The short introduction of Inconel 600/2.4816

Inconel 600/2.4816 is a nickel-chromium-iron alloy. Inconel600 has good high temperature corrosion resistance and oxidation resistance, excellent hot and cold processing and welding performance, and has satisfactory heat strength and high plasticity below 700 °C.

Inconel 600 alloys can be strengthened by cold working, or by electric resistance welding, fusion welding or brazing. It is suitable for making anti-oxidation parts with low load below 1100 °C.

Application field

● Thermowell in an erosive atmosphere

● Vinyl chloride monomer production: anti-chlorine gas, hydrogen chloride, oxidation and carbonization corrosion

● Uranium oxidation to hexafluoride: anti-hydrogen fluoride corrosion

●The production and use of corrosive alkali metals, especially the use of sulfides

●Using chlorine gas to make titanium dioxide

●Production of organic or inorganic chlorides and fluorides: corrosion resistance to chlorine and fluorine

Nuclear reactor

●The retort and components in the heat treatment furnace, especially in carbonized and nitriding atmospheres

● Catalytic regenerators used in petrochemical production are recommended to use alloy 600H in applications above 700 ° C for longer service life.

Similar grade

GH3600, GH600 (China), NC15Fe (France), W. Nr. 2.4816, NiCrl5Fe (Germany), NA14 (UK) Inconel 600, UNS NO6600 (USA) NiCrl5Fe8 (ISO)

Inconel 600 implementation standard: UNS N06600, DIN/EN 2.4816, ASTM B168, ASME SB-168, AMS 5540, NCF 600.

Filler metal

Inconel600 is suitable for welding with the same material or other metals using any conventional welding process, such as tungsten electrode inert gas shielded welding, plasma arc welding, manual sub-arc welding, metal inert gas shielded welding, molten inert gas shielded welding, in which pulsed arc Welding is the preferred solution. When using manual arc welding, it is recommended to use (Ar+He+H2+CO2) a mixture of various protective gases.

Incoloy 825 must be welded in an annealed condition and cleaned with stains, dust and various markings using a stainless steel wire brush. In order to obtain the best root weld quality when welding the root of the weld, the operation must be very careful (argon 99.99) so that the weld does not produce oxide after the root has been welded. The color produced by the weld heat affected zone should be brushed with stainless steel when the weld zone is not cooled.

Products show and scope



Chemical composition

C %	Si ≤%	Mn ≤%	P ≤%	S ≤%

0.05-0.10	0.50	1.00	0.02	0.015

Cr %	Ni %	Ti ≤%	Cu %	Al %
14.0-17.0	≤72.0	0.30	≤0.50	≤0.30

Co %	B %	Fe %
≤1.50	≤0.006	6.00-10.0

Mechanical properties

0.2% Yield strength Rp ≥N/mm^2	Tensile strength Rm N/mm^2	Elongation A_5 ≥%	Resistant on air up to °C	Modulus of elasticity kN/mm^2
175	490-640	35	1150	214