International Dep. Office
2nd Floor, Building A, Binjiang International, Jingjiang, Jiangsu
Director: Ivan Chan
Tel:+86 159 6106 6053
Email: info@vt-metal.com

Casting Centre
6 Jianghe Road, Jingjiang, Jiangsu, China
Technical Director: Sven Sun
Tel: +86 137 0143 9525
Email:sunbin@xingtejia.com

Machining Factory
1 Minghe Road, Jingjiang, Jiangsu, China
QA Director: Terry Tang
Tel: +86 138 6647 1864
Email:tang@xingtejia.com

Sales and Aftersales in Europe
St Quentin en Yvelines (78), France
Marketing Rep.: Mr Carlos
Tel:+ 33 6 62 41 01 28
Email:Carlos@xingtejia.com

www.vt-metal.com

OEM HEAT&WEAR RESISTANT CASTINGS SOLUTION PROVIDER

Foundry | Material Engineering

VITO METAL TECHNOLOGY CO.,LTD.

Over 15 years' R&D on Grate Bars manufacturing

定稿后源文件无水印

INTRODUCTION

COMPANY PROFILE

Vito is founded in 2010 with registered capital of 31.19 million yuan, located in Jingjiang, Jiangsu. We are a professional OEM heat&wear resistant castings manufacturer whose typical products are WtE&BtE grate bars. Our engaged industries include waste to energy, Biomass combustion, Mining, Steel Roll, hot dip Galvanizing line ,Cement industry and etc.

As an ISO9001:2015 certificated enterprise, mature QC system is our foundation. It has been always our final goal to help our customers reduce running cost and free of frequent downtime.

2010

31.19M

20000M²+

100+

LOCATION

International Dep. Office
2nd Floor, Building A,
Binjiang International,
Jingjiang, Jiangsu

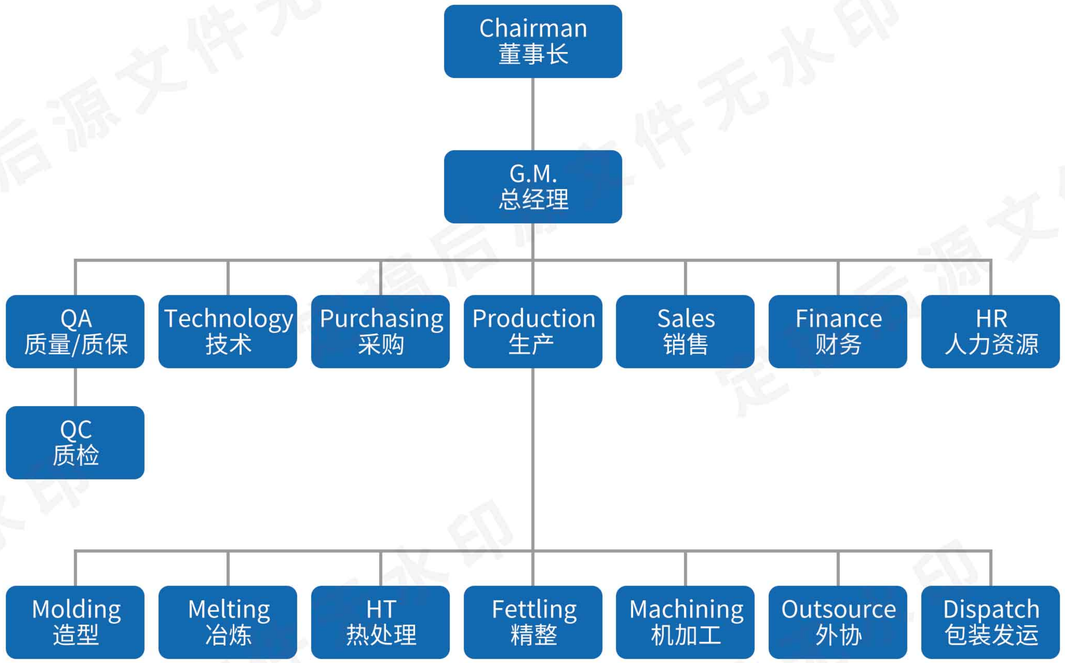
Casting Centre
6 Jianghe Road, Jingjiang, Jiangsu, China

Machining Factory
1 Minghe Road, Jingjiang, Jiangsu, China

Sales and Aftersales in Europe
St Quentin en Yvelines (78), France

INTRODUCTION

Organization Chart



Employee : Total 100+, including

Foundry Engineers 5
Heat Treatment Engineers 2
QC Engineer 8
Qualified welders 6
Outsourcing QC Manager 4

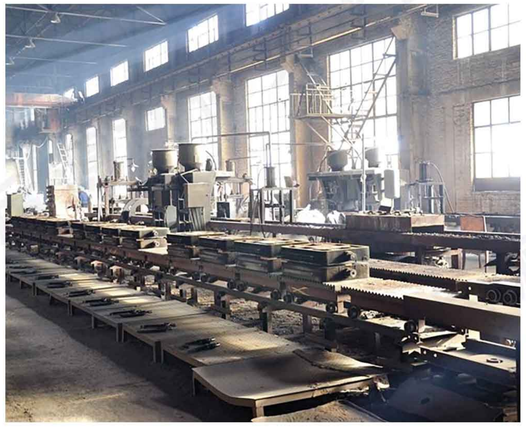
INTRODUCTION

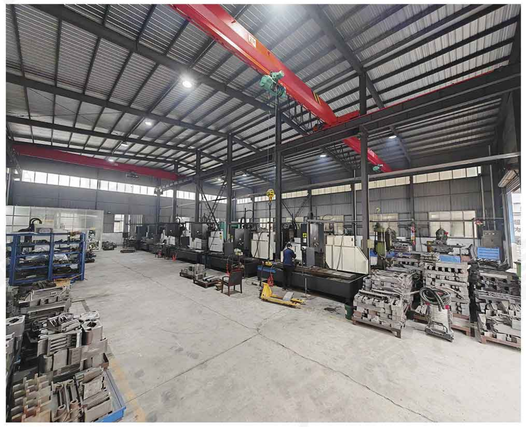
Our History

- **2026** Expect revenue to exceed 100 million CNY
- **2025** Purchase factory building and double the area
- **2023** Promote the management of 4S in the factory
- **2022** Add plenty of machining equipment
- **2020** Add new furnace, double capacity
- **2018** Independent International Department Founded
- **2016** Factory relocated
- **2015** Export orders surge
- **2013** Start collaborating with some of the world's leading enterprises
- **2012** Successfully applied the shell moulding technique to grate bars production
- **2011** Started International Trading
- **2020** First Factory Founded

INTRODUCTION

FACTORY TOUR





Production Management SOLUTION

Our Typical Technique

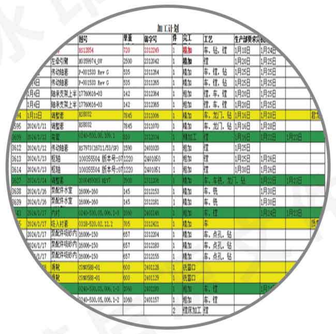
Our main manufacturing technique to produce grate bars is shell mould casting using steel patterns and resin-bound-sand. Compared to other casting methods, shell mold casting has lower costs and very high shell moulding efficiency.It can produce grates with accurate dimension and excellent surfaces. Additionally, the steel patterns have a nearly unlimited lifetime. Our scope of material comprises non-alloyed to high-alloyed steel castings. Heat resistant castings play a major role in our product range.

Refined Management

Casting daily plan
铸造日计划

Shaking out daily plan
开箱日计划

Heat treatment daily plan
热处理日计划



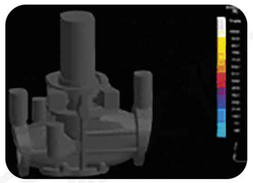
Machining daily plan
加工日计划

Moulding plan
造型日计划

Grinding daily plan
打磨日计划

Production Management SOLUTION

COMPANY PROFILE



Casting-design、Simulation

Package & Delivery

Final inspection

Tempering

Pattern makin

Excavation & Welding

Molding

NDT

Melting & Pouring

Grinding

Shake out & Cleaning

Riser cutting

Heat treatment

Machining

Equipment List

Production Equipment: Melting

- Induction Furnace*3
  Capacity 5400 tons/Year
- EPC Lost Foam Casting Vacuum System*1
  Used for some small quantity parts
- Semi automatic casting line*1
- Plan to add 2 more Furnace in 2027

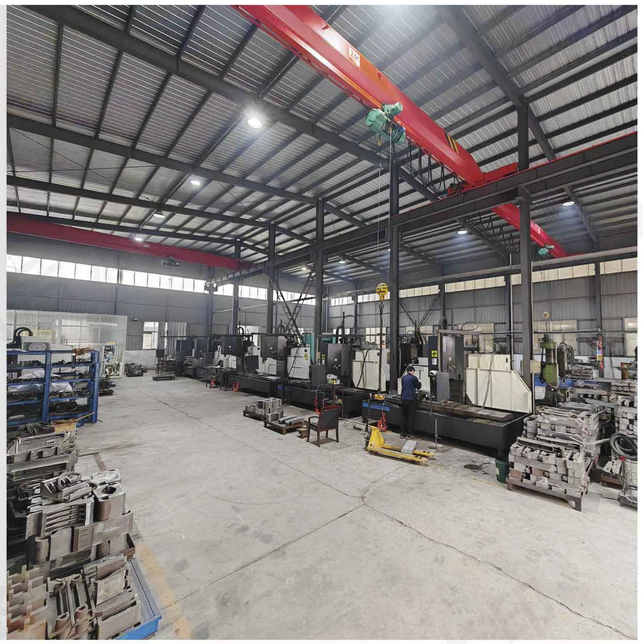
Production Equipment: Shell Molding

- Heat Corebox Shooter*14 sets
- Automatic steel ball shot filling machine: 30t*1

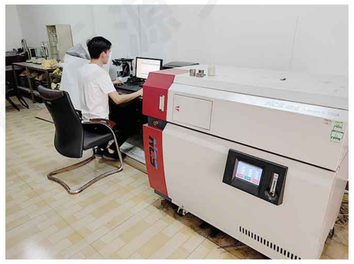
Equipment List

Production Equipment: Machining

- CNC Miller GSK980TC*12
- CNC double-sided miller*2
- CNC Planomiller 1200X3000*1
- Boring Machine*1
- Drilling Machine*1
- Electo-discharge Cutting*4
- CNC Machining Centre*2
- CNC Lathe*3
- Vertical millers X5042A*8
- Surface Grinder MY3207*1



Inspection Equipments



Laboratory of Chemical Analysis

Laboratory of Mechanical

3D Scan

- German imported Spike spectrometer
- OLYMPUS Handhold spectrometer
- 2000 KN tensile testing machine
- 100 KN tensile testing machine
- metallographic microscope
- Magnetic particle testing equipment
- Ultrasonic testing equipment
- LPI Testing spray
- 3D Scan
- Steel temperature tester

OUR QC SOLUTION

Front-end quality management

Process design, pouring simulation
工艺设计、浇注模拟

100% product MAGMA simulation.
100%产品
进行MAGMA模拟

Molding Instruction
Produced by the technical department, it clearly reflects the riser, chiller, runner and other elements in the form of a three-dimensional diagram. It also explains the applicable scope of shell mold heating temperature, holding time, coating requirements and casting letter requirements. Before the first production molding , technical personnel will provide briefing instructions to the operators.
造型作业指导书
由技术部制作，以立体图形式明确体现冒口、冷铁、浇道等要素。并对壳型加热温度，保温时长，涂料刷涂要求以及铸字要求进行说明。首次制造产品造型前由技术人员向操作者进行交底说明。

Molding
造型

Systematic Molding process
系统化造型工艺

Smelting &Pouring
冶炼 & 浇注

Check the ladle cleanliness for each lot
每炉检查钢包清洁情况

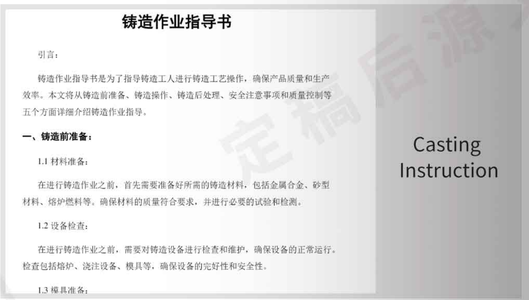
Check the state of dissolved waste for each lot
每炉确认出渣状态

Welding repair rate 3.4‰
焊补率 3.4‰

Process quality control

Molding Instruction

Casting Instruction



铸造作业指导书

引言：

铸造作业指导书是为了指导铸造工人进行铸造工艺操作，确保产品质量和生产效率。本文将从铸造前准备、铸造操作、铸造后处理、安全注意事项和质量控制等五个方面详细介绍铸造作业指导。

一、铸造前准备：

1.1 材料准备：

在进行铸造作业之前，首先需要准备好所需的铸造材料，包括金属合金、砂型材料、熔炉燃料等。确保材料的质量符合要求，并进行必要的试验和检测。

1.2 设备检查：

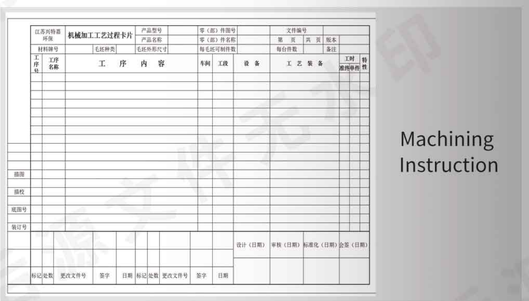
在进行铸造作业之前，需要对铸造设备进行检查和维护，确保设备的正常运行。检查包括熔炉、浇注设备、模具等，确保设备的完好性和安全性。

1.3 模具准备：

Grinding Instruction

打磨作业指导书

Machining Instruction

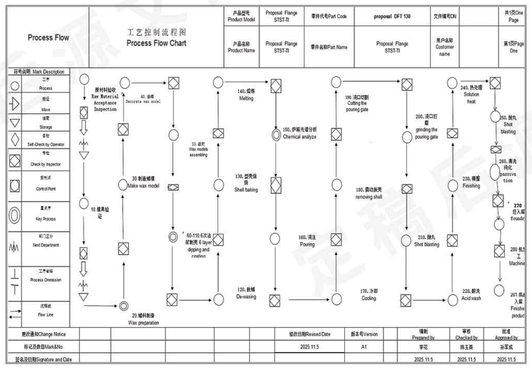


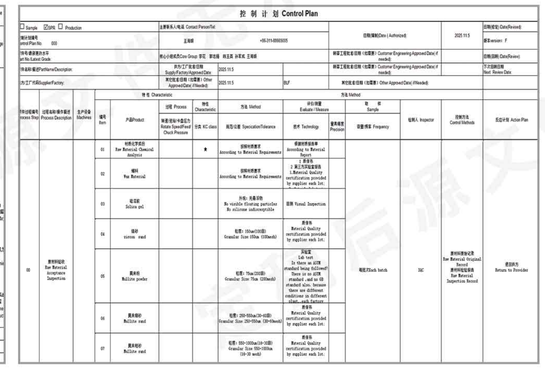
机械加工工艺过程卡片

OUR QC SOLUTION

Process Flow Chart

One copy of each product, made according to the product process. From raw material management to final product delivery, responsible departments for each sequence, inspection results before transfer, signature of the confirmer, confirmation time, etc.,





COMPANY PROFILE

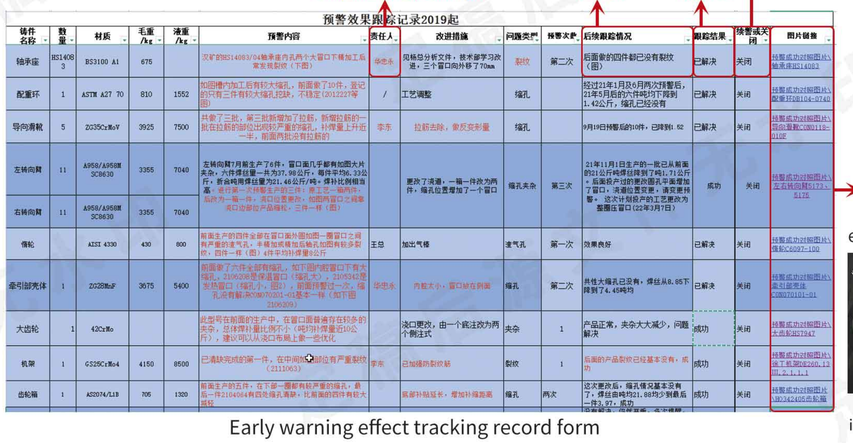
Found undesirable issues → Analyze causes and formulate countermeasures → **Implementation and verification**

Whether to close:
After a successful verification, it is necessary to continue to warn subsequent products to continue verification.
Multiple pieces/batches can only be closed after the quality is stable.

Improvement and implementation of responsible persons

Verification status

Validation results



预警效果跟踪记录2019起

铸件名称	数量	材质	毛重/kg	浇重/kg	预警内容	责任人	改进措施	问题类型	预警次数	后续跟踪情况	跟踪结果	预警或关闭	图片链接
轴承座	HS1408 3	BS3100 A1	675		汉军的HS14083/04轴承座内孔内个大管口下精加工后常发现裂纹（下图）	华忠水	风格显分析文件；技术部学习改进，三个冒口向外移了70mm	裂纹	第二次	后面要的四件都已没有裂纹（图）	已解决	关闭	预警成功2(图片1轴承座HS14083
配重环	1	ASTM A27 70	810	1552	如图槽内加工后有较大缩孔，前面做了10件，最近的只有三件有较大缩孔把孔，不稳定(2012227等图)	/	工艺调整	缩孔		经过21年1月及6月两次预警后，21年5月后的六件吨均下降到1.42公斤，缩孔已经没有	已解决	关闭	预警成功2(图片1配重环2014-0740
导向滑轨	5	Z035Cr18Ni9	3925	7500	共做了三批，第三批新增加了拉筋，新做拉筋的一批在拉筋的部位出现较严重的缩孔，补焊量上升近一半，前面两批没有拉筋的	李东	拉筋去除，象反变形量	缩孔		9月19日预警品的10件，已降到1.52	已解决	关闭	预警成功2(图片1导向滑轨CB0118-0108
左转向臂	11	A958/A958M SCB630	3355	7040	左转向臂7月份生产了4件，冒口面几乎都有如图大片夹杂，六件焊丝量一共为37.98公斤，每件平均6.33公斤，折合吨两焊丝量为21.44公斤/吨，焊补比例明显高，但只第一次预警生产的三件；原工艺一箱两件，现改为一箱一件，其它位置更好，但因热冒口之间影响口部位产品稳扰，三件一样（图）		更改了清理，一箱一件改为两件，缩孔位置增加了一个冒口	缩孔夹杂	第三次	21年11月日生产的一批已从前面的21公斤吨焊丝降到了吨1.71公斤，后面所产品的更改图孔平面增加了冒口，清理位置变更，调变更持整，但次计划改产的工艺更改为整圆在冒口(22年7月7日)	成功	关闭	预警成功2(图片1左右转向臂5171-6175
右转向臂	11	A958/A958M SCB630	3355	7040									
惰轮		AISI 4330	430	800	前面生产的四件全部在冒口面外圈如图一圈冒口之间有严重的渣气孔，半精加式精加后畅孔如图有较多裂纹，四件一样（图）4件平均5.9重6.5斤	王总	加出气槽	渣气孔	第一次	效果良好	已解决	关闭	预警成功2(图片1惰轮C6097-150
牵引部壳体	1	ZG28Mn2F	3675	5400	前面做了六件全部有缩孔，如下图的底面冒口下有大缩孔，2106298是停造冒口（缩孔大），2106342是发热冒口（缩孔小，图2），前面预警过一次，缩孔没有最2106298/2106342是不一样（如下图2106309）	华忠水	内腔太小，冒口缺在倒角	缩孔	第二次	共性大缩孔已没有，焊丝从8.65下降到了4.45吨均	已解决	关闭	预警成功2(图片1牵引部壳体C2007010101-01
大齿轮	1	42CrMo			此型号在前面的生产中，在冒口面普遍存在较多的夹杂，总体焊补量比例不小（吨均焊量近10公斤），建议可以从浇口布局上做一些改化		浇口更改，由一个底注改为两个侧注式	夹杂	1	产品正常，夹杂大大减少，问题解决	成功	关闭	预警成功2(图片1大齿轮B57947
机架	1	G5250CrMo4	4150	8500	已表缺陷成的第一件，在中间部位有严重裂纹（2111063）	李东	已加强热裂纹缺	裂纹	1	后面的产品裂纹已经基本没有，成功	成功	关闭	预警成功2(图片1机架2101.13图.2.1.1.1
齿轮箱	1	AS2074/LZ18	705	1320	前面生产的五件，在下部一圈都有较严重的缩孔，最后一件2104084有四处缩孔清缺，比前面的四件有较大的较		底部补贴延长，增加补强跟踪	缩孔	两次	这次更改后，缩孔情况基本没有了，焊丝由吨均21.88均少到最后一件8.97，成功	成功	关闭	预警成功2(图片1齿轮箱2104245齿轮箱

Early warning effect tracking record form

Improved before-and-after photo archiving
eg:

Before improvement　After improvement

Product CASES DISPLAY

Grate Bar

Vito Metal Technology Co.,LTD.

Product CASES DISPLAY

Grate Bar

Product CASES DISPLAY

Grate Bar

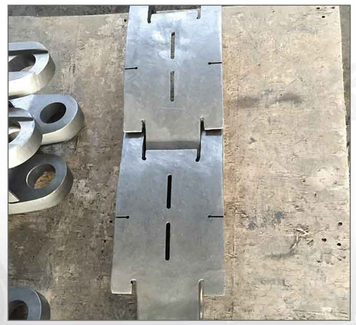
Product CASES DISPLAY

Grate Bars for mining pallet cars

Grate Plates for Pellet Plant

Product CASES DISPLAY

Chain castings for Pellet Plant



Product CASES DISPLAY

Investment Casting Stainless Steel Parts

OUR RESEARCH AND DEVELOPMENT (R&D)

15 years of dedicated research

Present for around 15 years in Waste to energy,XTJ is one of the major players specialize in the production of wear parts used in the field.

With a lot of times' on-site investigation and survey, We are very pleasant to provide relevant improvement suggestions from the aspects of casting technology and material properties.

INNOVATION-New Material

Composite layer infiltration casting process

Basal body: 42CrMo

Composite layer: hard metal alloy powder

The alloy powder are embedded and fixed with non-metallic materials. When the liquid steel poured, the alloy powder will be melted togther with the Matrix material, forming a composite material which have very high hardness.

Basal body HRC 28

Acting Surface HRC59.5

OUR RESEARCH AND DEVELOPMENT (R&D)

Diversified Technique Development

Entrusted by our partners, we have jointly developed a screening roller for the wood industry. **With** some new designs on the rollers, their lifespan increase 3 times. Significantly reduce customers' downtime.

Electroplating Hard Chromium

Layer thickness ⩾ 250 μm

Hardness ⩾ HRC 65

Diversified Wear Protection Solutions

Laser Cladding: Laser cladding is a precise additive process that uses a laser to melt and bond coating material onto a substrate, creating strong, wear-resistant layers with minimal heat impact. It's commonly used for surface protection and part repair.

Plasma Transferred Arc (PTA): a surface engineering process that uses a concentrated plasma arc as the heat source to melt and fuse filler material onto a substrate, forming a metallurgically bonded, low-dilution coating. It is widely used for enhancing wear, corrosion, and high-temperature resistance, as well as for rebuilding and repairing critical components.

Material: nickel-based alloys(e.g., Inconel 625, Hastelloy), cobalt-based alloys (e.g., Stellite), iron-based alloys, tungsten carbide (WC) composites, titanium alloys, and ceramics.

OUR RESEARCH AND DEVELOPMENT (R&D)

Efficiency wins trust

Project Background:

At the beginning of 2022, a 750t furnace project of Grandblue encountered a development bottleneck, and multiple suppliers tried to make samples but failed. At a critical moment when the project schedule is extremely tight and the pattern production cycle is long, we were entrusted with the task at the critical moment.

Project difficulty:

- Large scale: Complete sets of grate and accessories, with a total weight of about 100 tons.
- Model diversity: 45 different kinds of products, all parts need individual patterns.
- Urgent lead time: ≤ 60 days. Normally we need to take 30 days to finish sampling.

Our actions:

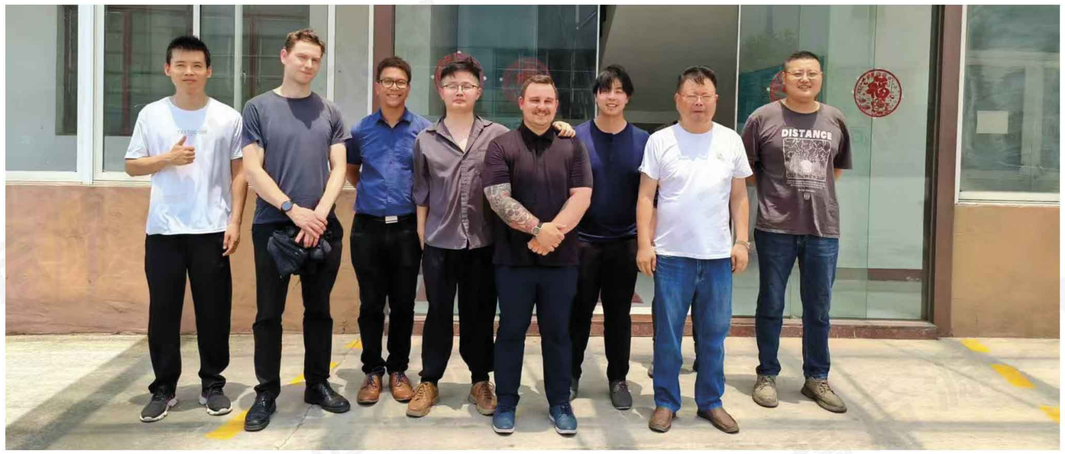
Faced with 'impossible tasks', we activated the emergency plan.

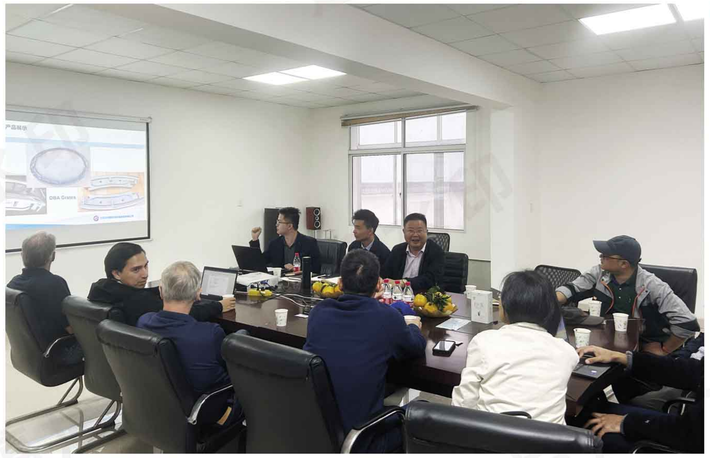
- Parallel work: synchronizing mold design and production preparation.
- Extreme rush work: All staff are involved, 24-hour 3 shifts are implemented, and the time for each link is compressed.
- Adjust Production Schedule: give them the highest priority.

Project achievements:

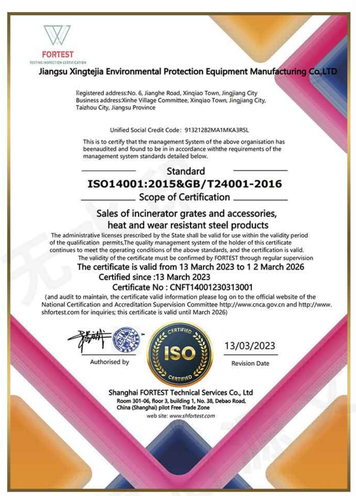
- Delivery on schedule: Their project ignited as scheduled.
- Quality recognition: The product passed the acceptance inspection in one go, solving the urgent needs of customers.
- From then on, we established long-term strategic cooperation with Grandblue. Awarded a thank-you letter.

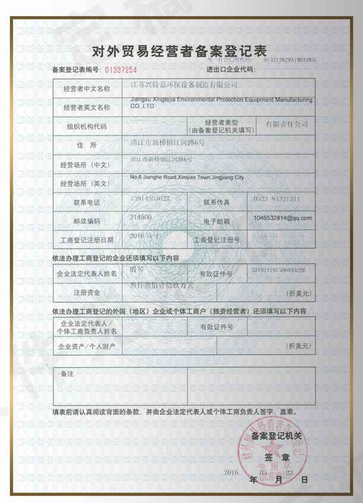
VISITORS





Certificates





FAQ

Can you do OEM?

Yes, we are an OEM factory with 15 years' manufacturing experience. We can provide custom fabrication service strictly according to your required standards. We normally proceed with drawings or samples. Other cooperative solution can also be negotiated.

How you proceed quality control?

If no special requirements, we normally proceed the QC acc. to EN10204/3.1.

How we start cooperation?

Please share us with the drawing and your detailed technical requirements. We will submit our best quotation and all your required docs. to you. After your confirmation and down payment, we will start sampling and production.

What's your payment term?

For our first time to cooperate with, we normally take 50% pattern cost in advance, balance of pattern cost payable after samples get your approval. When series production, we normally take 30% in advance, balance against B/L.

For long-term cooperation, net 30 days after shipment can be considered.

What is the lead time?

The sampling time for regular products is usually 30 days. Series production time will be acc. to your quantity. If the goods are in urgent need, please propose your deadline. We can give you the priority in production arrangements.

What about the shipping method?

We can ship by sea, by train, by air or by express like DHL, Fedex. Shipping term FOB, CIF, DAP, DDP can all be accepted.