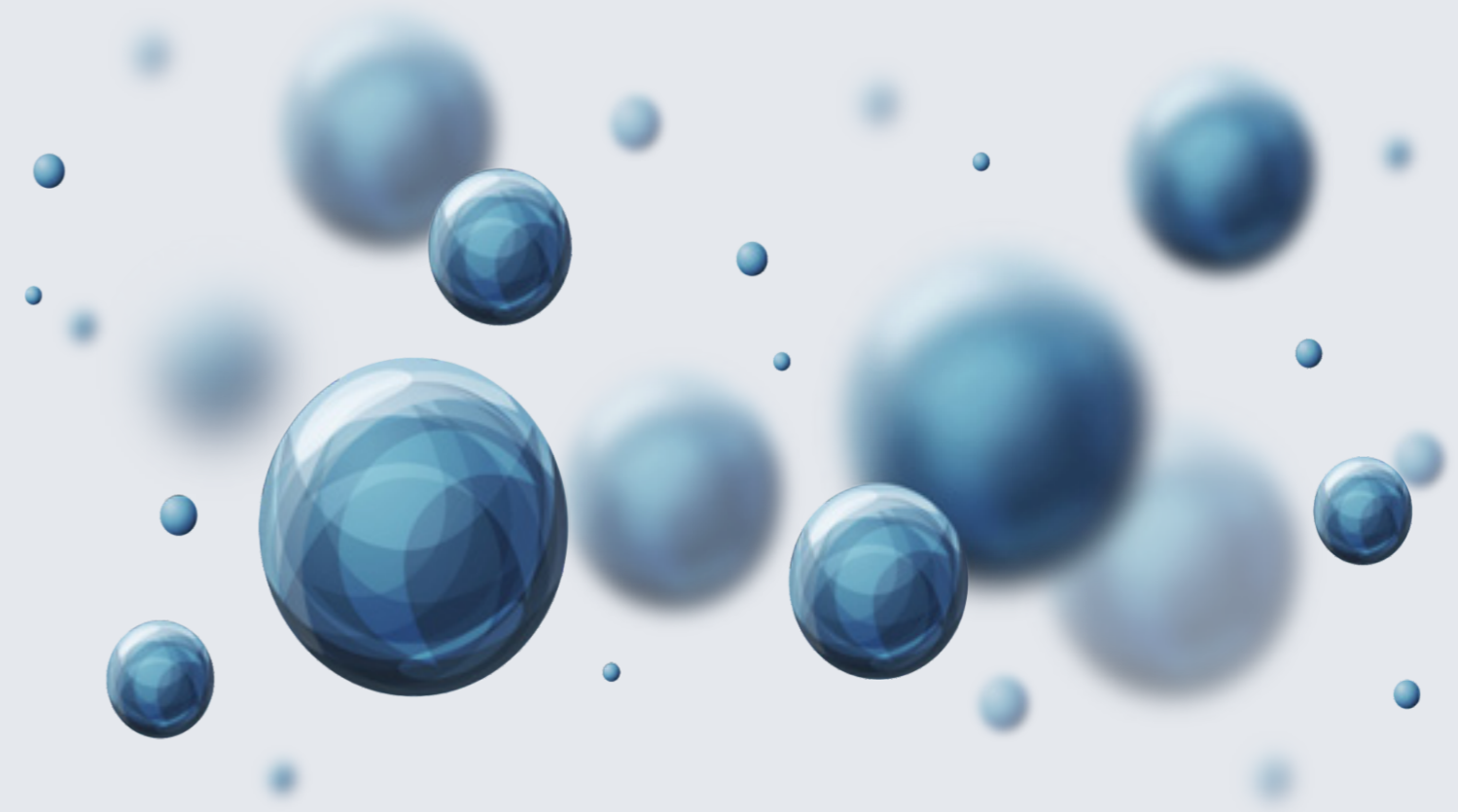


为客户提供高性能金属软磁粉末及应用解决方案,  
与客户紧密合作,创造最大的价值。

We provide high performance soft magnetic powder  
and application solutions to customers.  
We work closely with customers in order to create maximum value.



**专注气雾化合金粉末生产制造**

Focus on production of gas atomized alloy powder



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深圳市铂科新材料股份有限公司  
POCO Holding Co., LTD

# 公司简介

## Company profile

铂科是一家专注于高端气雾化合金粉末的生产制造商,具备先进的雾化制粉技术,拥有气雾化、真空雾化、离心雾化等制粉平台。铂科不断投入研发,持续探索新的雾化技术,尤其是在超细气雾化粉末制备技术方面不断突破,为客户提供更细的气雾化合金粉末。

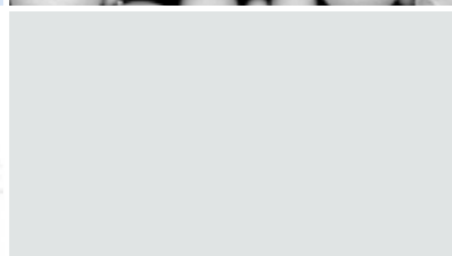
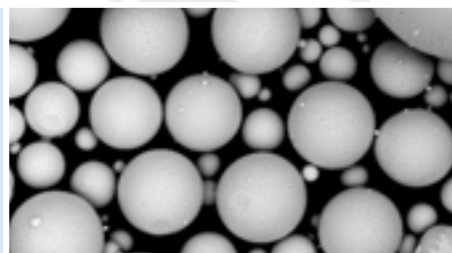
我们致力于为客户提供性能优异、品质稳定的气雾化合金粉末产品,努力为客户创造更大的价值,未来我们还将继续为满足客户的需求而不断开发高性能合金粉末,与客户携手共同迈向未来。

POCO is a manufacturer specializing in high-end gas-atomized alloy powder with advanced atomization technology. We have gas atomization, vacuum atomization, centrifugal atomization and other atomization platforms. POCO invest in R&D and explore continuously new technology, especially sustained technological breakthrough in the ultra-fine gas atomized powder preparation, to provide customers with better quality products.

POCO strives to provide gas-atomized powder alloy products with excellent performances, stable quality, and create greater value for its customers. In the future, we will continue to develop high-performance alloy powders to meet the customers' requirement, and make a bright future together.

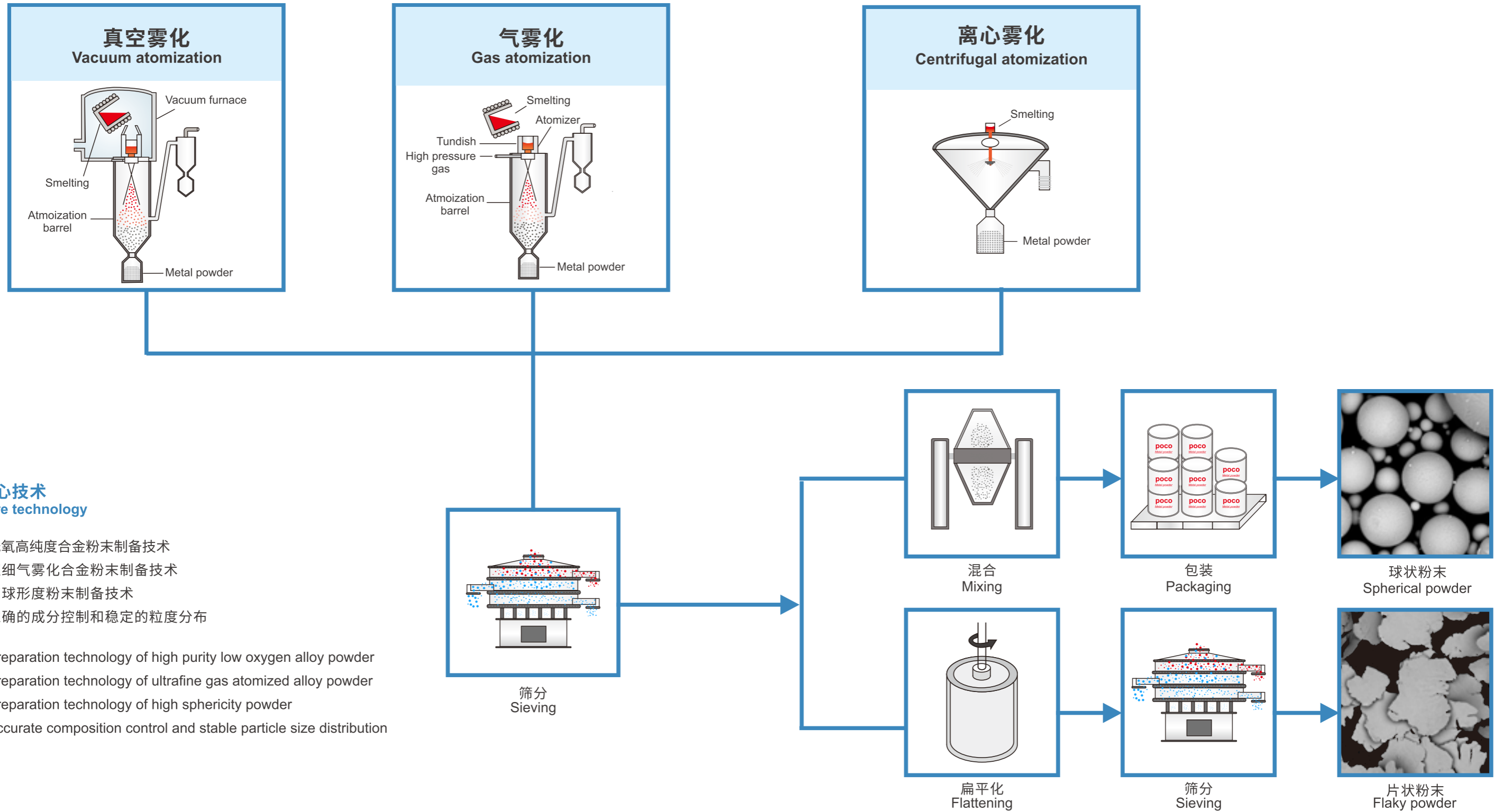
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# 雾化平台和制粉流程

Atomization platform and Pulverizing process



## 核心技术 Core technology

- 低氧高纯度合金粉末制备技术
- 超细气雾化合金粉末制备技术
- 高球形度粉末制备技术
- 准确的成分控制和稳定的粒度分布
- Preparation technology of high purity low oxygen alloy powder
- Preparation technology of ultrafine gas atomized alloy powder
- Preparation technology of high sphericity powder
- Accurate composition control and stable particle size distribution





## 铁硅系合金软磁粉末

### Iron-silicon (FeSi) alloy soft magnetic powder

以铁硅为基础,通过成分的优化设计,针对高频、大电流等不同应用领域开发不同的合金粉末,确保成型后的产品具有优异的直流偏置和损耗特性。

Based on FeSi material, we develop a variety of alloy powders for different uses, such as high frequency and high current application, to make sure the molding products have excellent DC bias and loss characteristics.

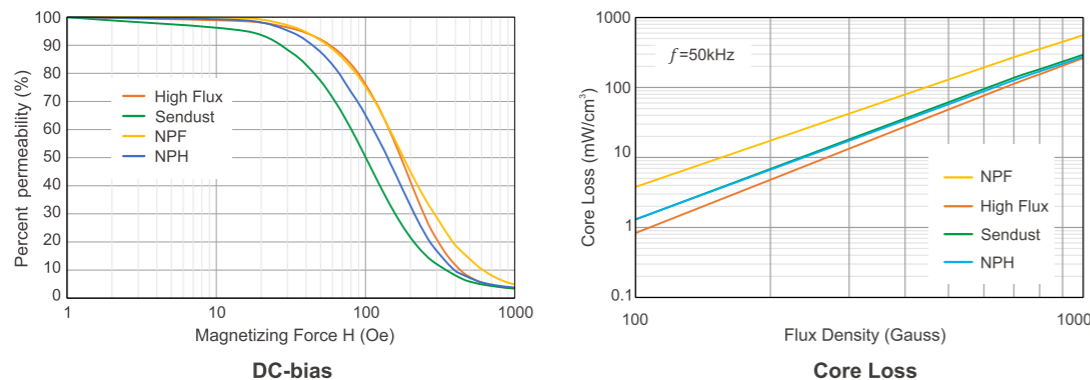
#### 主要产品

##### Main products

系列 Series	主要成分 Composition	规格 (目数) Specification (Mesh)	物理特性 Physical characteristics			磁性特性 Magnetic characteristics		氧含量 Oxy. Con. (ppm)	特征 Features	
			平均粒径 D50 (μm)	松装密度 A.P. density (g/cm <sup>3</sup> )	振实密度 Tap density (g/cm <sup>3</sup> )	饱和磁化 Ms (emu/g)	矫顽力 Hc (A/m)			
常规粉末 Common powder	NPI	Fe <sub>80</sub> Si	150	28~35	≥3.4	≥4.2	190	≤550	≤400	饱和特性好 Excellent saturation
	NPF	Fe <sub>85</sub> Si	150	28~35	≥3.3	≥4.0	180	≤450	≤400	饱和特性好 低损耗 Good saturation Low core loss
	NPH	FeSi*	150	28~35	≥3.0	≥3.8	120	≤350	≤400	低损耗 Low core loss

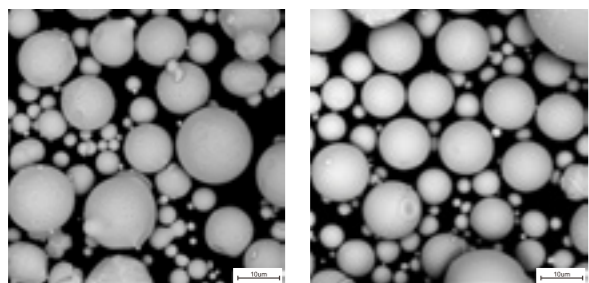
#### 电磁特性

##### Electromagnetic Characteristics



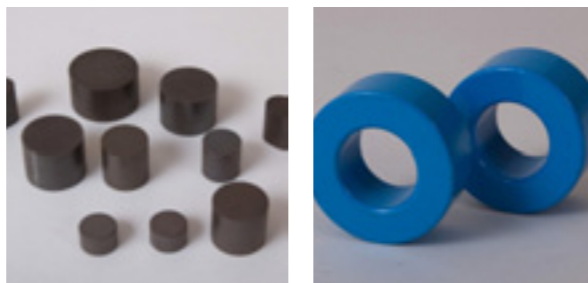
#### 粉末形貌

##### SEM



#### 主要应用

##### Applications



## 铁硅铬系合金软磁粉末

### Iron-silicon chromium (FeSiCr) alloy soft magnetic powder

铁硅铬粉末具有优异的防锈性能、高饱和磁感应强度、低损耗特性等,广泛应用于一体成型电感。气雾化铁硅铬粉末具有更低的损耗和更好的饱和特性,以及良好的球形度以确保一体电感具有更好的绝缘可靠性。

FeSiCr powder has excellent rust-proof performances, high saturation magnetic induction strength, low loss characteristics, etc., and is widely used in integrated inductors. The gas atomized FeSiCr powder has lower loss and better saturation characteristics, and the good sphericity ensures better insulation reliability for the integrated inductor.

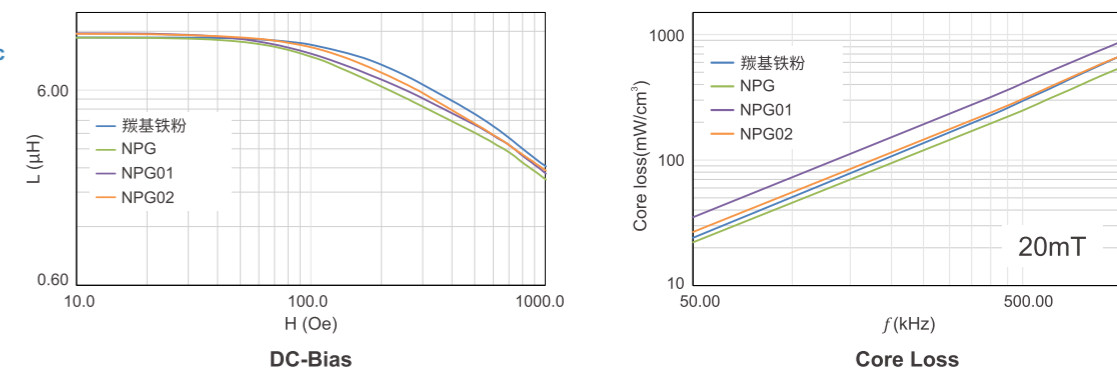
#### 主要产品

##### Main products

系列 Series	规格 (目数) Specification (Mesh)	物理特性 Physical characteristics			磁性特性 Magnetic characteristics		氧含量 Oxy. Con. (ppm)	特征 Features	
		平均粒径 D50 (μm)	松装密度 A.P. density (g/cm <sup>3</sup> )	振实密度 Tap density (g/cm <sup>3</sup> )	饱和磁化 Ms (emu/g)	矫顽力 Coercivity (Hc)A/m			
常规粉末 Common powder	NPG	180	25~30	≥3.2	≥4.2	176	≤600	≤400	低损耗 Low loss
	NPG01	180	25~30	≥3.2	≥4.2	180	≤700	≤400	防锈性好 Good rust-proof performance
	NPG02	180	25~30	≥3.2	≥4.2	192	≤700	≤400	饱和特性好 Good saturation
超细粉末 Ultrafine powder	NPG	500	10~12	≥2.1	≥3.8	176	≤900	≤500	低损耗 Low loss
	NPG01	500	10~12	≥2.1	≥3.8	180	≤1200	≤500	防锈性好 Good rust-proof performance
	NPG02	500	10~12	≥2.1	≥3.8	192	≤1200	≤500	饱和特性好 Good saturation
参考粉 Reference powder	羰基铁粉 Carbonyl iron powder	-	4~6	≥3.2	≥4.2	220	500	4000	饱和特性好 Good saturation

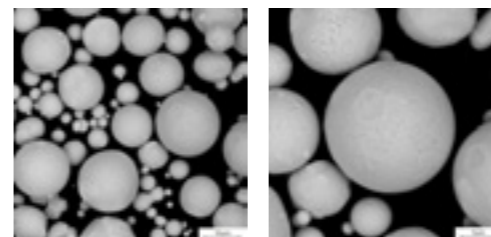
#### 电磁特性

##### Electromagnetic Characteristics



#### 粉末形貌

##### SEM



#### 主要应用

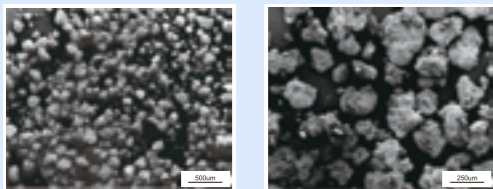
##### Applications



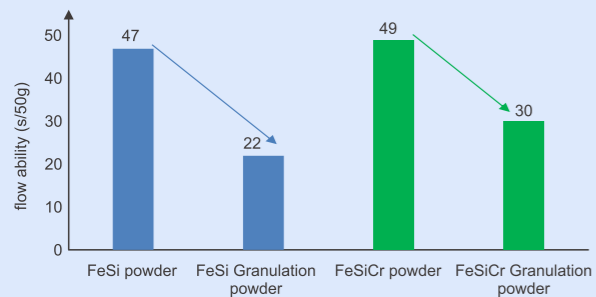
# 增值服务

## Value-added services

### 粉末形貌 SEM



### 流动性 Flowability



### 粉末绝缘造粒 Powder insulation and granulation

- 粉末绝缘 (降低粉末涡流损耗)**  
 特点: 绝缘层均匀致密  
 绝缘层薄, 磁导率高
- 粉末造粒 (提高粉末流动性, 改进粉末压制性)**  
 特点: 流动性好  
 松装密度大
- Powder Insulation** (Reduce eddy current loss)  
 Characteristics: Uniform and dense insulation  
 Thin insulating layer and high permeability
- Powder granulation** (improving powder flowability and compactness)  
 Characteristics: Good flowability; High apparent density

### 解决方案 Solution

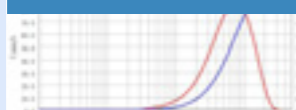
可根据客户的需求, 从软磁粉末的成分、粒度分布以及粉体形貌等多维度定制化开发合金软磁粉末, 同时可以根据客户对性能和成型的要求提供绝缘造粒处理, 为客户提供完整的解决方案。

We provide customized powder by adjusting the composition, particle size distribution and morphology. Besides, we can also do insulation and granulation treatment according to customers' requirements of performance and molding, and offer complete solutions.

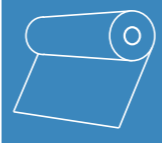
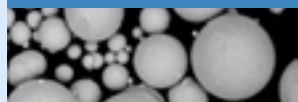
### 材料 Material



### 粒径分布 Particle size distribution



### 形貌 Shape



## 片状合金软磁粉末

### Flaky alloy soft magnetic powder

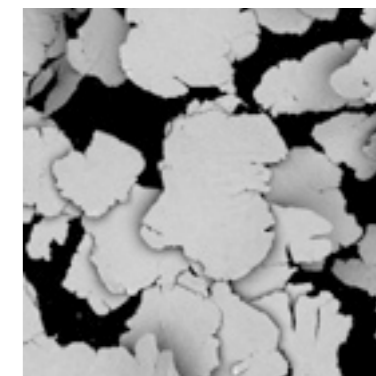
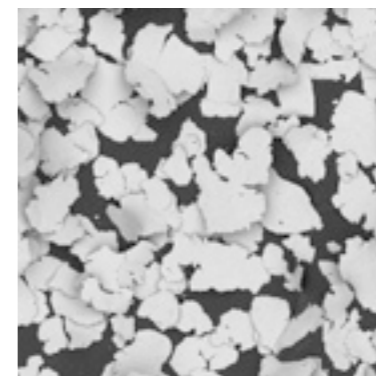
### 主要产品 Main products

- Fe-Si 合金粉末 Fe-Si powder
- Fe-Si-Al 合金粉末 Fe-Si-Al powder
- Fe-Si-Cr 合金粉末 Fe-Si-Cr powder

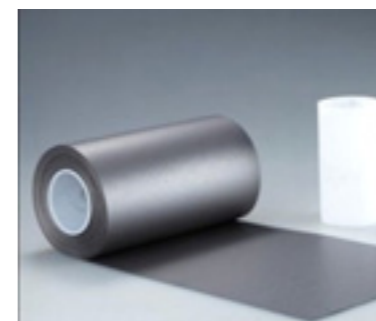
### 特征 Characteristics

- 纯净度高, 表面光滑 High purity, smooth surface
- 粒度分布窄 Narrow particle size distribution
- 宽厚比大 Large aspect ratio

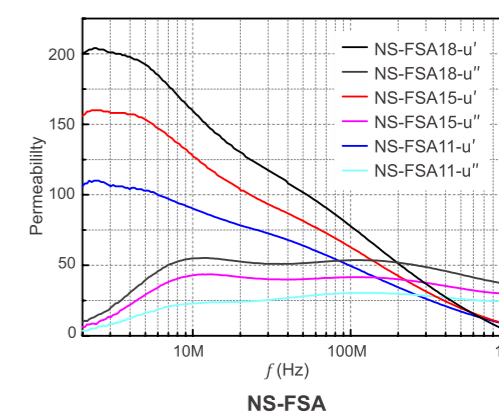
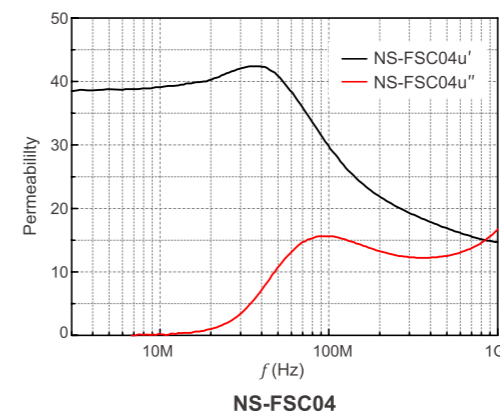
### 粉末形貌 SEM



### 主要应用 Applications



### 磁导率 Permeability







## 合金钢粉末 Alloy steel powder

采用高纯氮气雾化,合金钢粉末氧含量低、纯净度高、球形度好,广泛应于金属注射成型、热喷涂、激光熔覆、工模具钢等材料。

Produced through high purity nitrogen atomization, alloy steel powder has the advantages of low oxygen content, high purity and good sphericity, so it is widely used in metal injection molding, thermal spraying, laser cladding, die steel and so on.

### ■ 不锈钢系列 Stainless steel series

牌号 Grade	主要成分 Main composition								
	C	Cr	Ni	Mo	Si	Mn	Cu	Nb	Fe
SUS430	≤0.12	16~18	-	-	≤1.0	≤1.0	-	-	Bal
SUS304	≤0.08	18~20	8~11	-	≤1.0	≤2.0	-	-	Bal
SUS316L	≤0.03	16~18	10~14	2.0~3.0	≤1.0	≤2.0	-	-	Bal
SUS17-4PH	≤0.07	15.5~17.5	3.0~5.0	-	≤1.0	≤1.0	3.5~4.5	0.15~0.45	Bal
HK30	0.4~0.5	23~27	19~22	≤0.5	≤1.5	≤1.5	-	1.2~1.5	Bal

### ■ 镍基合金系列 Nickel based series

牌号 Grade	主要成分 Main composition									
	C	Fe	Cr	Mo	Nb	Si	Al	Ti	Co	Ni
IN625	≤0.1	≤5.0	20~23	8~10	3.15~4.15	≤0.5	≤0.4	≤0.4	≤1.0	Bal
IN718	≤0.08	Bal	17~21	2.8~3.3	4.75~5.50	≤0.35	0.2~0.8	0.65~1.15	0.15	50~55
IN713C	0.08~0.16	≤2.5	11.5~13.5	3.8~4.8	1.8~2.5	≤0.5	5.5~6.4	0.5~1.0	1.8~2.8	Bal

### ■ 钴基系列 Cobalt-based series

牌号 Grade	主要成分 Main composition								
	C	Si	Ni	Cr	Mo	W	Fe	Co	其他 Others
Co基 A	2.60	1.45	<2.00	31.00	<0.50	12.50	<2.00	Bal	-
Co基 B	1.10	1.30	<2.50	29.00	<0.80	5.20	<1.50	Bal	-
Co基 C	1.65	1.40	2.50	29.50	<0.50	9.00	<1.50	Bal	-

备注:表中数据为典型值或者均值,并不代表实际值,仅供参考。  
Note: Above data is typical value or mean value for reference only, it doesn't represent the actual value.

### ■ 特征 Characteristics

- 球形度好,流动性好,松装密度和振实密度大
- 氧含量低,纯净度高,成分均匀,无偏析
- 超细气雾合金钢粉末 (D50<20μm)
- Good sphericity, good flowability, high apparent density and tap density
- Low oxygen content, high purity, uniform composition, non-segregation
- Ultra-fine gas atomized alloy steel powder (D50<20μm)

## 先进的检测设备 Advanced testing equipment

铂科具备先进和完善的粉体检测设备,可提供成分、粒径、氮氧含量,以及矫顽力和磁损耗等特性的评估测试,为产品提供可靠的品质保障。

POCO owns advanced and complete test equipments to measure powder, composition, particle size, nitrogen and oxygen content, coactivity and magnetic loss etc., to do effective control of product quality.



粉体性能测试仪  
Powder Characteristics Tester



马尔文激光粒度仪  
(Mastersizer 3000E)  
Malvern laser particle size analyzer



大同矫顽力测试仪  
DAIDO Coercivity



岛津直读光谱仪  
Shimadzu direct reading spectrometer



爱尔特氮氧分析仪 ELEMENTRAC  
Alte Nitrogen Analyzer



岩崎损耗测试仪  
Iwatsu loss tester

## 完善的保障体系 Comprehensive support system



### ■ 主要应用 Applications

