The short introduction of Inconel 601/ N06601/2.4851

Inconel 601/2.4851 is a nickel-chromium-iron alloy. Inconel 601 has excellent high temperature corrosion resistance and oxidation resistance, excellent hot and cold processing and soldering properties. Inconel 601 has satisfactory thermal strength and high plasticity below 700 °C. The alloy can be strengthened by cold working, or it can be connected by electric resistance welding, fusion welding or brazing. It is suitable for making anti-oxidation parts with low load below 1100 °C.

The chemical composition of Inconel 601:

C %	Si ≤%	Mn ≤%	P ≤%	S ≤%
0.03-0.10	0.50	1.00	0.02	0.015

Cr %	Ni %	Ti ≤%	Cu %	Al %
21.0-25.0	58.0-63.0	≤0.50	≤0.50	1.00-1.70

Co %	Fe %	Nb %
≤1.50	≤0.006	≤18.0

The mechanical properties of Inconel 601:

Hardness HB 30 ≤HB	0.2% Yield strength Rp ≥N/mm^2	Tensile strength Rm N/mm^2	Elongation A_5 ≥%	Resistant on air up to °C
220	205	550-750	30	1200

The features of Inconel 601:

1. Excellent oxidation resistance at high temperatures

2. Great anti-carbonization

3. Excellent oxidation resistance sulfur-containing atmosphere

4. Good mechanical properties at room temperature and high temperature

5. Good resistance to stress corrosion cracking, due to the control of carbon content and grain size, Inconel 601 has a high creep rupture strength, so Inconel 601 is recommended in the field above 500 °C.

The corrosion resistance of Inconel 601:

An important property of Alloy 601 is its ability to resist oxidation at temperatures up to 1180 °C. Even under very harsh conditions, such as heating and cooling cycles, 601 can form a dense oxide film with high resistance to spalling. 601 has good resistance to carbonization. Due to its high chromium and aluminum content, 601 has excellent oxidation resistance in high temperature sulfur–containing atmospheres.

The application of Inconel 601:

1. Pallets, baskets and fixtures for heat treatment plants.

2. Wire strand annealing and radiant tubes, high speed gas burners, wire mesh belts in industrial furnaces.

3. Isolation tanks in ammonia reforming and catalytic support grids in the manufacture of nitric acid.

4. Exhaust system components

5. Combustion chamber of solid waste incinerator

6. Pipe support and soot treatment department.

Products show and scope

