925

CARPENTER TECHNOLOGY

925 is a nickel-iron-chromium superalloy with high strength and excellent corrosion resistance.

This alloy **obtains its high strength through the precipitation of gamma prime (Ni3(Ti, Al) - γ') during aging heat treatment.** The combination of nickel, chromium, copper, and molybdenum provides excellent resistance to stress-corrosion, pitting, and crevice corrosion in both oxidizing and reducing environments.

Similar alloys: 625, 718, G27

KEY FEATURES OF 925

- **Corrosion resistance:** The excellent corrosion resistance of 925 makes it a good candidate where high strength and corrosion resistance is desired. It exhibits a high resistance to all forms of corrosion in both oxidizing and reducing environments.
- **Applications:** 925's applications include down-hole and surface gas well components, shafting products, pumps, valves, and fasteners.
- **Ideal for extreme environments:** 925 has been particularly useful in sour gas wells at both high temperatures and high pressures where it resists environmental cracking.
- **Toughness:** 925 exhibits good impact toughness down to -75°F (-60°C), while maintaining high strength up to 1200°F (650°C).
- **Workability:** 925 has good machinability in both the solution treated and aged condition. The alloy is readily weldable when matching composition filler material is used.
- **Cost-effective:** 925 requires lower investment and lifecycle costs when compared to API grade 718.

Explore 925 in depth, along with our full alloy portfolio
CarpenterTechnology.com/Performance