

GASITE® F30G

BASIC SPECIFICATION

Erosion-corrosion resistant white iron alloy.

RELATED STANDARDS

F30G is generally covered by ASTM A532-93a.

MECHANICAL PROPERTIES

Tensile Strength..... 80 - 120 KSI
Hardness (minimum).....400--590HB/41-55HRC
(per ASTM A532)
Temperature RangeUp to 160 degrees F

MICROSTRUCTURE

The microstructure of F30G alloy consists of approximately 30% (vol.) refined carbides in a complex matrix of austenite, ferrite and/or martensite. This ideal microstructure offers excellent combined erosion-corrosion resistance and mechanical properties.

WEAR RESISTANCE

F30G has a pure wear resistance lower than regular martensitic high-chromium white iron such as 28G, but several times better than duplex stainless steels such as CD4MCu (Figure 1).

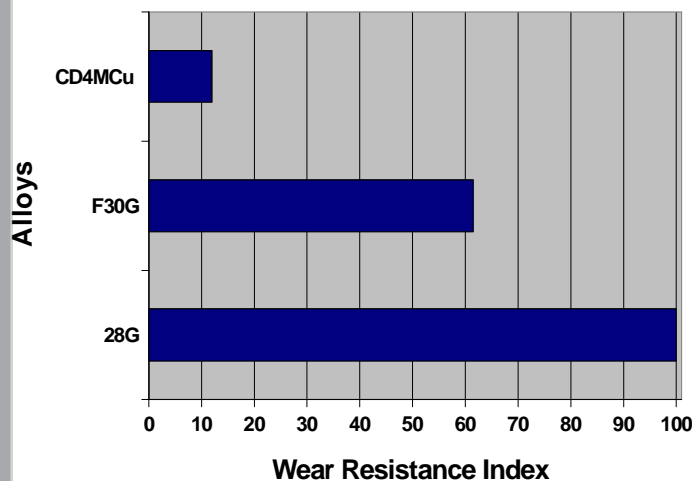


Figure 1, Wear Resistance Index for Selected Alloys
(The higher the index number, the better the wear resistance)

CORROSION RESISTANCE

F30G offers good corrosion resistance in many wear applications such as FGD. The general pH range and chloride limit of this alloy for FGD services are 4-7 (or higher) and up to 50,000ppm, respectively. The pH and chloride limits vary with chemical contents, temperature and other factors.

CHEMICAL SPECIFICATION

F30G contains relatively low carbon and ultra-high chromium. The general chemistry is confidential.

HEAT TREATMENT

Thermal treatment is applied to this alloy to achieve ideal casting properties.

TEST SPECIMENS AND CERTIFICATIONS

A chemical analysis of each heat is conducted prior to pouring. For further quality control, GIW pours test bars from random heats. After heat treatment, the tensile strength and hardness of the test bars are measured and recorded, and the casting is checked for uniform hardness at several locations.

APPLICATION

F30G alloy is designed for manufacturing pump parts and other castings for wear-corrosion applications.

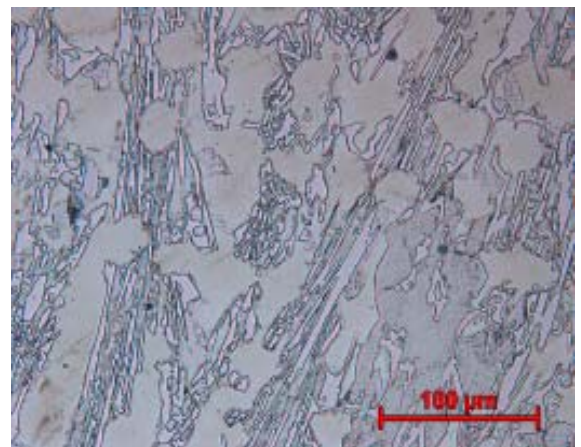


Figure 2, Typical Microstructure of F30G Alloy



GIW Industries Inc.
5000 Wrightsboro Road,
Grovetown, GA 30813-9750 USA
Telephone (706) 863-1011
Fax: (706) 863-5637
www.giwindustries.com

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