WINK'S WORDS
NEWS & VIEWS ABOUT NUTS AND BOLTS

A Nickel for Your Thoughts!

If you are concerned about the severe corrosive or high temperature environments to which your fasteners are to be subjected, think NICKEL!

Fastener alloys with high nickel content—from 32.5% to 99.5%—exhibit a resistance to corrosion that is greater than stainless steels, and remarkable mechanical properties at both cryogenic and ultra-high temperatures, such as found in an oil field, refinery, food and chemical processing applications, and in most metallurgical operations, such as smelting, heat treating, etc.

WINK can presently supply you with fasteners in a number of these high nickel alloys, including the following:

Hastelloy C 22**: 60% Nickel, 16% molybdenum, 15% chromium. Exceptional resistance to oxidizing solutions, especially those containing chlorides. Resists hydrochloric acid up to 120°F and acid chlorides and phosphates. Has high strength at extremely high temperatures. Plus outstanding resistance to pitting, crevice corrosion and stress-corrosion cracking.

Alloy 276 (Hastelloy 276**): Properties similar to Hastelloy C 22. It's one of the few materials that withstand corrosive effects of wet chlorine gas, hypochlorite and chlorine dioxide.

Inconel*: 70% nickel, 12% chromium, 2% iron. Good strength and corrosion resistance at high temperatures. Resists both oxidizing and reducing conditions. Terrific atmospheric corrosion resistance, including marine atmospheres.

Monel 400*: ASTM B164 Class A. Approximately 65% nickel, 30% copper. Used where high strength and corrosion resistance are required. Resists sea water, dilute sulfuric acid and strong caustic solutions. Widely used in marine and chemical processing applications because of its resistance to most alkalis, salts, waters, organic substructures and atmospheric conditions at normal and elevated temperatures. Generally excellent in reducing atmospheres, but poor under oxidizing conditions.

Monel 405*: ASTM B164 Class B. Properties similar to Monel 400, but easier to machine due to higher sulfur content. Generally used for studs, nuts, locknuts and machined parts.

Monel 500* ("K" Monel): 63% minimum nickel, 30% copper, 2-3% aluminum. The addition of the aluminum allows the material to be age hardened which increases its strength. Its other characteristics are similar to 400.

Alloy 20: Approximately 34% nickel, 20% chromium, balance iron. This is a high nickel stainless steel containing about 4 times as much nickel as the 18-8 austenic stainless steels. The high nickel content makes it the most corrosion resistant of the stainless alloys, especially in resisting stress corrosion cracking and hot sulfuric acid.

We also work with a number of fastener manufacturers producing other unique or exotic high nickel alloy fasteners to meet severe service conditions.

For all your special fastener requirements:

Just Call, Fax or Email!

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