# (=

# Baoding Guokun Machinery Co., Ltd

Address: 777 Chaoyang South Street, Baoding City, 071000, Hebei, China

As the customized casting components of heavy machinery, energy, marine, mining, pumps, valves, agricultural machinery, transmission machinery, food machinery and other fields, the quality of cast steel parts directly affects the safety and service life of equipment. Therefore, Baoding Guokun has formulated and strictly implemented the company's acceptance standards.

The following are the main standards and judgment methods for the acceptance of OEM casting products by Baoding Guokun.

## 1. Appearance quality

Appearance quality is the first step in acceptance, mainly through visual inspection or auxiliary tools. The acceptance content includes:

Surface defects: such as cracks, pores, slag inclusions, cold shuts, etc. The surface should be smooth and flat, without obvious defects.

Dimensional accuracy: Use measuring tools such as calipers, tape measures, and coordinate measuring instruments to check whether the dimensions of the castings meet the requirements of the drawings, including length, width, thickness, etc.

Surface treatment: Check whether the surface of the casting has been sandblasted, polished, etc., to ensure that there are no burrs, oxide scales, or other residues.



Web: <u>www.metalcastingfactory.com</u> Email: <u>gina@guokuncasting.com</u>



# Baoding Guokun Machinery Co., Ltd

Address: 777 Chaoyang South Street, Baoding City, 071000, Hebei, China



## 2. Internal quality

Internal quality needs to be assessed through non-destructive testing techniques, commonly used methods include:

Ultrasonic testing (UT): used to detect defects such as cracks, pores, and slag inclusions inside castings, especially suitable for thick-walled casting products.

Radiographic testing (RT): By using X-rays or gamma rays to inspect the internal defects of castings, the shape and location of the defects can be visually displayed.

Magnetic particle testing (MT): used to detect defects such as cracks, folds, etc. on the surface and near surface of castings.

Penetration testing (PT): suitable for surface defect detection of non-magnetic materials.



### 3. Mechanical performance

Mechanical properties are the core indicators of the quality of cast steel parts, usually tested through sampling. The main testing items include:

Tensile performance: Test tensile strength, yield strength, and elongation to ensure compliance with material standards (such as GB/T 11352, ASTM A27 for steel casting, ASTM A536, ASTM A48,

Web:  $\underline{www.metalcastingfactory.com} \hspace{1.5cm} \textbf{Email:} \ \underline{gina@guokuncasting.com}$ 



# Baoding Guokun Machinery Co., Ltd

Address: 777 Chaoyang South Street, Baoding City, 071000, Hebei, China

ASTM A216, etc.).

Impact toughness: The toughness of castings under low temperature or impact load is tested through the Charpy impact test.

Hardness testing: Use a Brinell hardness tester or Rockwell hardness tester to test the hardness of castings to ensure they meet design requirements.



## 4. Chemical composition

The chemical composition of cast steel directly affects its performance and is usually detected by spectroscopic or chemical analysis methods. During acceptance, it is necessary to ensure that the content of major elements (such as carbon, silicon, manganese, phosphorus, sulfur, etc.) meets the standard requirements.



# 6

# Baoding Guokun Machinery Co., Ltd

Address: 777 Chaoyang South Street, Baoding City, 071000, Hebei, China

### 5. Acceptance of metallographic structure

The metallographic structure reflects the microstructure of the casting. By observing the grain size, phase composition, and distribution through a metallographic microscope, it is ensured that there are no abnormal structures (such as excessively large grains or harmful phases).

#### 6. Special requirements

According to the usage environment of the castings, special testing may also be required, such as: Corrosion resistance test: used for castings used in corrosive environments.

High temperature performance testing: used for castings working in high temperature environments.

#### Determine whether it meets the requirements

During acceptance, it is necessary to compare the test results with the design drawings, technical agreements, and relevant standards (such as national standards, industry standards, or customer requirements). If all indicators meet the requirements, it is judged as qualified; If there are any non-conforming items, it is necessary to decide whether to repair, scrap, or accept them under concession based on the severity of the defect.

Guokun Casting, of Baoding Hebei is an ISO 9001-2008 registered iron and steel foundry & supplier of high-quality cast steel, cast iron and machined castings used in power, mining, railway, agricultural, tillage, truck, automobile, pump, valve, motor, pipe fittings and gear industry.

With a monthly capacity of 10,000kgs and with more than 25 years of experience ensure the short delivery and the highest valued iron & steel casting parts.

### **Baoding Guokun Machinery Co., Ltd.**

## **Baoding Guokun Export and Import Trading Co., Ltd**

Office Add: 777# Chaoyang South Street, Baoding City, Hebei, 071000, China Factory Address: Wangdu County, Baoding City, Hebei, 071000, China

Website: <a href="www.metalcastingfactory.com">www.metalcastingfactory.com</a>
Tel: 86-312-5951319 Fax: 86-312-5951296
Phone: 86-181 3278 9710 (WhatsApp & WeChat)

Email: gina@guokuncasting.com

gina.guokun@gmail.com



Web: <u>www.metalcastingfactory.com</u> Email: <u>gina@guokuncasting.com</u>