

# HC34 HIGH CHROME WHITE IRON

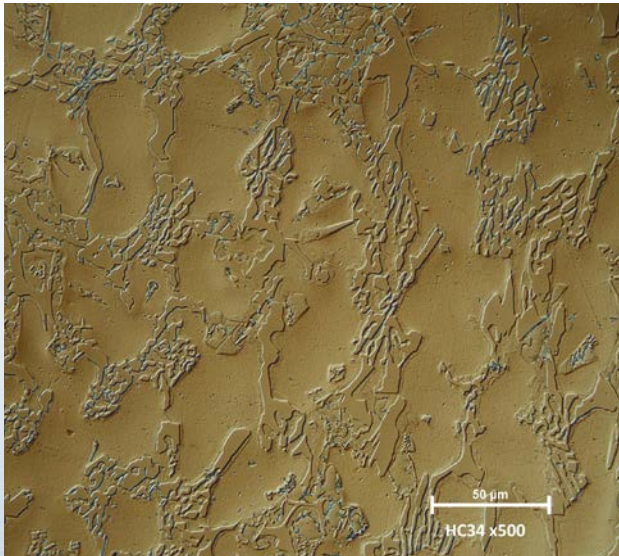
Closest ASTM / Specification A-532 - 75 a Class III, Type A

Townley's HC34 alloy has reduced carbon level and increased overall alloy content to provide improved corrosion resistance. In particular, HC34 was developed for application in FGD / Absorber Recycle pumps in the coal fired power industry where slurry conditions typically have a nominal pH of 5, operating temperatures of 140°F, less than 15,000 PPM chlorides and solids concentrations of 15%.

## HC34-C (3 – 5 pH, Chlorides: 15,000 – 40,000 ppm)

For more aggressive corrosive applications, custom formulations of this alloy with overall increased alloy content and chromium to carbon ratios, obtain a stainless steel matrix and a Carbide Volume Fraction (CVF) of 20% minimum. The carbide structures are Type  $M_7C_3$  to provide excellent abrasion resistance as well. Both matrix and carbides resist corrosion well giving this alloy superior performance characteristics in these applications.

## MICROSTRUCTURE



## Mechanical Properties

Density	0.274 lbs/in <sup>3</sup>
Brinell Hardness	440 - 550 min
Tensile Strength	72.5 - 86.5 KSI

## Chemical Analysis

Carbon	2.40% MAX
Manganese	0.4% - 1.40%
Silicon	0.4% - 1.40%
Chromium	34.00% MAX
Molybdenum	4.00% MAX
Nickel	2.80% MAX
Copper	2.00% MAX
Phosphorus	0.10% MAX
Sulfur	0.06% MAX
Iron	Balance

Samples of each heat are analyzed prior to pouring to insure exact chemical composition. Microstructural analyses are performed randomly and each casting is checked for proper hardness at several intervals during production.

# TOWNLEY

Engineering & Manufacturing Co., Inc.

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