

## Heat Treatment Of A532 White Cast Iron

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### Heat Treatment Of A532 White

Heat Treatment Tips and Notes for ASTM A532 Austenitization Austenitization must be done to castings made from chrome white iron to ensure a martensitic matrix and provide the highest toughness and abrasion resistance possible. The chemical composition of the casting will determine the correct austenitizing temperature and time.

### Heat Treating ASTM A532 | Chrome White Iron | Penticton ...

Pliant25 ASTM A532 Class III Type A. Pliant25 is a unique high chrome white iron that has been perfected by Penticton Foundry. Our engineered chemistry together with our proprietary heat treatment allows us to soften this alloy to the point where we can then drill and tap holes, as well as broach keyways. After machining, we can heat treat the casting to harden this alloy to a minimum of 600 BHN.

### Alloy data sheet Pliant25 Chrome White Iron | Penticton ...

ASTM A532 / A532M - 10(2019) ... hardened, hardened and stress relieved, or softened for machining. Heat treatment shall be done. The chemical composition of a class and type (that is, Class I, Type A) shall conform to the range of values specified for carbon, manganese, silicon, nickel, chromium, molybdenum, copper, phosphorus, and sulfur ...

### ASTM A532 / A532M - 10(2019) Standard Specification for ...

Heat Treatment of Nickel-Chromium White Irons. Nickel-chromium white iron castings are given a stress-relief heat treatment because, properly made, they have a martensitic matrix structure, as-cast. Tempering is performed between 205 to 260°C (400 to 450°F) for at least 4 h. This tempers the martensite, relieves some of the transformation ...

### Heat Treating of High-Alloy White Irons :: Total Materia ...

Low-alloy pearlitic white irons have hardness between 350-550 BHN, whereas high-alloy white irons have between 450-800 BHN. High-alloy white cast irons normally have austenite matrix in as-cast state, but is changed to hard martensite by heat-treatment.

### Heat Treatment of White Cast Irons | Metallurgy

A-532 Grade III is about Rc42/400 BHN at pour...and can be annealed down to 300 BHN and machined. It can then be heat treated to 600+ BHN. Some pump mfgs, such as Weir-Wemco, use this for grit handling vortex impeller pumps. This material is also used extensively in mining applications where resistance to wear is important.

### Machining and Heat Treating ASTM A-532

Common Heat Treatment for the Specific Cast-Iron Types. High-alloy (e.g., high chromium, high nickel-chromium) white irons can be heat treated. For example, nickel-chromium white-iron castings are given a stress-relief heat treatment because, properly made, they have an as-cast martensitic matrix structure.

### Heat Treatment of Cast Irons | 2018-12-12 | Industrial Heating

Malleable iron is obtained by the heat treatment of white iron so the hard iron carbide structure of ledeburite is converted to a matrix of ferrite or pearlite and graphite is precipitated within the iron. This form of graphite is sometimes referred to as tempered carbon. A wide range of mechanical properties can be obtained in

### Heat Treatment of Cast Irons - Heat Treat Doctor.com

The chromium-molybdenum irons (class II of ASTM A532) contain 11 to 23% Cr and up to 3.5% Mo and can be supplied either as-cast with an austenitic or austenitic-martensitic matrix, or heat treated with a martensitic matrix microstructure for maximum abrasion resistance and toughness. They are usually considered the hardest of all grades of white cast irons.

### Metallurgical Aspects of HIGH- CHROMIUM WHITE IRONS

RE: annealing and re-hardening ASTM A532-93 Class III Type A high chrome abrasion resistant cast iron arunmrao (Materials) 11 Oct 16 18:38 As a first step, I would temper this casting to drop the hardness to 450-500 BHN, before attempting annealing.

### annealing and re-hardening ASTM A532-93 Class III Type A ...

white cast iron, astm a532 class ii type b. Heat Treating Astm A 532 Class II Type D - nghospitalin. ASTM A532 Class II Type B high chrome white iron is used in With specific, . Get Price And Support Online.

### Heat Treating Astm A 532 Class II Type

High-alloyed white cast irons are an important group of materials whose production must be considered separately from that of ordinary types of cast irons. The metallic matrix supporting the carbide phase in the high-alloy white cast irons can be adjusted by alloy content and heat treatment to develop proper balance between resistance to ...

### Heat Treating of High-Alloy White Cast Irons[1] | Heat ...

Specification for Abrasion-Resistant Cast Iron - ASTM A532. Abrasion-resistant white cast irons have been alloyed to secure high resistance to abrasive wear. Abrasion-resistant irons can be classified into five groups but the majority of castings used today are in two groups. One is the nickel containing alloys, known as Ni-Hard.

### Abrasion Resistant Cast Irons ASTM A532 - Pacific Alloy ...

Can you please shed some light on the metallurgical precautions during casting and heat treatment of high chrome iron, ASTM-A532, Class III, type A (17, 23, 27% Cr)? We are softening for machining (300+ BHN) and hardening (600+ BHN) for better wear resistance during usage in a slurry-pumping (coal-ash) application.

### White Iron (part 2) - industrialheating.com

chromium-molybdenum white irons (class II of ASTM A532) contain 11 to 23% Cr and up to 3% Mo and some Ni and Cu and can be supplied; either as-cast with an austenitic or austenitic-martensitic matrix, or heat treated with a martensitic matrix microstructure for maximum abrasion resistance and toughness.

### Microstructural Characteristics and Mechanical Properties ...

White Cast Iron Astm A532 Class II Type B - glrrealtycoin. ASTM A532 Class III Type A The 25% Cr alloy is the most common high chrome white iron poured at Penticton Foundry This alloy has great abrasion resistant properties especially against gouging, grinding and scratching 25% Cr material

can be machined to meet tighter tolerances like those found in pump and piping type castings

**A532 classe iii type a - rafaeldevallei.nl**

Heat Treating ASTM A532 Chrome White Iron Penticton Jan 16, 2018 Case Study: Read this case study for a specific example of chrome white iron outperforming AR plate. Microstructure Notes No article on heat treating ASTM A532 would be complete without taking a look at its microstructure.

**high chrome cast iron heat treatment**

Heat Treatment in High Chromium White Cast Iron Ti Alloy. The influence of heat treatment on microstructure and mechanical properties of high chromium white cast iron alloyed with titanium was investigated The austenitizing temperatures of 980°C and 1150°C for 1 hour each followed by tempering at 260°C for 2 hours have been performed and the effect of these treatments on wear resistance ...

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