



Casting Material: Carbon Steel BS3100 Gr. A4

Carbon steel Grade A4 is one British steel casting material, which is a popular carbon-manganese steel material in casting purpose.

Grade A4 is listed in BS3100 standard which is superseded by G17Mn5 in BS EN10293:2005.

Similar Casting Steel: G17Mn5.

BS 3100:1991 Specification for steel castings for general engineering purposes

BS 3100 Grade A4 Casting Chemical Requirements and Mechanical Property:

Carbon: 0.18-0.25max

Manganese: 1.20-1.60

Silicon: 0.60 max

Sulfur: 0.050 max

Phosphorus: 0.050 max

Grade A4 TENSILE REQUIREMENT IN STANDARD.

Tensile Strength: 540-690Mpa min

Yield Strength: 320Mpa min

Elongation: 16.0% min

Charpy V-notch: 30J @ 20° C.

Hardness values for Castings: 152-207HB (Brinell Hardness)



BS3100 Gr A4 Casting Heat treatment process: Generally all castings need to be normalized; or N+T; or OQ+T; or WQ+T

A - For anneal by heating to a temperature above the AC_3 and cool in the furnace.

N - For normalize by heating to a temperature above AC_3 and cool in the still air.

OQ - For quench into oil from a temperature above AC_3

WQ - For Quench into water from a temperature above AC_3

AH - For air harden by heating to a temperature above AC_3 and cool in air at a rate fast enough to produce a hardened microstructure

T - For temper by heating to a temperature below AC_1 .

ST - For solution treat by heating to a temperature high enough to dissolve carbides and any intermetallic phases followed by a rapid cool.

Steel Manufacture Process: Sand Casting, Precision Lost Wax Investment Casting.



Introduction

As professional supplier of castings in China, Qingdao Casting Quality Industrial Co., Ltd provide our clients perfect solution in metal industry. We focus on providing service and quality exceeding customer's expectation, at highly competitive prices.

The production process includes sand casting, investment casting, die casting, lost foam casting, centrifugal casting and permanent casting. Today, its products are marketed globally through many countries.

Why Choose Casting Quality As Your Partner?

Integrity

We will honestly inform our clients of our capacity and quality level. All clients have the right to get the actual details including production process, quality, shipment and defects. The honesty will be benefit to both parts.

Innovation

Our engineers are more than just designers. They are pioneers. Our team use CAD/CAM to make the simulation of casting parts. Through the advanced technology, we can know the weight and structure. We also visit many other factories to know the differences and to improve our products every year.

Quality

We are obsessed with quality. Casting Quality constantly strives to exceed our customers' expectations in durability and performance. In fact, we will control the whole processes from the original material to the finished parts, Uniquely-designed Quality Control System focuses on ensuring four product goals: 1) Eligible Chemistry, 2) Hardness 3) Mechanical Property and 4) Affordable Pricing.

Service

We are located in Qingdao, China, The transportation is convenient for both road and sea. Courteous service is part of who we are, and we do it better than anyone in the industry. With Casting Quality you can expect friendly, knowledgeable and prompt customer service. Shipping orders complete and on-time is of paramount importance to our customers. We will count the delivery date and result before accepting your order .Casting Quality consistently

INTEGRITY

QUALITY

INNOVATION



Sand Casting

Sand casting is divided into many types: GREEN SAND CASTING, RESIN SAND CASTING AND SODIUM SILICATE BONDED SAND CASTING. Green sand casting is the lowest cost method to get a product, whose surface finish is not good too. Resin sand casting will get a good surface and precision dimensions, so it is widely used in automobile industry.

Casting Quality Industrial mainly cast Gray Iron, Ductile Iron, Malleable Iron, Wear Resistant Cast Iron, Carbon Steel, Stainless Steel, Brass/Bronze and Aluminum.

Unit weight range from 100g to 20tons.



Investment Casting

As highly versatile casting process, Investment Casting has for some time been perceived as a comparatively expensive process. But when compared to alternative processes which require extensive welding or machining, an investment cast component can often dramatically reduce overall part production costs.

Casting Quality Industrial would adapt three investment casting methods to reach our clients' quality requirement: Water Glass (Colloidal Silica-sodium), Silica Sol technology; or Colloidal Silica-sodium Silicate Compound. Water Glass technology is the worst quality but cheapest. Silica Sol technology is the best quality but most expensive. We will analyze the usage and drawings tolerance to choose an economic method.

Unit weight range from 1g to 100Kgs.





Centrifugal Casting

Centrifugal Casting mainly produce the pipes or pipe figure products , such as ductile iron pipe , cast iron soil pipe , glass roller , Furnace Roller and radiant



Lost Foam Casting

Lost-foam casting (LFC) is a type of evaporative-pattern casting process that is similar to investment casting except foam is used for the pattern instead of wax. This process takes advantage of the low boiling point of foam to simplify the investment casting process by removing the need to melt the wax out of the mold. Casting Quality Industrial only supply ductile iron or steel parts by lost foam casting method, such as valve body, impeller, pipe fittings, electrode and simply figure parts .



Die Casting

Die casting is a metal casting process that is characterized by forcing molten metal under high pressure into a mold cavity. Die Casting is generally use to make aluminum and zinc alloy parts.



Permanent Casting

permanent casting and low pressure casting, Casting Quality only used to make aluminum castings, permanent casting can get a better surface and dimensions than sand castings, low pressure casting can get a stably structure which are suitable to the endure pressure parts.





Quality Control

Experienced inspection team of Casting Quality conducts the entire quality control procedure from raw material to finished products. All inspectors are well trained and have rich product knowledge & inspection experiences.

- * Raw Material Control.
- * Chemistry Spectrum Analysis
- * Mechanical Property
- * Metallographic Analysis
- * Ultrasonic Testing
- * Magnetic Testing.
- * Radiographic Testing.
- * Dimension Inspection.
- * Visual Inspection
- * Dimension Checking
- * Chemical Analysis
- * Penetrant Testing
- * Leak Testing
- * Hardness Test

