



## Casting Material: Low Alloy Steel BS3146 CLA 3

Type CLA 3 is British low alloy steel for investment casting manufacture process only; it's used for structure and engineering purposes.

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

**BS3146 Type CLA 3 Casting Chemical Requirements Composition:** the manufacturer shall select the composition to obtain the mechanical properties required.

| Grade | Carbon % | Silicon % | Manganese % | Nickel % | Chromium % | Molybdenum % | Copper % | Sulphur % | Phosphorus % |
|-------|----------|-----------|-------------|----------|------------|--------------|----------|-----------|--------------|
| CLA 3 | -        | -         | -           | -        | -          | -            | -        | 0.035     | 0.035        |

### **BS3146 Type CLA 3 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 | 700-850                   | 495                        | 11                   | 25                                |

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

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

### **BS3146 Type CLA 3 Casting Hardness:**

| Grade | Hardness (HB) |
|-------|---------------|
| CLA3  | 201-255       |

### **BS3146 Type CLA 3 Casting Heat treatment process:**

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

The final heat treatment shall consist of annealing, hardening and tempering.

**Similar Steel:** BS3100 Grade A6; EN 10293 Grade G28Mn6; ISO 9477 Grade 540-720

**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.



## 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.





**Valve & Fittings**



**Marine Fittings**



**Automobile Parts**



**Accessories**

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