Type 316 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 SuperDuplex | UNS S32760 SuperDuplex

2.Ofter referred to as a marine grade stainless steel due to its resistance to chloride corrosion, Type 316 is another popular stainless steel grade. After 304, this is the most common stainless steel on the market. Again it is an austenitic grade with the addition of 2–3% molybdenum which further improves corrosion resistance. It is often referred to as a marine grade stainless steel because of its effective resistance to chloride corrosion in comparison to other stainless steel grades.

3.The material has superior welding and forming qualities. Grade 316 will require post-weld annealing to promote maximum corrosion resistance, though this is not necessary if Type 316L is used.

4.Origins from the Paper Industry

The steel was initially produced for the paper producing industry as it has been shown to be highly resistant to the sulphur compounds used in paper processing.

5.Typical applications for this material are now widespread due to its superior corrosion resistance properties when compared to Grade 304. Type 316 stainless can be found in heat exchangers, pharmaceutical equipment, dairies and breweries, marine fittings, coastal architectural fascia and fittings and in food preparation areas.

6.316 & 316L steel plate and pipes have common properties and are often stocked with Dual Certification, where it is determined that both have properties and composition which comply with both steel types.

7.Type 316H is excluded from this scenario by virtue of the fact that unlike 316 & 316L, 316H is engineered to work in elevated working temperatures.

8.Chemical Composition

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | C | Si | Mn | P | S | Cr | Mo | Ni | N |
| S31600 | 316 | 0.08 | 0.75 | 2.00 | 0.045 | 0.030 | 16.00/18.00 | 2.00/3.00 | 10.00/14.00 | 0.10 |

9.Mechanical Properties

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | Proof Stress 0.2% (MPa) | Tensile Strength (MPa) | Elongation A5(%) | Hardness Max | |
| HB | HRB |
| S31600 | 316 | 205 | 515 | 40 | 217 | 95 |

10.For more information about the benefits of utilising type 316 stainless steel alloy and for price and sizes, please contact us.