PIM

专业提供粉末注射成型产品解决方案
at the Forefront of PIM Solutions

杭州智见科技有限公司
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a FORESEE Company

China • United State • Germany

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公司简介
Company Profile

Foresee Technology specializes in the design and manufacture of Powder Injection Molding (PIM), including Metal Injection Molding (MIM) and Ceramic Injection Molding (CIM). Our capabilities allow for designs that are net-shaped, high-volume, and from complex to simple.

Established in 2013 as part of the Foresee Group of Companies, Foresee Technology is located in Tonglu County, Hangzhou China. Since the beginning, the strategic mission is to provide solutions that combine high-quality with cost efficiency in a high-volume PIM application.

Our manufacturing facility is over 50,000 m^2 and employs over 400 people in engineering, production, operations and business development. The manufacturing capabilities include feedstock creation, debinding, heat treatment, molding, machining, and surface finishing.

We serve customers worldwide from many industries. These include automotive, medical devices, consumer electronics, power tools, sensors, aerospace, and speakers.

生产工艺流程
Production Process

Powder Injection Molding (PIM) provides flexibility in materials, and the ability to process complex shapes. Below is an overview of the Production Process and capabilities of Foresee Technology.

Feedstock

Fine metal powders are combined with thermoplastic and wax binders to create the correct balance of components to ensure the mixture will meet the customer's requirement. This process is done by our staff to control the mixtures so we can achieve a 95%+ density and produce small, complex parts with tight tolerances. Correct feedstock controls are critical to consistent, repeatable components.

Molding

The process and technology of PIM is similar to Plastic Injection Molding. Feedstock is heated, melted and injected into mold cavities under high pressure. Time, temperature and pressure are tightly controlled to produce parts that are ready for the next steps in the process. Foresee Technology understands the need to accurately calculate shrinkage ratios to guarantee that parts meet tight tolerances and hold their shape.

Debinding

Removing the thermoplastic or wax binders after molding involves sintering parts so the binders melt away. Before the binders are removed, the part is considered a "green part". After the binders are removed a "brown part" remains and has the correct balance of metal or ceramic particles that meets the material specifications. This process involves the correct calculations of time and temperature during the process.

生产工艺流程
Production Process

Sintering

A sintering process is conducted so the parts can be exposed to temperatures that reach near melting points. This process closes the micro-pores and makes the part more solid, dense and stronger, but more importantly, gives the part the optimal material performance.

Shaping

Sintered parts with slight contractions will undergo a process called "shaping". This will correct any deformities in the part by subjecting it to a specific pressure with a shaping tool.

CNC

Most PIM parts are designed to have a tolerance range of 0.1% - 0.2% of its geometric dimensions, however further machining processes may be added to achieve even higher accuracy. Foresee Technology's CNC center has the proper equipment and expertise to fulfill tighter tolerance requirements.

Surface Treatment

Foresee Technology has the in-house capabilities to do surface treatment with environmentally friendly processes. This includes polishing, sand blasting, electric & chemical plating, and epoxy coating.

我们的优势
Why Foresee Technology

Solutions With PIM Technology

Foresee Technology has state-of-the-art PIM technology and the expertise to create precision metal components with a high level of complexity. Our innovative staff uses the most advanced machining techniques to create components that meet the most demanding specifications and requirements.

Product Reliability

Advanced Testing & Data Collection

Foresee Technology has a wide variety of test equipment and tooling to ensure the correct quality programs are implemented and Cpk data is gathered and studied. Our quality control programs monitor and continuously track processes and procedures. It is our passion to provide each customer with high-qualify, accurate components every time.

我们的优势
Why Foresee Technology

R&D Innovation

Simulation Technology

Foresee Technology has a very experienced and knowledgeable engineering team who can simulate the injection and molding process during the design phase to predict potential manufacturing issues. By simulating and anticipating defects or potential issues, we correctly optimize and design the necessary tooling, processes, and molds.

Material Development

PIM offers product designers greater freedom and flexibility with a wider variety of materials. The constraints of traditional materials can be replaced by new material blends of stainless steel, low alloy tool steel, soft magnetic alloys, specialty alloys, ceramics, and many other materials. Foresee Technology has the expertise and experience to develop new materials that meet stringent requirements.

Stainless Steel	Ceramic	Low Alloy Steel	Tool Steel	Soft Magnetic Alloy	Special Alloy
17-4PH	Al_2O_3	FN02	M2	FeSi3	Ti
316L	ZrO_2	FN08	SKD11	FN50	W
304		G1010		FeCo 50/50	F15
420		8620		Fe50Co48V2	HX
430		8740			N90
440B		4340			GHS-4
440NB		100Cr6			
		42CrMo4			
		SCM415			

产品展示
Products

体系认证
Certification

Foresee Technology is certified in IATF16949, ISO9001, ISO14001, OHSAS18001.


TUV NORD

CERTIFICATE

IATF 16949:2016

Hangzhou Foresee Technology Co., Ltd

Manufacturing of powder injection moulding


CQC

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

We hereby certify that

HANGZHOU FORESEE TECHNOLOGY CO., LTD.

has been awarded this certificate for compliance with the standard

ISO 45001:2018

The Occupational Health and Safety Management applies in the following area:

Design,Development and Production of PIM (Powder Injection Moldings) Products and Related Management Activities

CHINA QUALITY CERTIFICATION CENTRE


CQC

QUALITY MANAGEMENT SYSTEM CERTIFICATE

We hereby certify that

HANGZHOU FORESEE TECHNOLOGY CO., LTD.

by reason of its

Quality Management System

has been awarded this certificate for compliance with the standard

GB/T 19001-2016 / ISO 9001:2015

The Quality Management System Applies in the Following area:

Design,Development and Production of PIM (Powder Injection Moldings) Products

CHINA QUALITY CERTIFICATION CENTRE


CQC

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

We hereby certify that

HANGZHOU FORESEE TECHNOLOGY CO., LTD.

by reason of its

Environmental Management System

has been awarded this certificate for compliance with the standard

GB/T 24001-2016 / ISO 14001:2015

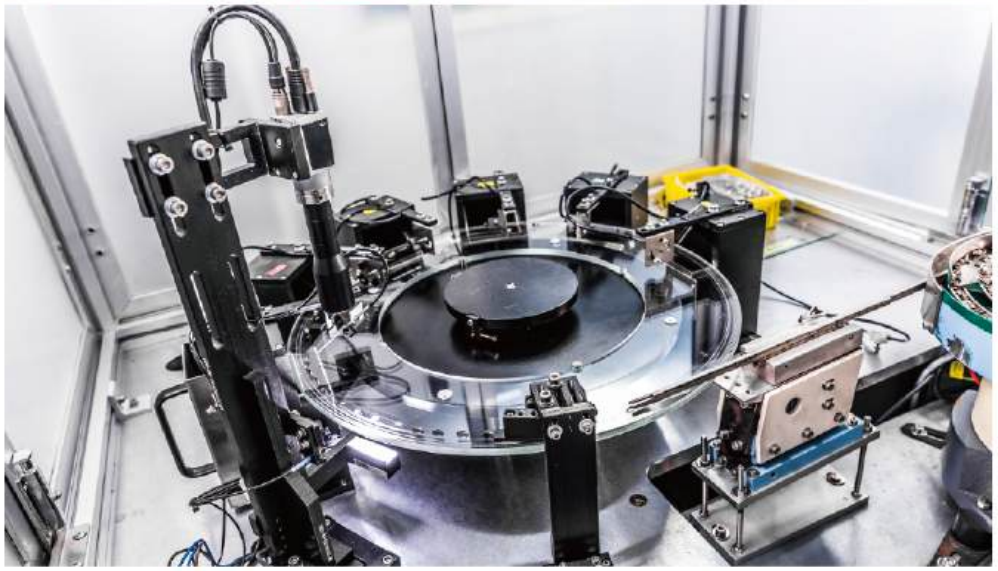
The Environmental Management System Applies in the following area:

Design,Development and Production of PIM (Powder Injection Moldings) Products and Related Management Activities

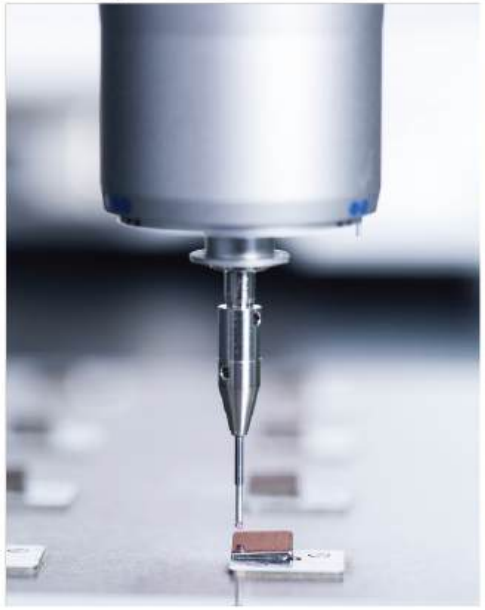
CHINA QUALITY CERTIFICATION CENTRE

自动化生产
Automated Manufacturing

自动化检验
Automated Inspection



检测中心
Inspection Center



员工风采
Our Team