Type 347 Stainless Steel

1.Stainless Steel Plate

Type 304 | Type 304L | Type 304H | Type 316 | Type 316L | Type 316H | Type 321 | Type 347

Type 410 | UNS S32205 Duplex | UNS S32750 Super Duplex | UNS S32760 Super Duplex

2.Type 347 stainless steel with added Columbium which helps to the stabilize the material. 347 stainless steel is variant of the basic austenitic 18/8 Grade 304 with added Columbium – the introduction of Columbium stabilizes the steel and eliminates carbide precipitation which subsequently causes intergranular corrosion.

3.The steel has excellent forming and welding qualities and excellent toughness even at cryogenic temperatures.

4.Benefits of 347 Stainless Steel

Higher creep stress and rupture properties when compared with 304

Ideal for high temperature service

Overcomes sensitization and intergranular corrosion concerns

Can be used in elevated temperature applications for ASME Boiler and Pressure Vessel Code applications

Due to stabilisation the material offers better overall corrosion resistance when compared to 304/304L

Excellent mechanical properties

A high carbon version (347H) is also available

5.Typical Uses

Heat exchangers

High temperature steam service

High temperature chemical process

Both 347/347H are used primarily in elevated temperature applications.

6.Chemical Composition

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | C | Si | Mn | P | S | Cr | Mo | Ni | N | Other |
| S34700 | 347 | 0.08 | 0.75 | 2.00 | 0.045 | 0.030 | 17.00/19.00 | – | 9.00/13.00 | – | Cb:10xC1.00 |

7.Mechanical Properties

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | Proof Stress 0.2% (MPa) | Tensile Strength (MPa) | Elongation A5(%) | Hardness Max | |
| HB | HRB |
| S34700 | 347 | 205 | 515 | 40 | 201 | 92 |

8.To find out more about Type 347 and Grade 347H stainless steel, Please contact us.