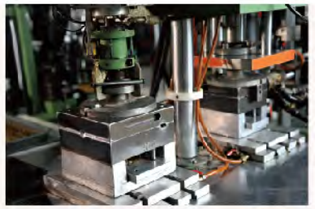




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嘉扬精密金属
GIAYOUNG PRECISION METAL











www.cast-china.com

A World-leading Investment Casting Foundry

GIAYOUNG
PRECISION
METAL



History

- 1991. 10 Former company — Dongying Luchang Precision Casting Co., Ltd. was established
- 1996. 01 Management team led by General Manager Mr. David Wei starting to contract with Luchang Precision Casting Co., Ltd.
- 1998. 12 ISO 9002:1994 Quality Control System certified
- 2000. 10 Dongying Giayoung Precision Metal Co., Ltd. established
- 2004. 08 Casting Production Lines A with 1,800 tons of annual production capability started operation, which is located at a new site covering an area of 80,000 square meters
- 2005. 06 Modern machining workshop built and put into use
- 2007. 10 Casting Production Line B1 & B2 started operation
- 2010. 05 Awarded as a Top Hundred Enterprises among all Chinese foundry enterprises
- 2010. 09 Machining workshop upgraded and expanded
- 2012. 06 Vacuum melting capabilities added
- 2012. 12 North America Sales & Service Center (Giayoung Metal, Inc.) established
- 2015. 12 Waste water treatment system installed
- 2016. 05 Multi-use stadium & warehouse covering over 7,600 square meters opened

Company Profile

Dongying Giayoung Precision Metal Co., Ltd. is located at the fertile Delta of the Yellow River. It is in the Bohai Economic Circle and only 270km from Qingdao Seaport. The manufacturing site is **80,000m²** with over 30,000m² of office and production buildings.The company currently employs over **1,000** employees.

Giayoung produces a wide variety of high-grade precision castings and machined parts in stainless steel, heat-resistant steel, carbon steel, low alloy steel, high temperature steel and nonferrous alloys using the advanced silica sol investment casting process. We also have full precision machining and surface treatment capabilities. Giayoung serves a wide range of markets, including nuclear power stations, high-speed rail, automotive, fluids & chemicals, marine equipment, medical, food, industrial locks, power, petroleum equipment, instrumentation & metering, construction hardware, heat treat equipment, aerospace, gas turbine, etc.

In **2010**, Giayoung was awarded as a Top Hundred Enterprises among all Chinese foundry enterprises. In **2016** Giayoung delivered a speech at the 14th World Investment Casting Conference as the first Chinese private investment casting foundry. The company maintains close cooperation with Tsinghua University, is a Councilor Member of the China Foundry Association and the Vice Director Member of the Council for the Confederation of Investment Casting Exporters. The company is now ranked in the top four investment casting manufactures in China. Giayoung and its products have won recognition in many of the "World's Top 500" companies.

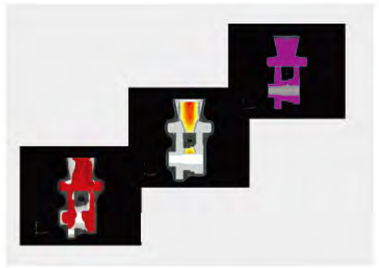


Advanced Techniques

- Giayoung has developed and produced over **17,000** types of parts covering
- **760** different alloys as per standards of EN, DIN, BS, AISI, ASTM, JIS, etc.
- Capable of developing **1,200** new parts per year
- Critical dimensions follow **ISO 8062 DCTG 3-6**
- Surface roughness after fettling and trimming **Ra 1.6-3.2**
- Casting range of **1g** to **220kgs** for air melts and up to 50kgs for vacuum melts
- Parts manufactured maximum overall size, **1000mm*710mm*380mm**
- Minimum wall thickness is **0.5mm**
- Capable of carrying out casting simulation analysis using Procast software
- Also capable of producing Ni-based, Co-based, Cu, and Al castings
- Capable of producing castings from 3D waxes produced in-house. Maximum overall size is **480mm*480mm*400mm**



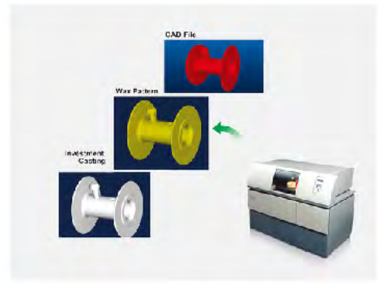
Engineering Team



Founding Process Simulation



Examples of Products Winning High Quality Casting Gold Award



3D Printing



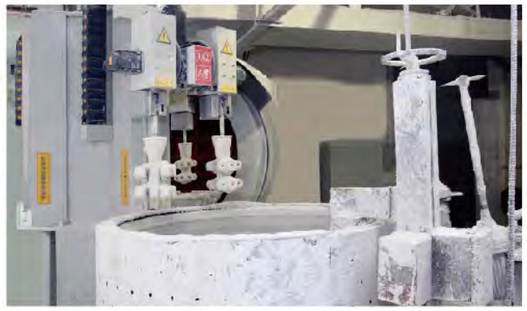
Ceramic Core and Soluble Core

Manufacturing Capability

Giayoung has around 850 investment casting and precision machining equipment. Additionally, over 85% of the equipment used for checking quality critical parameters is imported. This ensures a stable product of a high quality.

- Adopted advanced fully closed automatic wax processing system, thus allowing for semi-automatic processing of the wax. Imported non-vat wax injector and automatic electric steam dewaxing autoclave
- Shell drying system adopts an automated suspension conveyer chain
- **3** Casting production lines with an annual capacity of **4,800** tons poured metal
- **50** kgs vacuum melt furnace
- Advanced heat treat equipment, such as a fully automated atmosphere furnace and a high temperature solutionizing furnace
- **4,300** square meters machine shop, with advanced machining equipment imported from Japan, Germany, Taiwan, by OKUMA, LG-MAZAK, MORI SEIKI, DMG,YCM, YOUJI, ect., which are the turn-mill combination machines. Horizontal machining centers, CNC vertical lathes broaching machines and a welding robot etc. for precision machining and assembly. Also have 5-axis machining capability


Wax Injection


Shell Making


Dewaxing


Melting & Pouring


Heat Treatment


Vacuum Smelting Furnace


Machining

Inspection Capability

Our company is equipped with advanced inspection equipment as follows:

- **For raw material inspection:** Wax softening point tester, Penetrometer, Magnetic detector, Shell strength tester, Co 60 tester
- **For chemical composition:** Several direct-reading spectrometers for Fe-based, Ni-based, Co-based, Al-based, Cu-based alloy as well as Nitrogen element
- **For physical and mechanical property tests:** Electronic universal material tester, Ultra-low temperature (-196 ℃) impact tester and Brinell, Rockwell, Vickers, Leeb hardness testers
- **Metallography:** Metallurgical microscope and Ferrite measuring instruments
- **For non-destructive testing:** Magnetic particle flaw detector, Dye penetrant, Surface roughness tester (sealed groove), Ultrasonic flaw detection, Endoscopy and Digital X-ray & Gamma-ray flaw detector
- **For dimension and geometric tolerance inspection:** Coordinate Measuring Machine (CMM), Projector, Gauges, Thickness gauges, Ultrasonic thickness gauge, and Height measuring instrument
- **Corrosion performance:** Salt spray tester
- Equipment for the inspection of sealing performance and inter-granular corrosion
- Hydrostatic pressure testing up to 20MPa.
- **Other Inspection Instrument:** Infrared thermometer, Thermal infrared imager, Optional pyrometer, Dynamic balancing machine, and Portable magnetic defect detector



Direct-reading Spectrometer


X-ray Inspection


Ultra-low Temperature Impact Tester

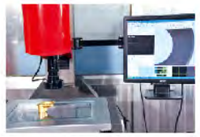


Coordinate Measuring Machine


Electronic Metallurgical Microscope


Dynamic Balancing Machine


Hardness Tester


Image Measuring Instrument


Endoscope


Ultrasonic Thickness Gauge


Surface Roughness Tester


Electronic Universal Material Tester



Height Gauge

Quality System

A solid system has been steadily established by implementing the quality concepts step by step

- **ISO 9001:2016** quality system certification
- **IATF16949:2016** quality system certification for automobile industry production.
- **EU** Pressure Vessel **CE/PED** certification and German Pressure Vessel **AD2000-W0** certification
- Manufacture License of Special Equipment People's Republic of China
- Certified by seven domestic and international classification societies of marine products, including China Classification Society **(CCS)**, Lloyd's Register **(LR)**, Det Norske Veritas Lloyd's Register **(DNV-GL)**, Bureau Veritas **(BV)**, Nippon Kaiji Kyokai **(NKK)**, American Bureau of Shipping **(ABS)** and Korean Register of Shipping **(KR)**



















Product Samples

AUTOMOBILE PARTS



PUMP PARTS



VALVE PARTS



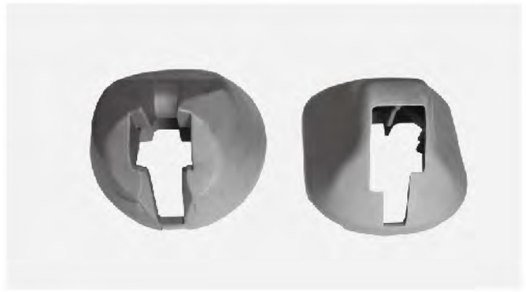
NUCLEAR POWER STATION PARTS



MARINE PARTS



HIGH-SPEED RAIL PARTS



POWER EQUIPMENT PARTS



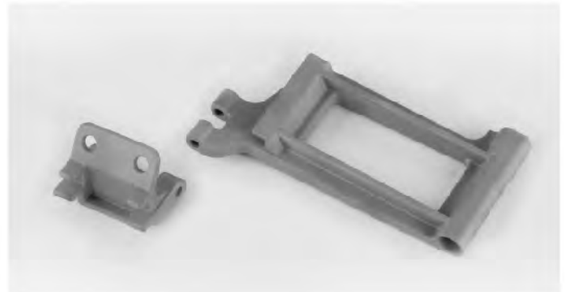
FOOD MACHINERY PARTS



MEDICAL/PETROLEUM INSTRUMENTS PARTS



AVIATION PARTS



PARTS FOR HEAT TREATMENT



CONSTRUCTION HARDWARE



TOOL PARTS



OTHER INDUSTRIES PARTS



Non-ferrous Alloys



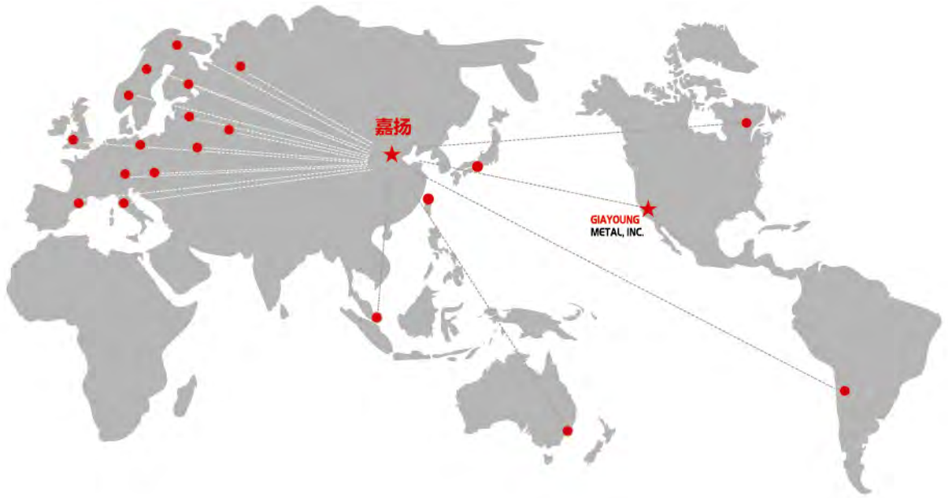
- Copper Alloy
- Aluminum Alloy
- Ni-based Alloy
- Co-based Alloy

Different Surface Treatments



- E-polishing
- Zinc Plating
- Black Oxide Coating
- Mirror Polishing
- Dull Polishing
- Painting
- Sand Blasting
- Pickling
- Barrel Polishing
- Anodizing
- Spray Coating

Our Markets & Customers



Successful Cases

Dubai International Airport



Heathrow International Airport





High-speed Railway



LNG Oil Tanker



Power Equipment

Our Customers

EMERSON · CRANE · spirax sarco · SULZER · KSB · DOVER · FLOWSERVE · Weatherford · Parker · EBARA · BMW · CATERPILLAR · Jeep · ALFA LAVAL · Eberspächer · burkert · CLAAS · SH·APOLLO · Talgo

Outstanding Human Resource:

The fundamental advantage of Giayoung Precision Metal lies in human resources and thanks to the favorable surroundings, such advantages can be brought into play.

Half of technical and managing heads have Bachelor degree or higher (Most have graduated from famous Chinese universities, such as Tsinghua University, Beijing University of Aeronautics and Astronautics, Tianjin University, Shandong University, Dalian University of Technology, University of Science and Technology Beijing, Northwestern Polytechnical University and Northeastern University and other world-renowned universities, such as Pepperdine University, USA, University of Cincinnati, USA,University of Sheffield, UK and etc.). Emphasis is placed on cultivating talent, so employees can enjoy chances to be selected and sent to Tsinghua University or other training organizations for further specialized education every year. This helps cement our human resource advantage.

Social Responsibility:

As good stewards, Giayoung Precision Metal fulfills its obligations and sets a good example for nearby enterprises as well as in the industry, as showing by the following examples:

- Honesty is our policy
- We regard improving employee income and welfare as one of our important goals
- We pay attention to employee professional development and staff training
- We endeavor to establish a harmonious working environment and create opportunities for extracurricular activities
- We respect our suppliers knowing that they are a key component of our business

