

TOWNLEY

Engineering & Manufacturing Co., Inc.

FOUNDRY

NIHARD 4

Mechanical Properties

Tensile Strength	75-110 KSI
Brinell Hardness	550 Min
Izod AB Impact, ft. lb.	35-45
Density, lb. per cu. in.	.275 - .280

Chemical Analysis

Carbon	2.5 - 3.6%
Manganese	1.3% Max
Silicon	1 - 2.2%
Chromium	7 - 11%
Nickel	5 - 7%
Phosphorus	.10% Max
Sulfur	.15% Max

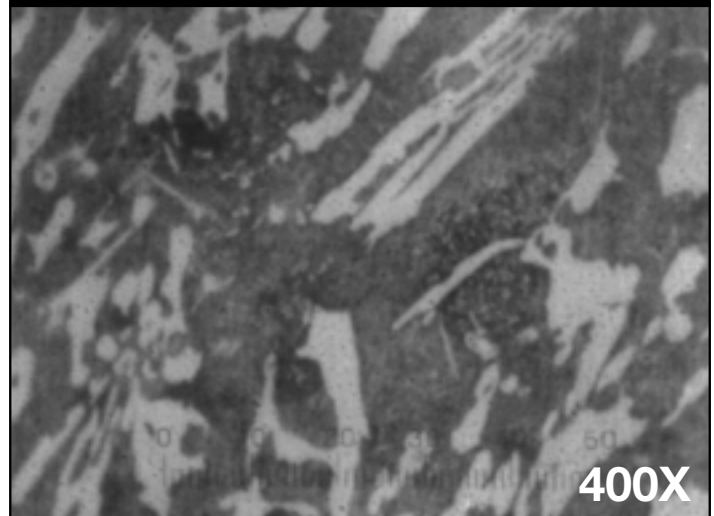
Nihard 4 is a nickel-chromium white cast iron which provides consistent wear life in a variety of applications including slurry pumps, mill liners, pipe fittings, wear backs, log teeth, pulverizer parts and other wear resistant castings. Over fifty years of use in industrial applications has proven this alloy to be a cost effective solution to many wear problems.

By virtue of its alloy content, Nihard in the mold-cooled condition possesses a matrix structure that is akin to heat treated steel. It also contains a multitude of refined carbides which make an important contribution to its abrasion resistance. The high chromium level and eutectic composition of Nihard 4 results in discontinuous very hard carbides of the $(CrFe)_7C$ type with the advantage of a lower carbon, extremely tough, high-nickel matrix martensite.

Microstructure



Microstructure



Samples of each heat are analyzed prior to pouring to insure exact metal in the chemistry. Microstructural analysis are performed randomly and each casting is checked for proper hardness at several intervals during production.

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*We
Can
Do
That.*

1.800.342.9920 www.townley.net