



Foshan Zeren Precision Casting Co., Ltd.

Since 2009

Investment Casting: Building The Future With Flawless Craftsmanship!



ZEALOUS
Precision Casting & CNC Solutions

Foshan Zeren Precision Casting Co., Ltd. **20** Years

Precision Lost Wax Investment Casting
Silica Sol Process
Machining Solution

Investment Casting
Experience

Since 2009



20 Years Investment Casting
CNC Machining Solution Offer

Innovation Through Investment Casting

CONTENTS



ABOUT US



OUR PRODUCT



QUALITY CONTROL



OUR TEAM

Part 1

ABOUT US

About us



Company Overview:

- Foshan Zeren Precision Casting Co., Ltd. is founded in 2009, with a **precision casting plant and a mechanical processing plant**, located at Foshan, Guangdong, China.
- We use advanced investment casting (lost wax casting) process for precision castings production, which are made of **stainless steel, carbon steel and alloy steel**.
- We can also **provide subsequent machining of casting**, and have passed and implemented the ISO9001:2015 quality management system.



Main business:

- Our company focuse on the lost-wax investment casting products, offer ***mold manufacturing, CNC machining, polishing, surface treatment and other design services.***
- From stainless steel investment castings to carbon steel investment castings, we keep you ahead of the competition. Our attention to detail using precision casting and the machining techniques produces the highest quality steel castings for various industries.

About us

Our quality services include:

- Industry **leading delivery and "customized" service**
- Production from a ounces to approximately **150 pounds**
- Creative engineering to keep your costs down

- Flexible volume capabilities
- Adherence to world-wide standards and specs
- An **arsenal of value-added services and processes** involving casting, CNC machining, surface treatment and assembly - just ask



Casting Analysis & Design

IS INVESTMENT CASTING RIGHT FOR YOUR COMPONENT? No two casting projects are the same and with different projects, there are different solutions.



Mould Manufacturing

Zeren's proprietary, mold manufacturing process technology is designed to measure and correct dimensional issues during the mould manufacturing process.



Lost Wax Investment Casting

All of our items are silica sol investment casting with better surface roughness Ra3.2, instead of water glass investment casting Ra12.5.

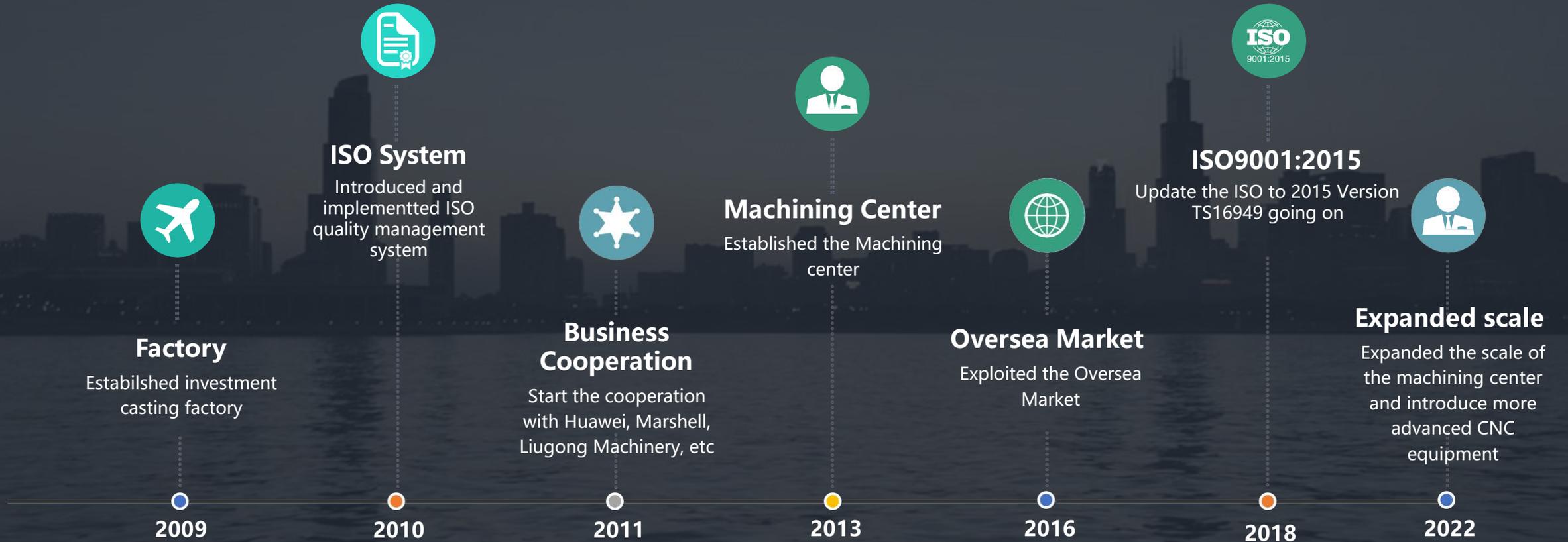


Secondary Machining

With full high-speed CNC machining in-house, we can quickly perform any necessary machining quickly and cost-effectively.

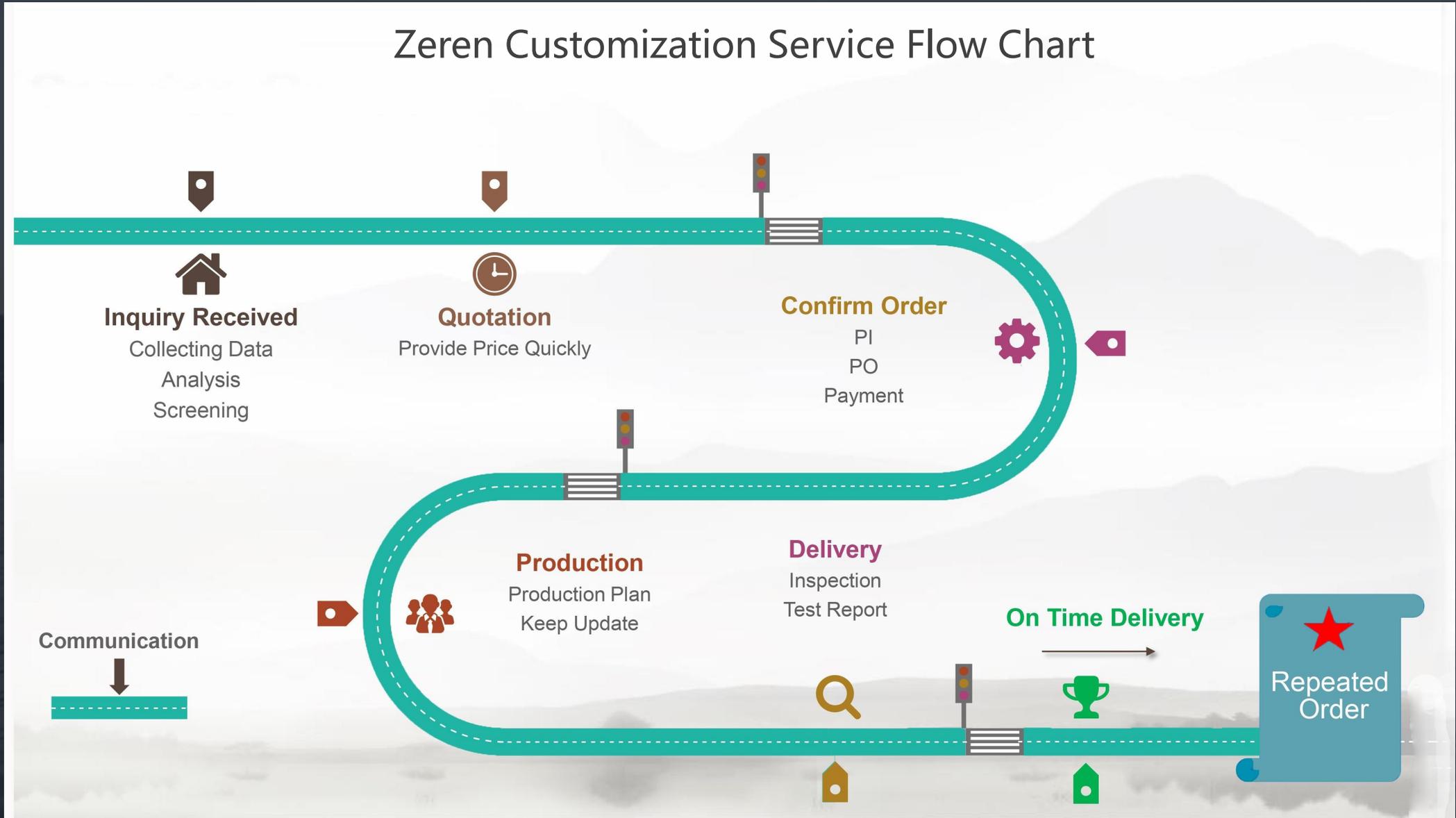
About us

Our History:



Service Flow Chart

Zeren Customization Service Flow Chart



Part 2

OUR PRODUCT

Our product

Product Categories:

Machinery Equipment



Vehicle & Motorcycle



Pump & Valve



Turbine Wheel/Blade



Bathroom Accessories



Light Fixture



Marine Accessories



Home & Kitchen



Measuring Instrument



High Temperature Steel



Why choose us

Intuitive, Innovative, Investment Casting

An industry leading commercial precision investment casting (lost wax) foundry producing stainless steel, carbon steel, and alloy castings.

Let the team at Zeren Precise Castings prove their value in the successful launch of your next critical project.

Look to Precise Castings for your next casting need!

- ✓ Stainless Steel Casting
- ✓ Carbon Steel Casting
- ✓ High Alloy Casting
- ✓ Low Alloy Casting
- ✓ Heat or Wear Resistant Casting
- ✓ Nickel Casting
- ✓ Titanium Casting

Zeren Precise Casting is the #1 Investment casting company in our region.



Member Of China Foundry Association



Over 20 Years Experience In Precision Casting Field For Industry Leading Delivery & Customized Service



An Arsenal Of Value-added Services Casting CNC Machining Surface Treatment And Assembly - Just Ask



ISO9001:2015 Quality Management System



Professional Team Creative Engineering To Keep Your Costs Down



Adherence To World-wide Standards And Specs To Satisfy Your Fitting

Our product



Steam Valve



Vehicle & Motorcycle Part



Valve



Machinery Body



Impeller



Bump Body



Instrument accessories



Micrometer Frame

Our product



Valve



Bump



Gear



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Valve

Our product



Window Accessories



Connecting Housing



Automatic Door Part



Vehicle & Motorcycle Part



Turbine



Bathroom Accessories



Machinery Part



Automatic Door Part

Our product



Impeller



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Valve Body



Bathroom Accessories

Our product



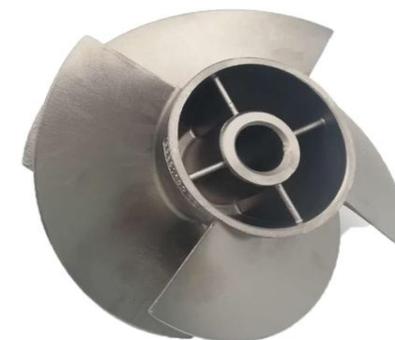
Valve



Vehicle & Motorcycle Part



Machinery Part



Lighting Accessories



Machinery Part



Machinery Part



Vehicle & Motorcycle Part



Bump

Our product



Impeller



Vehicle & Motorcycle Part



Lighting Accessories



Lighting Accessories



Lighting Accessories



Lighting Accessories



Machinery Part



Machinery Part

Our product



Machinery Part



Machinery Part



Art Craft



Lighting Accessories



Machinery Part



Machinery Part



Valve Body



Machinery Part

Our product



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Food Machinery



Food Machinery



Food Machinery



Machinery Part

Our product



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part

Our product



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Machinery Part



Pump & Valve

Our product



Pump & Valve



Pump & Valve



Impeller & Turbine Blade



Impeller & Turbine Blade



Impeller & Turbine Blade



Lighting Fixture



Lighting Fixture



Lighting Fixture

Our Product

Part & Product Example:



1. Bracket Assembly for motorcycle gear shifter

These components are part of a bracket assembly for a gear shifter on a motorcycle. Both castings are made from 20CrNiMo and are machined, powder coated, and assembled.



Our Product

Part & Product Example:



2. Gear Case for race car

This component is customized gear case for the racing car.

It is made from SS304 and are machined, powder coated.



Our Product

Part & Product Example:



3. Rope And Chain Winch

This is an inner gypsy in an electric rope and chain winch. The component is made with SS316, that was then machined and electropolished.



4. Control Button Guard

This component is a control button guard made from SS316. This casting is machined and electropolished.



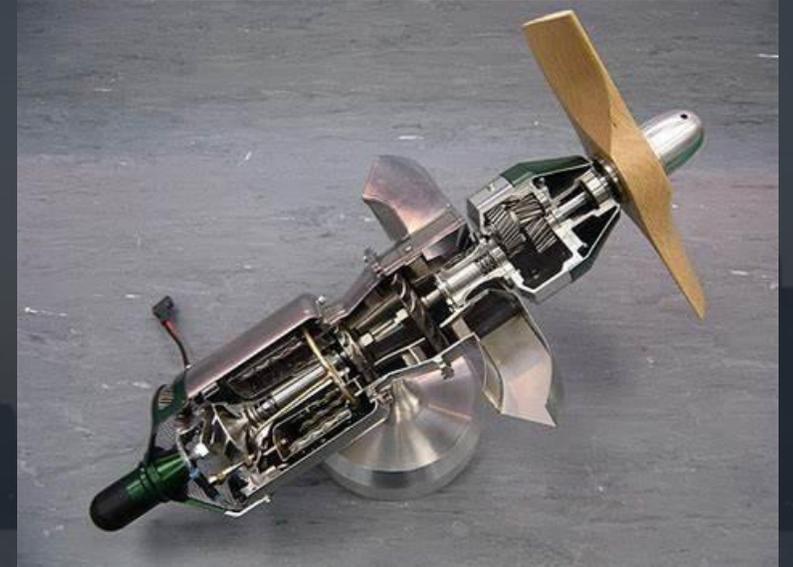
Our Product

Part & Product Example:



5. Turbine Wheel For Model Jet Engine

This is the turbine wheel in the model jet engine. The component is made with Inconel 713, that was then machined.



Our Product

Part & Product Example:



6. Turbine Blade For Model Turbine Shaft Assembly

This is the turbine blade in the model jet engine. The component is made with Inconel 713, that was then machined.



Our product

Our Product General Specs:

Material	Austenitic stainless steel: 201, 303, 304, 316, 316L, 1.4581, scs14, scs16
	Hardened stainless steel:17-4PH, 410, 420, 440C
	Alloy cast steel: 4140, 4150, 4340, 8620, GS-25CrMo4
	Casting alloy tool steel: CS-2, CS-7, CrWMn
	Carbon steel: 1020, 1025(WCB), 1030, 1040, 1045, 1050
Weight	1g-30kg
Casting tolerance	CT4-CT7/GBT6414-1999; VDG Merkblad P690
Surface Roughness	Ra1.6-Ra6.3
Thickness	Min 2mm (1mm in Micro-region)
Casting Radius	Round radius $\geq 0.3\text{mm}$, Internal fillet radius $\geq 0.5\text{mm}$
Blind Hole Depth	Max 30mm (Diameter 10mm)
Machining	Turning, Milling, Drilling, Boring, Threading, Grinding, CNC Machining & test equipment
Heat Treatment	Annealing, Hardening, Normalizing, Carburizing, Aging
Surface Finishing	Black Oxide, Black Coating, Anti-Pollution Flashover Coating, Mirror Polish
Industry Standards	ASTM, ICI, BS, DIN, JIS, ISO
Design Software	Pro-E, UG, Solidworks, AutoCAD
File Format	IGS, STP, XT, PDF, JPEG, JPG

Our Product

Our Advantage:

All of our items is **silica sol investment casting** instead of water glass investment casting.

Water glass method dewaxes into the high-temperature water, and the ceramic mold is made of water glass quartz sand. Silica sol method dewaxes into the flash fire, and silica sol zircon sand makes the ceramic mold.

The silica sol investment casting can get a better surface roughness Ra3.2.

Silica Sol
Casting

VS

Water Glass
Casting



Ra3.2



Ra12.5



2:1



2:1



3:1



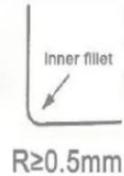
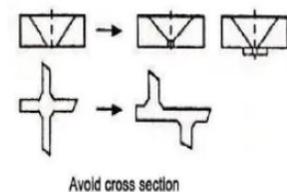
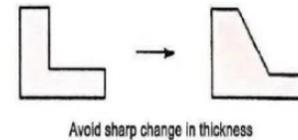
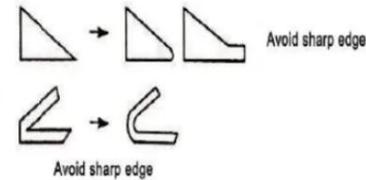
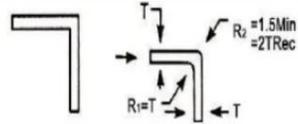
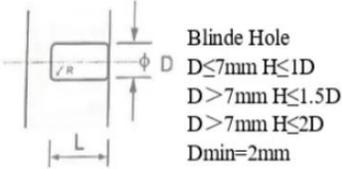
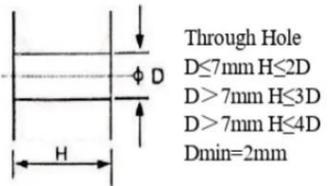
3:1

Our Product

TOLERANCES FOR INVESTMENT CASTING

Angle Tolerance $\pm 0.5^\circ$ to $\pm 1^\circ$
 Straightness $\leq 0.005^\circ$ per inch

CASTING CAPABILITY



The scope can be enlarged by the use of pre-formed ceramic cores at additional cost, only economical for large quantities

Minum wall thickness: 2mm (1mm for small area)
 Radius of Rounds and fillets
 Surface Roughness: Ra3.2
 Casting Weight: 5g-10Kg

TECHICAL INFORMATION

DIMENSION TOLERANCE

Liner Tolerance (Refer to German Investment Casting Tolerance Standards VDG Merkblad P690)

Nomianl Dimension		Length, Width, Height						Center Line	
		D1		D2		D3		D1	D2
> From	≤ To	Tolerance	Field	Tolerance	Field	Tolerance	Field	Tolerance	Tolerance
0	6	± 0.10	0.20	± 0.08	0.16	± 0.06	0.12	± 0.25	± 0.16
6	10	± 0.12	0.24	± 0.10	0.20				
10	14	± 0.15	0.30	± 0.12	0.24	± 0.09	0.18		
14	18	± 0.2	0.40	± 0.14	0.28				
18	24	± 0.25	0.50	± 0.17	0.34	± 0.12	0.24	± 0.32	± 0.20
24	30	± 0.30	0.60	± 0.20	0.40	± 0.14	0.28	± 0.50	± 0.30
30	40	± 0.37	0.74	± 0.25	0.50	± 0.17	0.34		
40	50	± 0.44	0.88	± 0.30	0.60	± 0.20	0.40	± 0.71	± 0.45
50	65	± 0.52	1.04	± 0.38	0.76	± 0.23	0.46		
65	80	± 0.60	1.20	± 0.46	0.92	± 0.27	0.54	± 0.91	± 0.60
80	100	± 0.68	1.36	± 0.53	1.06	± 0.30	0.60	± 1.15	± 0.85
100	120	± 0.76	1.52	± 0.60	1.20	± 0.33	0.66		
120	140	± 0.84	1.68	± 0.65	1.30	± 0.36	0.72	± 1.80	± 1.00
140	160	± 0.92	1.84	± 0.72	1.44	± 0.38	0.76		
160	180	± 1.02	2.04	± 0.80	1.60	± 0.42	0.84	± 2.20	± 1.25
180	200	± 1.12	2.24	± 0.88	1.76	± 0.43	0.86		
200	225	± 1.28	2.56	± 0.95	1.90	± 0.47	0.94	± 2.60	± 1.60
225	250	± 1.44	2.88	± 1.05	2.10	± 0.51	1.02		
250	280	± 1.64	3.28	± 1.15	2.30	± 0.56	1.12	± 2.60	± 1.60
280	315	± 1.84	3.68	± 1.25	2.50	± 0.63	1.26		
315	355	± 2.10	4.20	± 1.40	2.80	± 0.71	1.42	± 2.60	± 1.60
355	400	± 2.40	4.80	± 1.60	3.20	± 0.80	1.60		

D1 General dimension tolerance

D2 Applicable to important dimension requiring close tolerances

D3 Premium tolerance require additional operations at extra cost only applied to a few speical dimensions

Our Product

Zeren Lost Wax Investment Casting & Machining Process

The Zeren Difference

- Investment casting can produce parts of virtually any size, to almost any level of complexity, and can hold tolerances simply impossible using other methods.
- With our state-of-the-art equipment and automation, we can deliver the best performance and the lowest total cost for every component you develop.

Contact our team today to experience the Zeren difference.

Operations	Photo	Operations	Photo	Operations	Photo
1. Mould Design		2. Mould Production		3. Inject Wax Pattern	
4. Trim Wax Pattern		5. Inspection		6. Assembly Wax Tree	
7. Build Mould Shell		8. Dewax/Burnout		9. Pour Metal	
10. Chemical Composition Inspection		11. Shot Blasting		12. Cut-Off	
13. Polish		14. Grinding		15. Heat Treatment	
16. Straighten		17. Final Inspection		18. CNC Machining	
19. CNC Lathe Machining		20. Dimensional Inspection		21. Packing & Shipping	

Part 3

Quality Control

Quality Control

Quality Commitment

- **Quality is always the highest priority at Zeren.** We strive to meet and exceed all customer requirements and expectations and **provide on-time delivery of defect-free casting and precision machined parts.**
- Our commitment to continuous improvement means great value is placed on teamwork, education, training, and prevention-oriented techniques across all possible aspects of company operations.



Quality Assurance

- **We and all our partner manufacturers are typically ISO 9001 and/or TS 16949 certified.** Our customers rely on us and our partner manufacturers to deliver world class quality products.
- Our quality assurance technicians verify every lot of parts to ensure it meets our customers' high standards. We utilize ISO9001 accredited independent labs to **certify material, casting, machining, finish, heat treatment, coating, customer specific performance and test requirements, and specifications.**

Quality Control

Inspection

- Zeren inspection capabilities** include mechanical inspections using 3D scanner, CMM (coordinate measuring machine), spectrograph, hardness testing, thread gauging, electronic document control, digital calipers & micrometers, lot traceability, process capability studies, gauge R&R studies and inspection accuracy to 0.00005" (0.001mm).
- Our Calibration Program assures Zeren's metrology is functioning properly and kept in compliance both in-house and at our global partners. We continually monitor all associated metrology and gages in all of our production facilities.
- We partner with certified outside test labs to perform the full gamut of testing such as Physical Property Testing, Destructive & Non-Destructive Testing, X-Ray and Metallurgical Analysis, Corrosion Resistance (salt spray) testing of coatings, and virtually any test required by our customers.



Spectrograph



Hardness Test



CMM



Size Inspection



Special Gauge



3D Scanner



Quality Compliance

- **Zeren incorporates a robust quality plan to inspect and verify every lot.** Our quality assurance professionals maintain the highest standards of training and education. Prior to exit-factory, all material and dimensional inspections are completed and certified.
- Equipping with the latest in inspection technology and precision metrology, our quality team of ASQ Certified Technicians is able to obtain accurate data and pass that information on to our customers whenever required.
- We offer our customers: **First-Article Inspection Reports, SPC Data and Final Inspection reports.** We also maintain a database with a full complement of quality records for immediate retrieval when required.

Quality Control



Certification & Test Report:



TEST REPORT

No. : SH01702670166
Date : Feb 02, 2018
Page : 2 of 2

Dimension Measurement:

No.	Feature	Dimension	Nominal	Tolerance		Measure	Deviation	Date	Loc.	Type	Remarks
				Min	Max						
Screw for bearing hub											
1	Height	48	—	—	—	48.017	-0.017	—	—	—	OK
2	Radius	R8	0.2	0.2	0.2	0.208	0.008	0	0	0	OK
3	Distance	27	0.1	0.1	0.1	0.108	0.008	0	0	0	OK
4	Distance	60.8	0.1	0.1	0.1	60.812	0.012	0	0	0	OK
5	Distance	82	0.017	0.017	0.017	81.981	-0.019	0	0	0	OK
Nut for mounting bearing											
1	Distance	264	1.8	1.8	1.8	264.262	0.262	0	0	0	OK
2	Radius	R	—	—	—	0.218	0.218	0	0	0	OK
3	Radius	R	—	—	—	0.228	0.228	0	0	0	OK
4	Radius	R	—	—	—	0.187	0.187	0	0	0	OK
5	Radius	R	—	—	—	0.228	0.228	0	0	0	OK
6	Distance	20	0.028	0	0	20.036	0.036	0	0	0	OK
7	Distance	202	0	0	0	201.988	-0.012	0	0	0	OK
8	Distance	88	0.028	0	0	88.027	0.027	0	0	0	OK
9	Distance	117	0.8	0.8	0.8	117.011	0.011	0	0	0	OK

Note: N/A indicates Pass, * indicates Fail.
----- End of report -----

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate Number: SH01702670166

This is to certify that the Quality Management System of
Foshan Zeren Metal Products Co., Ltd.
Organization Code/Unified Social Credit Code: 914406050400072448
Registration Address: No. 4, Shichang Industrial Zone, Xingyuan Road, South Kexun, Area B, Weidian Industrial Park, Nantou District, Foshan City, Guangdong, P.R. China
Production Business Address: No. 4, Shichang Industrial Zone, Xingyuan Road, South Kexun, Area A, Weidian Industrial Park, Nantou District, Foshan City, Guangdong, P.R. China

Has been Audited to Conform to the Following Quality Management System Standards:
GB/T19001-2016/ISO9001:2015
for the Scope of Registration:
Production and Sale of Hardware Precision Castings.

Issued on: Jan 16, 2018
Date of Expiry: Jan 28, 2022

TEST REPORT

Report No.: LEB0-C-1611261501
Sample No.: C-16112612
Page 1 of 2
ID No.: 0100588

Approved: Foshan Zeren Metal Products Co., Ltd.
Address of Applicant: Room 1021, Wing 3, North Kowloon Road, Cognito Class
Sample Name: Brass Ring
Article / Model No.: 12011-001
Examined Date: November 20, 2018
Test Period: November 15, 2018 - November 30, 2018
Test Requested: As specified by Client, with reference to JIS Z 2301 (JIS Z 2301 S12) standard Annex 2 of 2012 (JIS Z 2301), to Assess Carbon, Lead, Manganese, Cu/Fe in the referenced sample
Test Method: With reference to JIS Z 2301 (JIS Z 2301 S12), Determination of Lead by XRF-ANALYSIS
With reference to JIS Z 2301 (JIS Z 2301 S12), Determination of Carbon by XRF-ANALYSIS
With reference to JIS Z 2301 (JIS Z 2301 S12), Determination of Manganese by XRF-ANALYSIS
With reference to JIS Z 2301 (JIS Z 2301 S12), Determination of Iron/Steel Chemistry by spot test Colorimetric Method using UV-Vis Spectrometry
Testing Organization: Changshu Leadmet Testlab Co., Ltd.
Address: 204 East, No. 7 Building, No. 471, Xueyuan Road, Foshan City, Zhejiang Province

TESTS CONDUCTED:
AS REQUESTED BY THE APPLICANT, FOR DETAILS REFER TO ATTACHED PAGE(S)

Signed for and on behalf of
Leadmet Testlab

Wang Xueping
Wang Xueping
Lab Manager
Date: November 30, 2018

The Applicant shall not be held liable for any loss or damage caused by the laboratory. The results shown in this report are valid only for the sample(s) tested. If you need to retest the report items, you may wish to provide them with a new report ID number.

CHANGSHU LEADMET TESTLAB CO., LTD.
4001 204 East, No. 7 Building, No. 471, Xueyuan Road, Foshan City, Zhejiang Province P.R. China
TEL: +86 571 86202018 FAX: +86 571 86202019 MAIL: info@leadmet.com.cn www.leadmet.com.cn

Quality Control

Quality Feedback System

Input: Received feedback from customer or factory

What: Identifying the Problem

Where: Defining the goal to improvement

Why: Thinking about possible ways of solving a particular problem

Who: Designating the best person in charge

How: Optimizing and modifying the method or procedure

Why: Asking more why and then find out the best solution for improvement

Output: Going through the PDCA cycle to solve the problem



Part 4

OUR TEAM

Our team

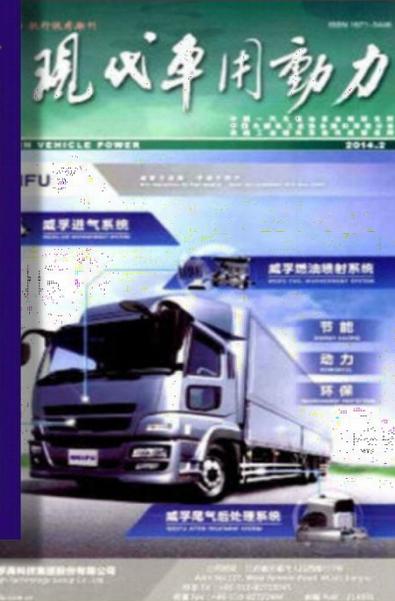
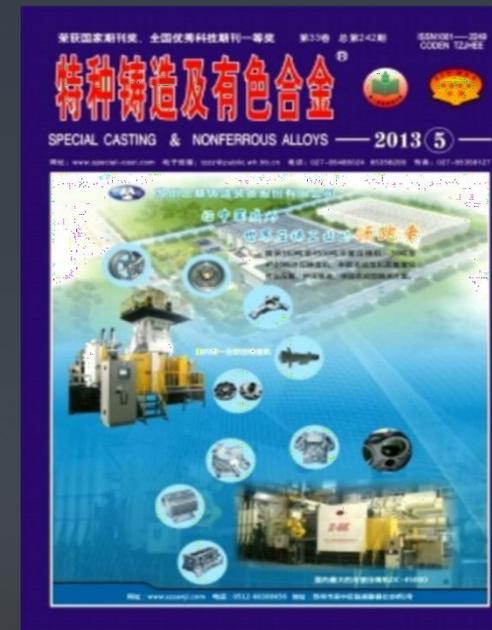
Company Organization



Our team

Our thesis published in academic journals :

1. Prevention methods for shrinkage cavity and surface burr defects of investment castings
<<Special-cast and Non-ferrous Alloys>> 2020, (7)
2. Solutions of shrinkage in small castings with isolated hot joints
<<Special-cast and Non-ferrous Alloys>> 2002, (2)
2. Reconsideration Solutions for shrinkage in small castings with isolated hot joints
<<Special-cast and Non-ferrous Alloys>> 2002, (6)
4. Methods of eliminating cracks in silica sol shells and burrs in castings
<<Special-cast and Non-ferrous Alloys>> 2001, (6)
5. Solutions of the investment casting enterprise after WTO
The 8th(2003) Annual Meeting China Foundry Association Investment Casting Branch
6. Application example of riser for investment casting
The 8th(2003) Annual Meeting China Foundry Association Investment Casting Branch
7. Technology measures of improvement iron casting structure density in II pump body
<<Modern Vehicle Power>> 1995, (2)



- The “Prevention methods for shrinkage cavity and surface burr defects of investment castings” & “Solutions of shrinkage in small castings with isolated hot joints” & “Reconsideration Solutions for shrinkage in small castings with isolated hot joints” (<<Special-cast and Non-ferrous Alloys>> 2020, (7), 2002, (3,6))
- These **three** theses directly rewrote part of the content of the textbook in foundry major in Chinese universities.
- In the past ten years, many skilled technicians in the foundry industry have mastered this technology and made great contributions to the technical progress of the foundry industry

Our team

Team Activities



Contact information



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Phone: +86 15875760497 (Doris Lyu)



Whatsapp/Skype: +86 15875760497(wechat available)



Website: (1) www.zr-investmentcasting.com
(2) fszeren.en.alibaba.com



Thanks