Type 410 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.As a martens tic stainless steel, Type 410 can be heat treated under the quenched and tempered method. 410 stainless steel is a harden able martens tic stainless steel alloy. Unlike austenitic grades it can be heat treated ("quench and temper") to generate high strength with good ductility. 410 alloy is required when strength, hardness and wear resistance is required with some corrosion resistance.

3.Due to the hardening capabilities of this steel, other properties and the resulting performance of this material are somewhat compromised. The alloy can only effectively be used in mildly corrosive environments. The operating temperature range is limited a) a loss of strength by over tempering at elevated temperatures and b) a loss of ductility at sub-zero temperatures.

4.Type 410 is officially a stainless steel but characteristically the material is actually a compromise of high carbon steel alloy (which promotes wear resistance) with chromium stainless steel (which promotes corrosion resistance).

5.This steel is ideal for use in the manufacture of highly stressed parts found in a variety of industries including petrochemical, automotive and power generation.

6.Chemical Composition

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | C | Si | Mn | P | S | Cr | Mo | Ni | N | Other |
| S41000 | 410 | 0.08/0.15 | 1.00 | 1.50 | 0.040 | 0.030 | 11.5/13.5 | –– | 0.75 | –– | –– |

7.Mechanical Properties

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| UNS No | Grade | Proof Stress 0.2% (MPa) | Tensile Strength (MPa) | Elongation A5 (%) | Hardness (Max) | |
| HB | HRB |
| S41000 | 410 | 205 | 450 | 20 | 217 | 96 |

8.We can supply you with high quality 410 stainless steel worldwide – to receive a competitive quotation please contact us.s