



Casting Material: Manganese Steel BS3146 CLA 2

Type CLA 2 is British manganese steel for **investment casting** manufacture process only.

BS 3146-1 Specification for Investment Castings in metal; Part 1: Carbon and low alloy steels

BS3146 Type CLA 2 Casting Chemical Requirements Composition:

Grade	Carbon %	Silicon %	Manganese %	Nickel %	Chromium %	Molybdenum %	Copper %	Sulphur %	Phosphorus %
CLA 2	0.18-0.25	0.2-0.5	1.2-1.7	0.4	0.3	0.1	0.3	0.035	0.035

Ni/Cr/Mo/Cu total amount shall not exceed 0.80%.

BS3146 Type CLA 1 Casting Mechanical Properties at Ambient Temperature:

Steel	Tensile Strength MPa, min	0.2% Proof Stress Mpa, min	Elongation, A %, min	Izod Impact Strength, ft/lbf, min
CLA 2	550-700	310	13	30

$$1\text{MPa} = 1\text{ N/MM}^2$$

Ambient temperature is taken as $23 \pm 5\text{ }^\circ\text{C}$

BS3146 Type CLA 2 Casting Hardness:

Grade	Hardness (HB)
CLA 2	152-201

BS3146 Type CLA 2 Casting Heat treatment process:

The castings shall be supplied in the finally heat treated condition unless otherwise agreed by purchaser.

The final heat treatment shall consist of normalizing, normalizing and tempering or hardening and tempering at suitable temperatures to give the mechanical properties.

Similar Steel: BS3100 Grade A4; EN 10293 Grade G17Mn5

Manufacture Process: Precision Lost Wax Investment Casting.





SERVICE IN QINGDAO CASTING QUALITY INDUSTRIAL

- I **SAND CASTING**
- I **INVESTMENT CASTING**
- I **SHELL CASTING**
- I **PERMANENT MOLD CASTING**
- I **CNC MACHINING**

As a professional casting manufacture, Qingdao Casting Quality Industrial pay much attention to the quality and technology, our products are much more casting and forging parts. We are mainly do Sand Casting, Investment Casting (Lost Wax Casting or Precision Casting) and Die Casting .Today, its products are marketed globally through many countries.

Our Services

Casting Quality focus on Metal Parts industry, we provide professional service in Metal Casting field.

1. Sand Casting
2. Investment Casting
3. Shell Casting
4. CNC Machining
5. CAD Design
6. Tools/Mold Design

Many buyers from all over the world purchase products from China. But do you know the quality of products in China? Maybe you only pay the surface and price, but the inner quality is lost.

Housing Casting Design in Solidworks

What makes Casting Quality the best?

Innovation

Our engineers are more than just designers....they're pioneers. Our team use CAD/CAM to do the simulation of casting parts .Through the advanced technology, we can know the weight and structure. We also visited so many factories to know their difference and improve our products every year.

Quality

We're obsessed with quality. Casting Quality constantly strives to exceed our customers' expectations in durability and performance. In fact, we will control the whole process from the original material to the finished parts , include the technology .Uniquely-designed Quality Control System focuses on ensuring four product goals: 1) Eligible Chemistry , 2) Hardness 3) Property and 4) Affordable Pricing. The result is the best casting products value in the industry.

Service

We're in Qingdao,China, It has convenient transportation of 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.

Fulfillment

Shipping orders complete and on-time is of paramount importance to our customers. We will count the delivery date and result before accept your order. Casting Quality consistently ranks as one of the best in speed of delivery and fill rates.

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.

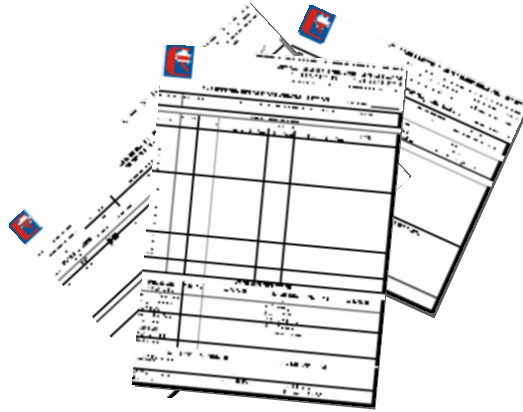




Quality Control

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





Valve & Fittings



Marine Fittings



Automobile Parts



Accessories

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