

Aesteiron Steels LLP, provides an extensive range of Stainless Steel 216L product, we provide all our activities to serve the trust of customers by providing them best quality products as per their satisfaction. Even, we follow moral business policies and pure transparency in all our transactions to sustains health relations with the customers.

### **Stainless Steel 216L Properties**

**SS 216L** is one of the most widely utilized precipitation hardening grades. In the solution annealed condition, it is soft and ductile and is capable of high properties with an aging treatment or single precipitation.

### **Machinability**

In the annealed condition **Type 216L** can be machined, but condition H1150M will give best results. If machining is done in this condition post machining solution treatment of parts will be needed before final hardening.

### **Heat Treatment**

CONDITION A- for 30 minutes soak it at 1900°F and cool below 60°F, for absolute martensitic conversion.

CONDITION H950- for 1 hour treat condition "A" material at 900°F, and then air cool.

CONDITION H925, H1025, H1075, H1100, H1150- for 4 hours soak solution treated material at stated temperature and then air cool.

CONDITION H1150M- for 2 hours soak solution treated material at 1400°F then air cool, for 4 hours re-heat to 1150°F and air cool.

### **Welding**

**XM -18** can be welded by standard fusion and resistance methods, and it should not be joined by oxyacetylene welding.

### **Forging**

Before forging soak **ASTM XM-18** for 1 hour at 2150°F and do not work below 1850°F. And before final hardening post-work solution treatment is needed.

### **AISI 216L Applications**

**UNS S21603** is usually used in industries such as aerospace, marine, offshore, food, paper industry and oil fields. It is used for elements such as fasteners, bushing, couplings, fittings, screws, studs, valves, and wear rings.

## Chemical Composition

Element	%
Carbon	0.03 max
Manganese	7.5-9.0
Phosphorus	0.045 max
Sulfur	0.030 max
Silicon	1.00max
Chromium	17.5-22.0
Nickel	7.5-9.0
Nitrogen*	0.25-0.50
Molybdenum	2.00-3.00
Iron	55.395-65.25

## Mechanical Properties

Ultimate Tensile Strength [Mpa] psi	690 [100000]	690 [100000]	690 [100000]	690 [100000]	690 [100000]	690 [100000]
Yield Strength [Mpa] psi	415 [60200]	415 [60200]	415 [60200]	415 [60200]	415 [60200]	415 [60200]
Elongation in 2 inches, %	40 min	40 min	40 min	40 min	40 min	40 min
Reduction in Area, %	-	-	-	-	-	-
Hardness, Rockwell B	100 max	100 max	100 max	100 max	100 max	100 max

### Standard Available in forms :

- ASTM A182/ ASME SA182 Stainless Steel Pipe Fittings
- ASTM A213 / ASME SA213 Seamless Stainless Steel Pipes
- ASTM A240/ ASME SA240 Stainless Steels Sheets / Plates
- ASTM A249/ ASME SA249 Stainless Steel Welded Tubes
- ASTM A269/ ASME SA269 Stainless Steel Tubes
- ASTM A270/ ASME SA270 Stainless Steel Sanitary Tubes
- ASTM A312/ ASME SA312 Stainless Steel Pipes
- ASTM A403/ ASME SA403 Stainless Steel Pipe Fittings
- ASTM A554/ ASME SA554 Stainless Steel Welded Tubes
- ASTM A731/ ASME SA731 Stainless Steel Pipes
- ASTM A789/ ASME SA789 Stainless Steel Tubes
- ASTM A790/ ASME SA790 Stainless Steel Pipes
- ASTM A791/ ASME SA791 Stainless Steel Tubes

### Products Available in forms :

- SS 216L, TYPE 216L, XM-18, UNS S21603 Plates
- SS 216L, TYPE 216L, XM-18, UNS S21603 Pipes
- SS 216L, TYPE 216L, XM-18, UNS S21603 Round Bar
- SS 216L, TYPE 216L, XM-18, UNS S21603 Tube
- SS 216L, TYPE 216L, XM-18, UNS S21603 Flanges
- SS 216L, TYPE 216L, XM-18, UNS S21603 Wire
- SS 216L, TYPE 216L, XM-18, UNS S21603 Fittings



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