

Alloy 20 (UNS 08020)

Description

A high nickel, high chromium stainless steel stabilized with columbium (to reduce carbide precipitation during welding).

Advantages

- ✓ Excellent resistance to corrosion
- ✓ Superior resistance to stress-corrosion cracking in hot sulfuric acid (20%-40%)

Limitations

- ✓ Preheat to 480°C before immersion in molten metals above 1100°C

Maximum exposure temperature

2300°F (1280°C)

Chemical composition

Ni	32%-38%
Cr	19%-21%
Cu	3%-4%
Mo	2%-3%
Mn	2.0%*
Si	1.0%*
C	0.07%*
P	0.045%*
S	0.035%*
Cb	Trace
Ta	Trace

*Maximum

Thermal Conductivity

Low (14.0 W/mK at room temperature)

Typical applications

- ✓ Cement kilns
- ✓ SO₂ scrubbers
- ✓ Petrochemical applications such as mixing tanks, reactors, pickling equipment and heat exchangers
- ✓ Also used in pharmaceutical, food, solvent and explosives manufacturing