

SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309, ALLOY 309, Grade 309, AFNOR Z 15 CN 24-13, ASTM 309

Introduction :

Stainless Steel 309 is austenitic stainless steel which is commonly used for elevated temperature applications. Due to high chromium and nickel content provides comparable superior resistance to oxidation and corrosion resistance. Similar to 304 stainless steel 309 stainless steel can also be machined. By using the method of resistance and fusion grade 309 Stainless Steel can also be welded. For welding 347H stainless steel oxyacetylene welding is not recommended. 309 stainless steel grade is heated at 1177°C followed by reheating at 982°C and rapidly it can be then quenched. To restore its corrosion resistance property post-work annealing can be done. If grade 309 stainless steel has high work hardening rate then also it can be stamped, headed, upset and drawn. In order to reduce internal stress annealing is performed after cold working. 309 stainless steel is annealed at 1038-1121°C followed by quenching in water. Hardness and strength of 309 steel can be increased by cold working

Chemical Composition

	SS 309	WNR 1.4828	UNS S30900	AISI 309	ALLOY 309	GRADE 309	AFNOR Z 15 CN 24-13	ASTM 309
Carbon	0.20 max	0.20 max	0.20 max	0.20 max	0.20 max	0.20 max	0.20 max	0.20 max
Manganese	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max	2.00 max
Phosphorus	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max	0.045 max
Sulfur	0.030max	0.030max	0.030max	0.030max	0.030max	0.030max	0.030max	0.030max
Silicon	0.75max	1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5
Chromium	22.0-24.0	19.0-21.0	19.0-21.0	19.0-21.0	19.0-21.0	19.0-21.0	19.0-21.0	19.0-21.0
Nickel	12.0-15.0	11.0-13.0	11.0-13.0	11.0-13.0	11.0-13.0	11.0-13.0	11.0-13.0	11.0-13.0

Mechanical Properties

	SS 309	WNR 1.4828	UNS S30900	AISI 309	ALLOY 309	GRADE 309	AFNOR Z 15 CN 24-13	ASTM 309
Ultimate Tensile Strength, ksi	95(655)	95(655)	95(655)	95(655)	95(655)	95(655)	95(655)	95(655)
0.2% Yield Strength, ksi	50(345)	50(345)	50(345)	50(345)	50(345)	50(345)	50(345)	50(345)
Elongation in 2 inches, %	45	45	45	45	45	45	45	45
Reduction in Area, %	-	-	-	-	-	-	-	-
Hardness, Rockwell B	85	85	85	85	85	85	85	85

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

Products Available in forms :

- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Plates
- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Pipes
- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Round Bar
- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Tube
- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Flanges
- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Wire
- SS 309, Type 309, WNR 1.4828, UNS S30900, AISI 309 Fittings

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

Fabrication and Heat Treatment

Machinability

- Grade 309 stainless steel can be machined similar to that of 304 stainless steel.

Welding

- Grade 309 stainless steel can be welded using fusion or resistance welding methods.
- Oxyacetylene welding method is not preferred for welding this alloy.

"Aesteiron House", 107, Kika Street, 4th Floor, Gulalwadi, Mumbai - 400 004, India.

info@aesteiron.com

www.aesteiron.com

© 2016-17. The content on this website is owned by Registrant of domain www.aesteiron.com , Do not copy any content (including images) without prior written consent. Manufacturer, Stockholder, Suppliers, Traders, Wholesaler, Dealer, Distributor, Importer, Exporter, Stockiest of Alloy Steel Pipe Tubes, Stainless Steel Pipe Tube & Carbon Steel Pipe Tube



Hot Working

- Grade 309 stainless steel is hot worked at 1177°C (2150°F) followed by reheating at 982°C (1800°F).
- It can be then quenched rapidly.
- Post-work annealing can be done to restore its corrosion resistance property.

Cold Working

- Grade 309 stainless steel can be headed, upset, drawn, and stamped even though it has high work hardening rate.

Annealing

- Annealing is performed after cold working in order to reduce internal stress.
- Grade 309 stainless steel is annealed at 1038-1121°C (1900-2050°F) followed by quenching in water.

Hardening

- Grade 309 stainless steel does not react to heat treatment.
- Strength and hardness of this alloy can be increased by cold working.

Applications

- Boiler baffles
- Furnace components
- Oven linings
- Fire box sheets
- Other high temperature containers.



"Aesteiron House", 107, Kika Street, 4th Floor, Gulalwadi, Mumbai - 400 004, India.

info@aesteiron.com

www.aesteiron.com

© 2016-17. The content on this website is owned by Registrant of domain www.aesteiron.com , Do not copy any content (including images) without prior written consent. Manufacturer, Stockholder, Suppliers, Traders, Wholesaler, Dealer, Distributor, Importer, Exporter, Stockiest of Alloy Steel Pipe Tubes, Stainless Steel Pipe Tube & Carbon Steel Pipe Tube