

HASTELLOY® C-22® FAQ

IS C-22 THE SAME AS C-276?

In many applications Hastelloy C-22 and C-276 can be used interchangeably. However, they are different nickel alloys. Haynes International, the original manufacturer of both materials, states C-22 has “better overall corrosion resistance than other Ni-Cr-Mo alloys available today, including Hastelloy C-276 and C-4 alloys, as well as alloy 625.”

C-22 contains 22% chromium, compared to the 16% in C-276, which is one factor contributing to C-22’s improved performance.

IS INCONEL ALLOY 22 SAME AS HASTELLOY C-22?

Inconel Alloy 22 and Hastelloy C-22 are alloys with the same UNS number, N06022. Inconel is a brand name of Special Metals Corporation, and Hastelloy is a brand name of Haynes International. Haynes International is the original inventor of this alloy. Allegheny Ludlum also makes Alloy 22. C-22 is a registered trademark of Haynes.

ARE WELD INSERT RINGS OR SPECIAL WELDING WIRES REQUIRED TO JOIN C-22 COMPONENTS?

Due to very low carbon content, welded wrought C-22 alloy does not form the microstructures that are deficient in corrosion-resistant elements typically produced in stainless steel and 6% molybdenum alloys during welding. Therefore, overalloying with weld insert rings or other higher alloy filler material is usually not required.

CAN AL-6XN ALLOY BE WELDED TO C-22?

Hastelloy C-22 tubing and fittings can be welded directly to AL-6XN tubing and vessels without weld insert rings. If filler wire is required to make the weld, C-22 filler wire (ER NiCrMo-10) is recommended. If the surface area of the AL-6XN portion of the weldment is much greater than the surface area of the C-22 alloy component, the likelihood of galvanic corrosion attack is minimized.

IS C-22 STAINLESS STEEL?

Hastelloy C-22 is a nickel alloy with 56% nickel, 13% molybdenum, and 22% chromium. N06022 is the UNS number with other names such as Inconel 22, Alloy 22, AL 22, etc.

DOES HASTELLOY C-22 EXHIBIT WELDABILITY LIKE OTHER NICKEL ALLOYS?

Hastelloy C-22 exhibits excellent weldability, is ductile, and is easily fabricated into industrial components like the other nickel alloys.