

磁钢和组件

MAGNETS&ASSY



NEOLUNE MAGNETS
新月磁业

宁波江北新月磁业有限公司
Ningbo Jiangbei NeoLune Magnets Co.,Ltd.

公司简介

Company Profile



宁波江北新月磁业有限公司成立于2013年，是一家专注于磁钢及组件研发的生产销售型企业!公司经营宗旨:我们以产品为载体，向客户提供磁钢组件设计与组装方案等优质的服务，我们把客户当做合作伙伴，致力于与客户共同成长。

Ningbo Jiangbei NeoLune Magnets Co.,Ltd. established in 2013, is a production and sales enterprise specializing in the R&D of magnet and its components : Our responsibility is to provide with the magnet assembly design, assembly solutions and other quality package services. We are committed to constructing partnerships and developing together.

发展历程

Development History



2020年开拓海外市场

2020: overseas markets launch

2019年成长拓展阶段（成为国内著名核磁企业关键供应商，成立磁组件事业部）

Growth and expansion phase in 2019: a key supplier to a well-known domestic nuclear magnetic enterprise and establishing a Magnets & Assy Division

2016年起步阶段（销售额突破¥1000万，进军磁组件领域）

Start-up 2016 : sales over ¥10 million, entry into magnetic components)

2013年公司成立阶段（对外宣传）

Founded in 2013 (advertising & publicity)

2009-2012年公司原始积累阶段（专业知识学习，应用领域研究）

2009-2012: Original accumulation phase: expertise learning, application research, etc.

核心优势 Core Advantages

- 
核心优势1 独特先进的生产工艺。
Unique & Advanced Manufacturing
- 
核心优势2 实力雄厚的研发团队。
Strong R & D Team
- 
核心优势3 稳定高效的供需产业链。
Stable and efficient supply and demand industry chain.
- 
核心优势4 以客户需求为导向的技术服务。
Customer-oriented technical services.



产品优势 Product Advantages

1.高牌号

High Performance.

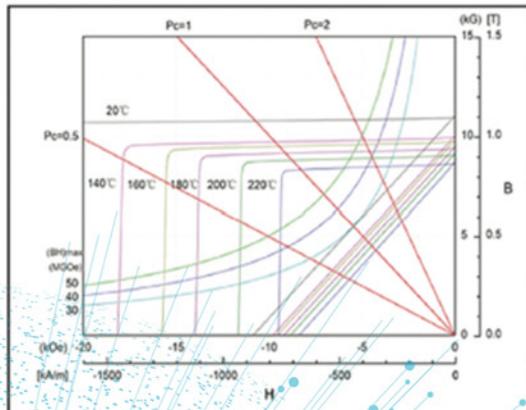
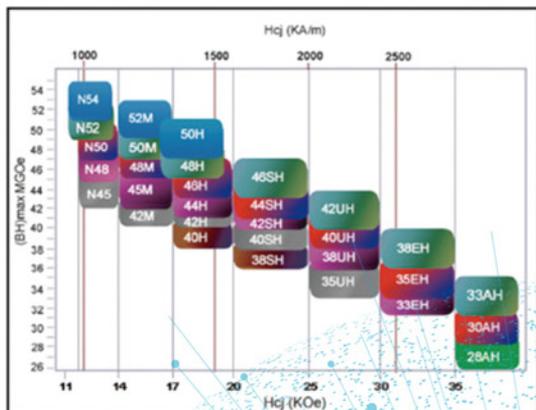
N55、52M、50H、
46SH、42UH、38EH、
33AH等。

2.高温工作

High Working Temperature.

目前生产的AH系列产品，最高矫顽力
可达40kOe，可成功替代钕钴永磁。

The AH series with 40kOe super-high coercive force can replace SmCo magnets in most applications.



工艺流程

Process Flow



A

毛坯

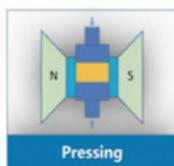
Block Magnet



Strip Cast



Jet Milling



Pressing



Sintering & Annealing

甩带 —— 制粉 —— 成型 —— 烧结&时效

机加工

Machine



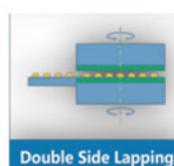
Slicing



Profile Grinding



Wire Saw



Double Side Lapping

切片 —— 轮廓磨 —— 线锯 —— 双面磨

表面处理

Surface Treatment



Tumbling



Plating

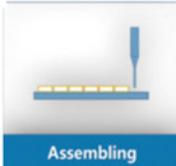


Washing

倒角 —— 滚镀 —— 清洗

装配

Assemble



Assembling



AOI Inspection



Packing

组装 —— 检验 —— 包装



制造过程中的材料变化

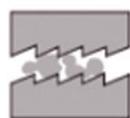
Material Variation During Manufacturing



B



Melting of the alloy under vacuum



Crushing



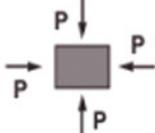
Milling



Alignment in magnetic field

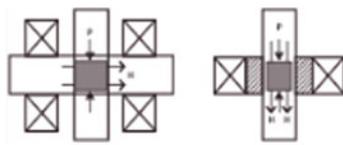


Isostatic



Pressing

Die pressed



T Transverse

Axial field (AP)



Sintering, annealing



Machining, coating



Magnetizing



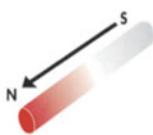
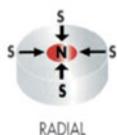
磁钢的制造过程步骤

Survey of Manufacturing Process Step for magnet

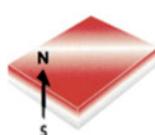
充磁技术 Technology for magnetization

充磁类型

Types of magnetization



LONGITUDINAL AXIAL



AXIAL THROUGH THE THICKNESS



1-FACE MULTIPOLEAR



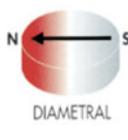
2-FACE MULTIPOLEAR



PERIPHERAL MULTIPOLEAR



INTERIOR/EXTERIOR MULTIPOLEAR



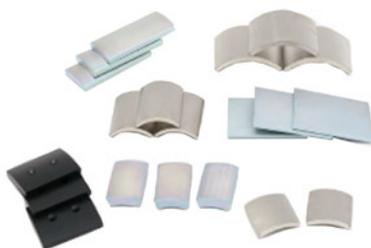
DIAMETRAL



FRONTAL MULTIPOLEAR

产品介绍

Product Introduction



1 普通形状磁钢的定制，根据客户使用要求磁体的能级、镀覆可多元化选择。

Customization of common shape magnets and diversified choices of magnet performance level and coating according to customer requirements.

2 特殊形状磁钢的定制，满足客户不同的装配及使用要求。

Customization of special shape magnets to meet different assembly and application requirements of customers.

3 超大规格磁钢的生产，例如：超大圆柱磁钢 $\Phi 260 \times 42\text{mm}$ ，大尺寸方形粘接磁钢质量达30Kg。

The production of extra-large magnets, e.g., extra-large cylindrical magnets $\Phi 260 \times 42\text{mm}$, large-size square bonded magnets up to 30 kg.

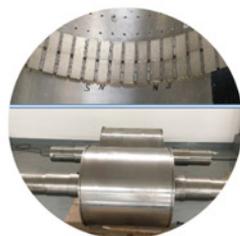


项目 Projects



1 表贴式转子类磁组件

Surface mounted rotor magnetic components



在电机应用工程服务中，为客户提供磁场仿真和研究服务。帮助客户优化电机设计或选择最适合电机应用的磁钢。例如磁钢能级的选择、磁钢的形状与规格优化、磁钢镀覆的选择、磁钢耐温的选择等；

The provide magnetic field simulation and research services to customers in motor application engineering services. To help customers optimize motor design or select the most suitable magnets for motor applications, e.g., selection of magnet energy levels, optimization of magnet shapes and specifications, selection of magnet coatings, selection of magnet temperature resistance, and so on.

2 直线电机组件

Liner motor assembly



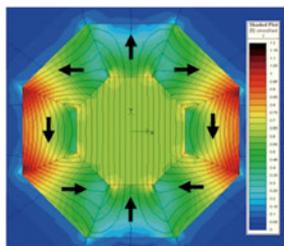
在多年的电机磁组件装配实践中，一直致力于高效、可靠、稳定的组装工艺开发，有丰富的装配解决方案；例如：自动点胶工艺开发、微特电机磁组件磁钢拼装间隙控制、超大规格电机磁组件的组装、长行程直线电机定位精度的控制等；

In many years of assembly practice of motor magnetic components, we have been committed to the development of efficient, reliable and stable assembly process, with a wealth of Assembly solutions. For example, the development of automatic dispensing processes, the control of the assembly gap of magnetic assemblies for micro-motors, the assembly of magnetic assemblies for over-sized motors, and the development of long-running and long-running magnetic assemblies. Control of positioning accuracy of linear motors, etc.

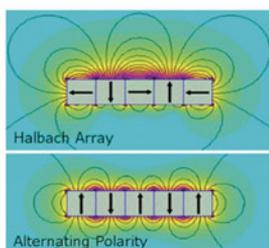


项目 Projects 

3.1 Halbach环形阵列 Circular Arrangement



3.2 Halbach平行阵列 Parallel Arrangement



1.选择UV+厌氧胶水粘接剂，在提高装配效率同时，保证磁钢粘接的可靠性。

By selecting UV + anaerobic adhesive bonding agent to we improve the assembly efficiency while ensuring the reliability of the magnet bonding.

2.独立设计精密的装配工装，满足较大halbach磁钢阵列批量生产组装要求。

To independently design precision assembly tooling to meet the mass production assembly requirements of larger halbach magnet arrays.

4 其它项目 Other Projects

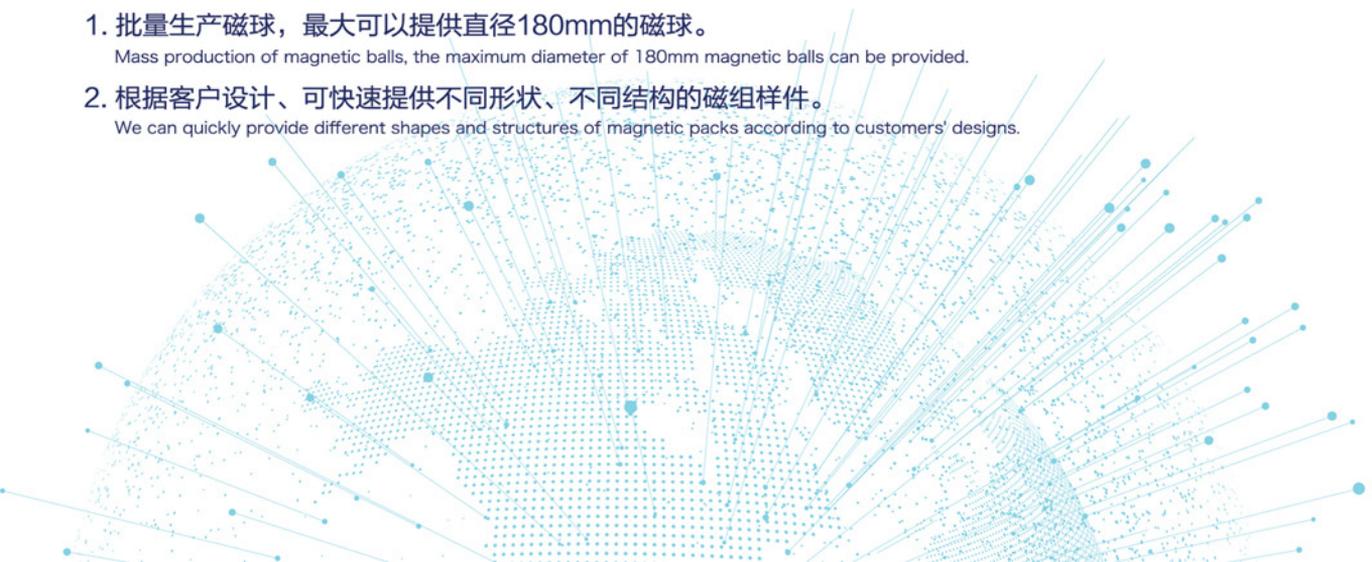


1. 批量生产磁球，最大可以提供直径180mm的磁球。

Mass production of magnetic balls, the maximum diameter of 180mm magnetic balls can be provided.

2. 根据客户设计、可快速提供不同形状、不同结构的磁组样件。

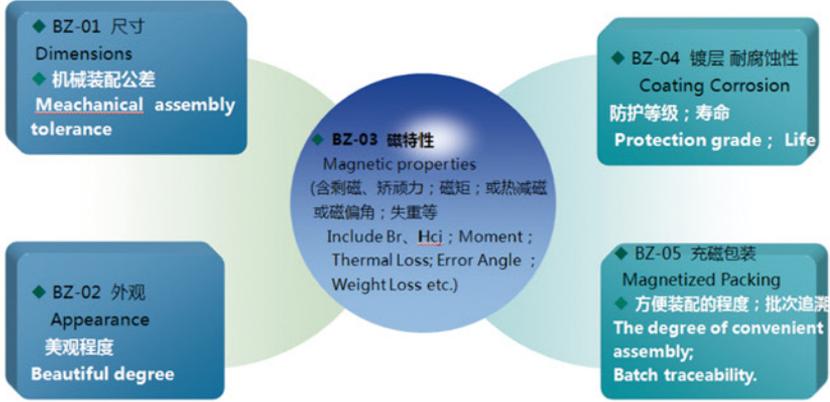
We can quickly provide different shapes and structures of magnetic packs according to customers' designs.



质量控制

Quality Control

磁钢五大项检测标准/Test Standard for magnet



XY-01 尺寸
Dimensions



XY-02 外观 (不只是缺角)
Appearance (Not only chips)



XY-03 磁特性
Magnetic properties



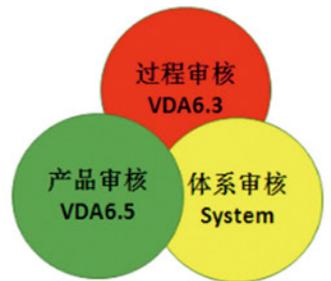
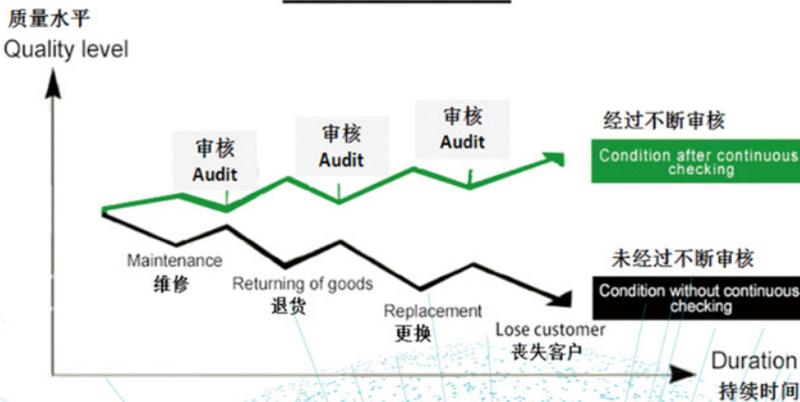
XY-04 耐腐蚀性
Corrosion resistance



XY-05 包装(充磁标识)
Package (Magnetized Marked)

不同类型的审核/ Different types of audits

审核会提高质量水平
Quality level could be improved from audit



▶ **质量检测**
Quality Inspection



磁钢测试与控制

Test&Inspection Control For Magnets

I 毛坯/Rough Magnet



材料成分-ICP
Material Components



高加速寿命应力试验
(两种试验类型)
HAST-Highly Accelerated
Stress Test For Life
PCT-Press Chamber Test
(2 types of tests)



粉末粒度-PSD
Powder Particle size(Sympa)

II 机加工/ Machine



尺寸检验-OMM
Dimension Inspection



粗糙度
Roughness

III 表面处理/Surface Treatment



无损镀层厚度
X-Ray Plating thickness



基体磁钢&镀层厚度-显微镜
Base magnet & Plating thickness-
Metallographic Microscope



电镜分析
SEM-EDS

IV 成品和装配 /Finished and Assy



磁矩测试
Magnetic Moment (Physik)



表磁测试-高斯计
Tesla Test- Gauss meter



质量保证
Quality Assurance



德国标准应用于磁钢 German VDA standard is applied to magnet



以德国的各项标准为标杆，磁钢的研发，制造，质量，项目等不断改进完善，提升能力。

The benchmark with the VDA standards of Germany, the R & D, manufacturing, quality and project of magnet are constantly improved to improve its ability.

服务
Services



售前服务 Before Sales
产品咨询、方案设计、配合研发、样品制作
Product consulting, project design, customized R & D, sample making

售中服务 During Sales
提供装配方案、实时跟踪产品状态
Assembly solutions and real-time product status tracking.

售后服务 After Sales
产品应用交流、设计改善、持续优化
Product application communication, design improvement and continuous optimization





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