



## Casting Material: Stainless Steel CF8

CF8 is a cast austenitic material for pressure containing parts, which covered by ASTM A351 and ASTM A743 standard.

CF8 Chemical Requirements in those two standards is same as bellow:

**ASTM A351 Standard Specification for Castings, Austenitic, for Pressure-Containing Parts: ASTM 743A Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application:** [www.castingquality.com](http://www.castingquality.com)

Carbon: 0.08 max

Manganese: 1.50 max

Silicon: 2.0 max

Sulfur: 0.040 max

Phosphorus: 0.040 max

Chromium: 18.0-21.0

Nickel: 8.0-11.0

Molybdenum: max 0.50 in ASTM A351, no requirement in A743

Tensile Strength: min 70ksi(485Mpa)

Yield Strength: min 30ksi (205Mpa)

Elongation in 2in. or 50mm: min 35.0%



**CF8 Heat treatment process:** Heat to 1900°F [1040°C] minimum, hold for sufficient time to heat casting to temperature, quench in water or rapid cool by other means. [www.castingquality.com](http://www.castingquality.com)

CF8 equal to SS304/F304 and Chinese Standard GB/T2100 ZG0Cr18Ni9Ti, GX5CrNiMo19-10(EN10213); EN No. 1.4308 [www.castingquality.com](http://www.castingquality.com)

**Manufacture process in Qingdao Casting Quality company: Sand Casting, Precision Investment Casting (Lost Wax Casting).**

CF-8 is the cast equivalent of the popular wrought 18-8, or 304 grade of stainless steel. It has good resistance to nitric acid and nitric/sulphuric acid mixtures, organic acids and salts, potassium sulphate, sodium carbonate and sulphite. Solution annealing at 1900 to 2050oF followed by rapid cooling, is used to optimize corrosion resistance and should be applied to castings exposed to temperatures of 800 to 1600oF as a result of service or welding. High impact strength is retained at cryogenic temperatures, while conversely it may be used for service up to 1300oF.

The alloy normally consists of austenite and 10% ferrite. However, non-magnetic castings are required in some applications and to meet this need the compositional balance is altered to produce 100% austenite. A modified form of the alloy known as CF-8A, has a controlled, but higher ferrite content, which raises strength above that of the normal CF-8.

**What means of CF8:** [www.castingquality.com](http://www.castingquality.com)



As to the designation - [www.castingquality.com](http://www.castingquality.com)

C (first letter) means the service it is intended to be used in this case - corrosion resistant service , but Casting Quality think sometimes it means of CASTING usage because you will find F304 in ASTM A 350 ( F = Forging) [www.castingquality.com](http://www.castingquality.com)

F(second letter) -The second letter indicates the approximate location of the alloy on the iron-chromium-nickel (FeCrNi) ternary diagram. For users familiar with the diagram, the second letter does provide an indication of the nominal iron, nickel, and chromium content, but most people would have to obtain alloying information from a material specification. [www.castingquality.com](http://www.castingquality.com)

8- the third and fourth digits represent the maximum permitted carbon content in units of 0.01% (e.g., CF8 has a maximum of 0.08% carbon) [www.castingquality.com](http://www.castingquality.com)

## ***SERVICE IN QINGDAO CASTING QUALITY INDUSTRIAL***

- I SAND CASTING
- I INVESTMENT CASTING
- I SHELL CASTING
- I PERMANENT MOLD CASTING
- I CNC MACHINING
- I CAD/CAM DESIGN



# Casting Quality





## 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.

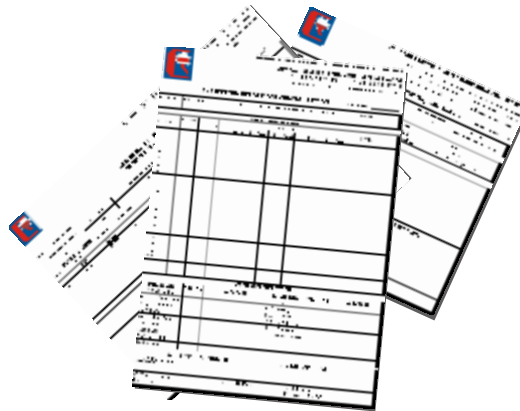




## Quality Control

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





**Valve & Fittings**



**Marine Fittings**



**Automobile Parts**



**Accessories**

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