Hastelloy C22 Pipe & Tube (UNS N06022/ WNR 2.4602)

Alloy C22 is an omnipotent of nickel, chromium and molybdenum mixed alloy, with better corrosion resistance performance than other alloys. It has a good resistance performance to pitting, crevice corrosion and stress corrosion cracking, have excellent inoxidability water medium performance, including the wet-chlorine, nitric acid or oxidizing acid mixed acid with chloride ion. It possesses perfect resistance to oxidation and reduction of processing environment then it can be used in some complicated environment or with many different manufacture target factory depend on the omnipotent performance.

Hastelloy C22 Alloy possess prominent resistance performance to different chemical environments, including strong oxidizing matter, such as copper chloride, iron chloride, chlorine, acetic acid, heat pollution liquid, formic acid, acetyl oxide, seawater and salting liquid and soon. Hastelloy C22 can resist the grain boundary precipitate form when jointing heat affected zone, this performance made it can applied in many kinds of chemical processing.

Hastelloy C22 Corrosion resistance

It suits many kinds of chemical process industry which contain the oxidizing medium and reductant. Its high molybdenum and chromium content make it can withdraw the chloride corrosion, and tungsten makes it corrosion resistance better. It is one of a few material that can resist the corrosion of moist chlorine, hypochlorite and chlorine dioxide, this alloy have prominent corrosion resistance to high concentration chlorate.

Hastelloy C22 Chemical Composition

Alloy	%	Ni	Cr	Mo	Fe	W	C	Si	Co	Mn	V	P	S
N06022	Min.	balance	20.0	12.5	2.0	2.5							
N06022	Max.	balance	22.5	14.5	6.0	3.5	0.015	0.08	2.5	0.50	0.35	0.02	0.02

Hastelloy C22 Physical Properties

Density	8.69 kg/dm³ 0.314lb/in.³
Melting Point	1325-1370 °C

Hastelloy C22 Alloy Mechanical Properties

ASTM B622 ASME SB 622 N06022 Hastelloy C22 Alloy minimum mechanical properties in the room temperature

Alloy state	Tensile strength Rm N/mm²	Yield strength Rp0.2N/mm²	Elongation A 5 %
N06022	690	310	45

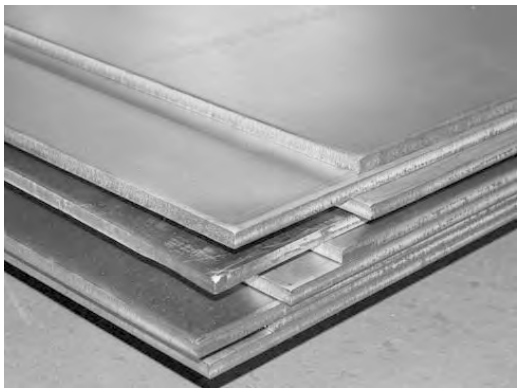
Hastelloy C22 Application

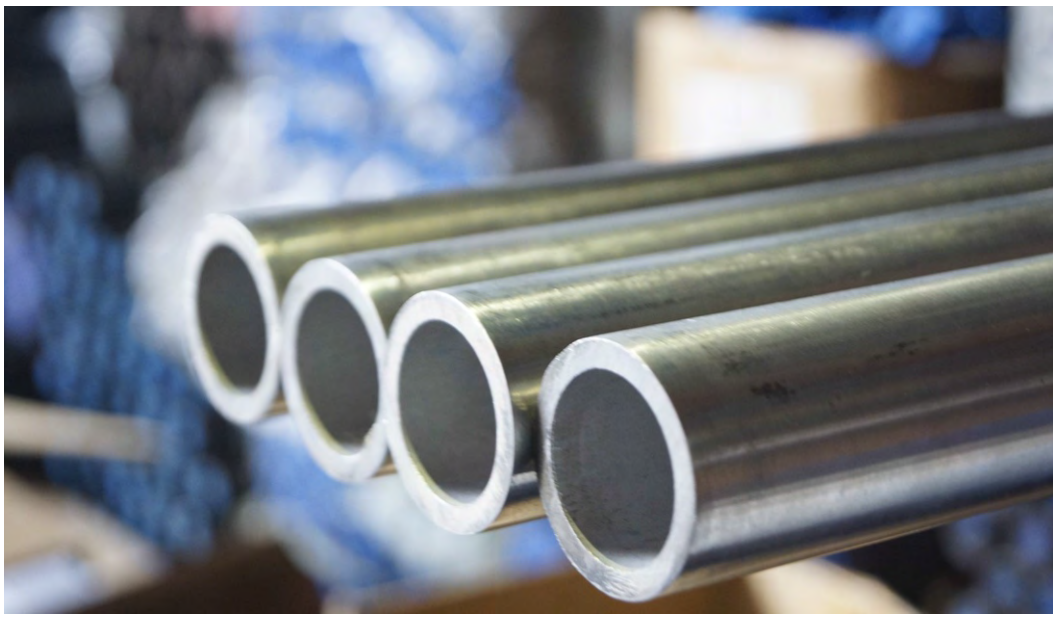
It is widely used in the chemical field and petrifaction field, such as the element of chloride organic and catalyze system. This material especially suit for high temperature environments, impure inorganic acid and organic acid, sea-water corrosion environments.

Hastelloy C22 Other application:

1. Acetic acid/acetyl oxide
2. Acid dipping
3. Cellophane paper manufacture
4. Chloride system
5. Complicated mixed acid

6. Electrogalvanizing grooveroller
7. Expansion bellows
8. Flue gas washer system
9. Geothermal well
10. Fluorine hydride furnace cleaner
11. Incineration cleaner system
12. Nuclear fuel regeneration
13. Pesticide manufacture
14. Phosphoric acid manufacture
15. Acid cleaning system
16. Plate heat exchanger
17. Selectivity filter system
18. Sulfur dioxide cooling tower
19. Sulfonating system
20. Tubing heat exchanger
21. Resurfacing welding valve





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