



山东开泰金属磨料有限公司

SHANDONG KAITAI METAL ABRASIVE CO.,LTD.

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公司简介

Introduction

山东开泰金属磨料有限公司是集科研、开发、生产于一体，提供全方位抛（喷）丸、喷砂工艺解决方案，亚洲单产最大的金属磨料生产商。年产25万吨金属磨料，现拥有资产12.8亿元，年产值15.8亿元。

公司地处黄河三角洲高效生态经济区、山东半岛蓝色经济区的黄金腹地——邹平，距省会济南52公里、济青高速500米，离济青高速章丘路口7公里，占地面积60万平方米。

公司技术力量雄厚，生产设备先进，与山东大学材料科学与工程学院合作，组建了全国第一家金属磨料实验中心，共同研究开发出了铸钢丸、铸钢砂、钢丝切丸、不锈钢丸、不锈钢丝切丸、铝丸、锌丸、铜丸八大系列，共80多个规格的金属磨料产品，产品出口二十多个国家和地区，深受国内外造船、铸造、锻造、热处理、钢结构、集装箱、机械、汽车、机车、矿山、石材等行业用户好评。

在今后的发展中我们将“以金属磨料为依托，进一步拓展抛丸机械行业链条”为目标，坚持“增强自主创新，建设科技企业”的企业理念，加大技术研发投入力度，增强企业的核心竞争力。努力把企业做强做大，引领行业发展。

Shandong Kaitai Metal Abrasive Co., Ltd. is the biggest manufacturer of metal abrasive in Asia which integrates with technical research, development and production, and provides solution for omnidirectional shot blasting and sand peening technology. Based on one billion two hundred eighty million Yuan (RMB) assets, with a yearly turnover of one billion five hundred eighty million Yuan (RMB), the company could produce 250,000 tons metal abrasive annually.

Occupied 600,000 square meters, the company is located in the Huanghe Delta High Efficiency Ecological Economic Region and key hinterland of Shandong Peninsula Blue Economic Region—Zouping. It is only 52km to Jinan—capital of Shandong Province. It's only 500 meters away from Jinan–Qingdao expressway and only 7km away from Zhangqiu exit.

Company has strong technology force and advanced process equipment, cooperated with Material Science & Engineering College of Shandong University, we set up national first metal abrasive test center and have developed 8 series including Cast steel shot, Cast steel grit, Steel cut wire shot, Stainless steel shot, Stainless steel cut wire shot, Aluminium shot, Zinc shot and Copper shot, 80 kinds of abrasive products. The products have exported to more than 20 countries and regions and got good comments from domestic and abroad users

of shipyard, foundry plant, forging plant, heat treatment shop, steel structure plant, container manufacturer, auto, locomotive manufacturer and stone industries.

In the future development, we will insist the aim “expand shot blasting machine industry chain further based on metal abrasive” and persist enterprise idea “strengthen independent innovation, create technical enterprise” to increase investment strength in technology research and improve enterprise core competitive force. We will spare no efforts to make our company stronger and lead the development of this industry.



山东开泰集团鸟瞰图
Shandong kaitai group aircscape

资质荣誉

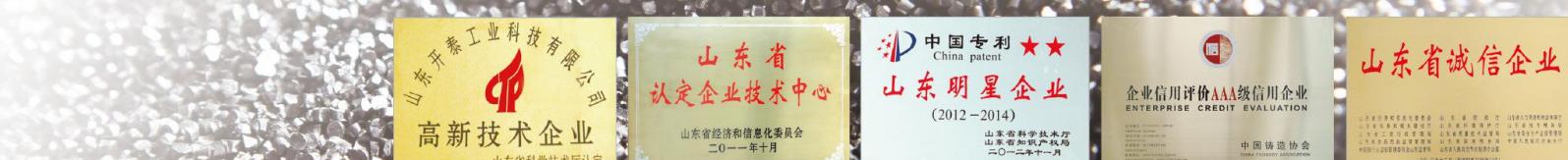
Qualification Honor

开泰公司作为中国金属磨料行业的领头军，是山东省金属磨料工程技术中心，山东省企业技术中心，山东省高新技术企业，山东省工程技术研究中心，目前公司已通过GB/T 29490-2013知识产权管理体系认证，ISO9001-2008国际质量管理体系认证，ISO14004-2004环境管理体系认证，获山东省著名商标称号。“开泰牌”铸钢丸和砂还被山东省名牌战略推进委员会、山东省质量技术监督局评为山东名牌产品，公司还是国家AAAA级标准化良好行为企业，山东省标准创新型企业，中国铸造行业排头兵企业，企业信用等级评价AAA级信用企业，两化融合示范工程试点企业，中国专利明星企业。

该系列产品拥有授权发明专利4项，获得中国专利优秀奖1项，获得山东省专利奖2等奖一项，获得滨州市专利奖2等奖2项，被授予中国专利山东明星企业。

As leader of China metal abrasive industry, Kaitai company is Shandong Province Metal Abrasive Engineering Technology Center, Shandong Province Enterprise Technology Center, Shandong Province Advanced & New Technology Enterprise , Shandong Province Engineering Technology Research Center. The company has passed ISO9001-2008 International Quality Management System Certificate and ISO14004-2004 Environmental Management System Certificate, and gets the Title of Shandong Province Famous Trademark. “Kaitai Brand” cast steel shot and cast steel grit are evaluated as Shandong Famous Product by Shandong Province Famous Strategy Propulsion Committee and Shandong Province Quality Technology Inspection Bureau, it is National AAAA Grade Standardization Excellent Behavior Enterprise, The National Anticorrosion Twenty strong enterprises, Vanguard of Chinese Casting Industry, Enterprise Credit Rating Evaluation AAA Credit Enterprise, Informationization and Industrialization Fusion Demonstration Trial Enterprise, China Patent Star Enterprise.

This series of products gain four authorized invention patents, one China excellent patent, one second prize if Shandong patent, two second prizes of Binzhou patent and are honored to be Shandong Star Enterprise of China Patent.



科研质控

Research and quality control

开泰公司是全国标准化委员会SAC/TC186抛(喷)丸分技术委员会委员单位、SAC/TC5/SC6涂漆前金属表面处理及涂漆工艺分技术委员会委员单位，与山东大学材料科学与工程学院合作，组成了全国第一家金属磨料实验中心，共同研发了“铸钢丸、铸钢砂、钢丝切丸、不锈钢丸、不锈钢丝切丸、铝丸、铜丸、锌丸”八大系列，共80多个规格的金属磨料产品。公司还参与起草制定了GB/T 18838.3-2008《高碳铸钢丸、铸钢砂》、《低碳铸钢丸》、GB/T 18838.5-2015《钢丝切丸》、JB/T 8354.1-2013《钢丝切丸》、JB/T 8354.2-2015《高碳铸钢丸》、JB/T 8354.3-2015《高碳铸钢砂》、JB/T 8354.4-2015《低碳铸钢丸》、JB/T 8354.5-2015《不锈钢丸》等二十五项标准，拥有专利一百四十四项，科技成果十七项。是中国金属磨料行业的领跑者。

公司拥有完善的质量监测手段，引进2台美国欧文公司的疲劳寿命试验机，对金属磨料进行寿命测试，引进德国SPECTRO公司直读光谱仪及碳硫高频红外分析仪，对金属磨料进行成分测定，质量均达到SAE美国汽车工程师协会、ISO国际标准、国家标准及行业标准。



Kaitai company is National Standardization Committee SAC/TC186 shot Blasting & Peening sub-Technical Committee Unit and SAC/TC5/SC6 Metal Surface Treatment & Painting Technology Council. We have cooperated with Material Science & Engineering College of Shandong University to set up national first metal abrasive test center, and has developed 8 series products including cast steel shot, cast steel grit, steel cut wire shot, stainless steel shot, stainless steel cut wire shot, aluminum shot, zinc shot and copper shot, 80 kinds of abrasive products. The company takes part in and sets down 25 national standards such as GB/T18838.3-2008 High Carbon Cast Steel Shot & Cast Steel Grit Low Carbon Cast Steel Shot, GB/T 18838.5-2015 steel cut wire shot, JB/T 8354.3-2015 steel cut wire shot, JB/T 8354.2-2015 high carbon cast steel shot, JB/T 8354.3-2015 high carbon cast steel grit, JB/T 8354.4-2015 low carbon cast steel shot, JB/T 8354.5-2015 stainless steel shot total 35 standards. we have passed 144 patents and 17 scientific&technical achievements,now kaitai is the leader in China metal abrasive field.

Company has complete quality control system, 2 sets American Ervin Fatigue life Tester to test the fatigue life of metal abrasive, Germany SPECTRO Direct Reading Spectrograph and Carbon-Sulfur High Frequency Infrared Rays Analyzer to test ingredient of metal abrasive. Quality has met SAE American Automobile Engineering Committee standard, ISO international standard and national new standard of casting steel shot and steel grit.



交流合作 Intercommu-nication

一个拥有着强大实力与宽广胸怀的企业绝不会吝啬于信息的交流与分享。开泰凭借着行业领军的地位，多次参与国内顶尖的学术交流活动，用经验为行业同仁指引方向，同时在分享中获得学习与提升。

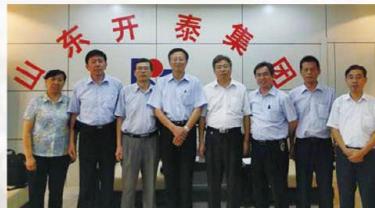
A company with powerful strength and openmindedness would like to exchange and share information with others. As the industry leader, Kaitai participates many domestic top academic exchanges, shows the direction for the colleagues by experience, and requires improvement from the information sharing.



中国弹簧会议上做学术报告
Academic Report on China Spring Meeting



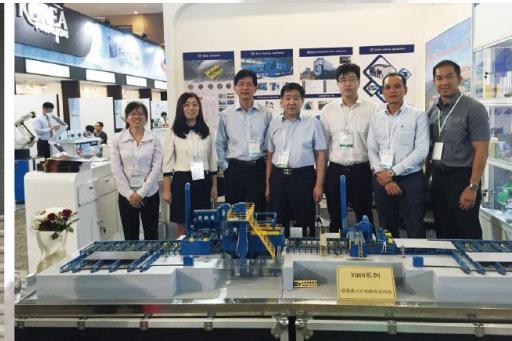
中国铸造协会长与我公司技术专家交谈
Presidents of China Foundry Association Communicates with Our Technical Professor



中国铸造协会领导来公司
Visit of Leaders of China Foundry Association



国外客户培训
Foreign customer training



德国展会
Exhibition in Germany



巴西铸造展会
Brazil casting exhibition



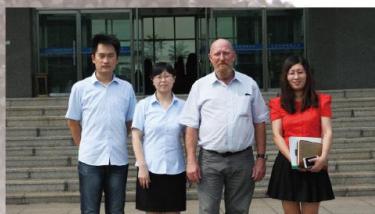
参展上海五金展
Shanghai hardware exhibition



与Airblast.B.V进行全面合作
Comprehensive cooperation with Airblast.B.V.



开泰与新东领导交流
Communicate with Sinto Leaders



澳大利亚客户来访
Australia customer

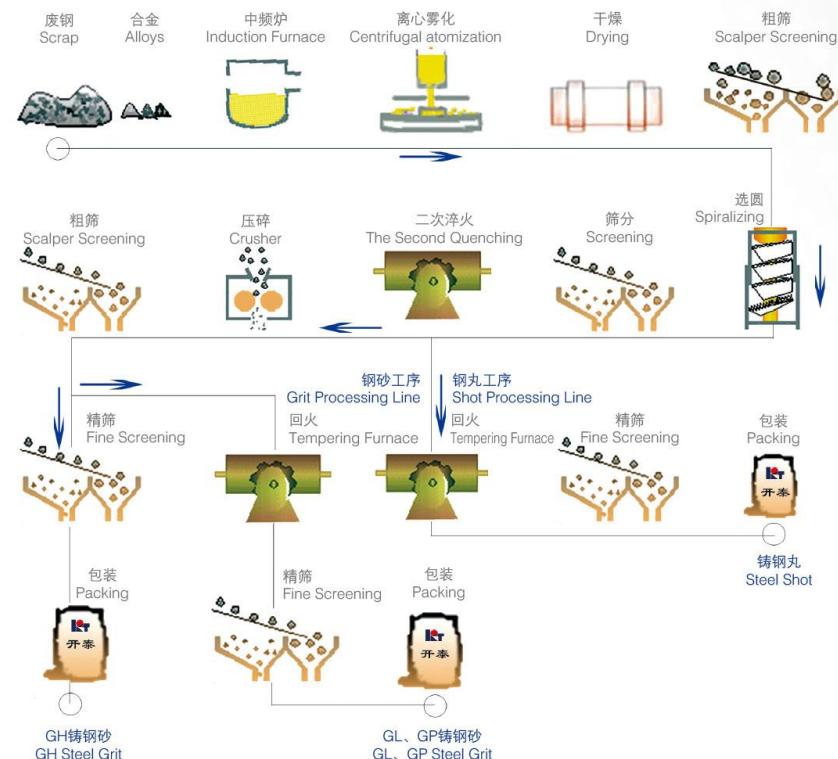


沙特客户来访
Saudi Arabia customer

工艺流程

Process Flow

开泰公司技术力量雄厚，生产设备先进，利用国外最先进的中频感应电炉，离心雾化造粒，二次淬火、回火、选圆、筛分、包装制成优质高强度、长寿命强化铸钢丸、铸钢砂。HQ高碳铸钢丸生产工艺与成套装备获得山东省科技进步奖二等奖、滨州市科技进步奖一等奖，年产两万吨不锈钢丝切丸生产工艺与设备获得滨州市科技进步奖二等奖。



With strong technical force, advanced equipments such as intermediate frequency induction furnace, centrifugal atomizer, second quenching, tempering, spiralizing, package and so on, the company could produce high strength, strong durability cast steel shot and cast steel grit. The production process of HQ high carbon cast steel shot and complete sets of equipment gain Second Prize of Scientific and Technological progress in Shandong Province and First Prize of Scientific and Technological progress in Binzhou City. Annual output twenty thousand tons stainless steel cut wire shot production process and equipment gain Second Prize of Scientific and Technological Progress in Binzhou city.



产品系列 Products Series

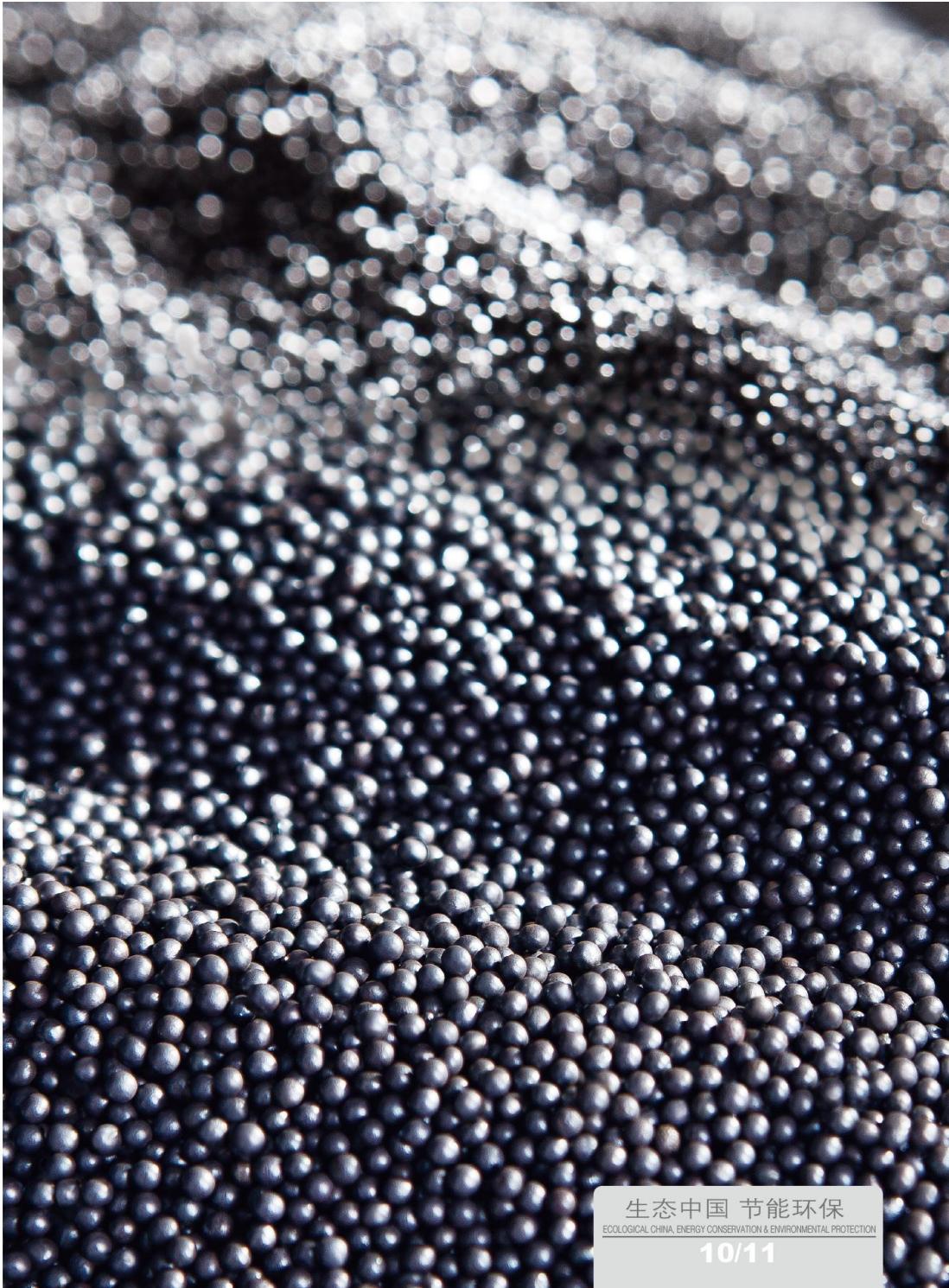
开泰公司，按照每个客户的不同要求，精心缔造每一粒丸料，竭力为客户提供专业的抛丸、喷砂技术解决方案，用最高品质的产品赢得客户的满意，回报行业与社会的信赖。

According to different demand of each customer, Kaitai produces each cast steel shot meticulously, and supplies professional shot blasting and sand peening solution scheme elaborately. We will use top quality products to meet customers' request and redound trust of industry and society.

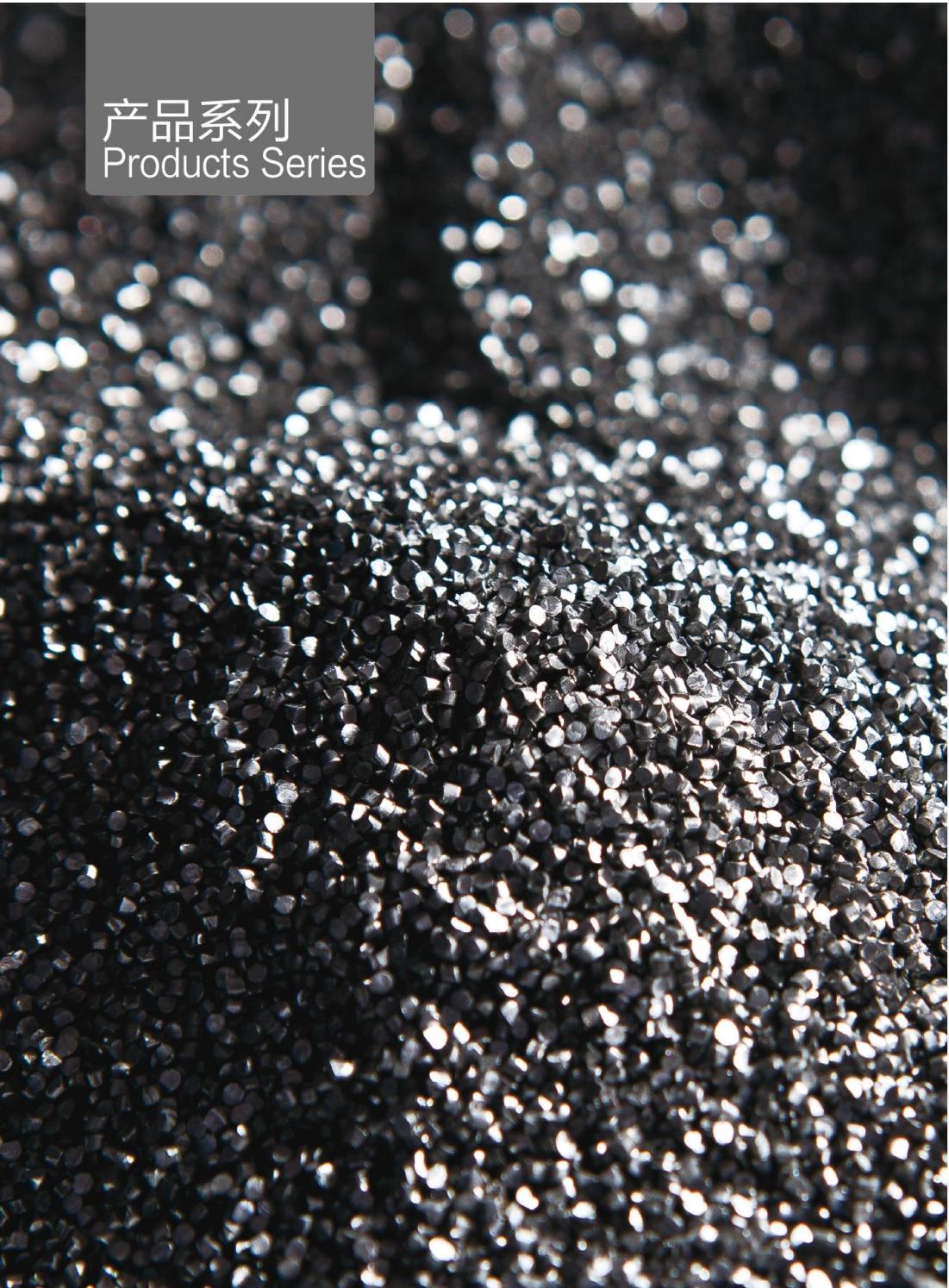
名称 Products	铸钢丸 Cast Steel Shot	铸钢砂 Cast Steel Grit	钢丝切丸 Steel Cut Wire Shot	钝化钢丝切丸 Conditional Cut Wire Shot	HQ铸钢丸 HQ Cast Steel Shot
形状 Shape	铸钢丸	铸钢砂	钢丝切丸	钝化钢丝切丸	HQ铸钢丸
化学成分 Chemical Composition	碳(C)	0.80 ~ 1.20%	0.45 ~ 0.85%	C:0.45 ~ 0.85%	0.80 ~ 1.20%
	锰(Mn)	0.35 ~ 1.20%	0.30 ~ 1.30%	0.30 ~ 1.30%	0.35 ~ 1.20%
	硅(Si)	≥0.40	0.15 ~ 0.35%	0.15 ~ 0.35%	≥0.40
	硫(S)	≤0.05%	≤0.05%	≤0.05%	≤0.05%
	磷(P)	≤0.05%	≤0.04%	≤0.04%	≤0.05%
平均硬度 Hardness	常规：40 ~ 50HRC 特殊：52 ~ 56HRC 特殊：56 ~ 60HRC	GP钢砂：42 ~ 52HRC GL钢砂：53 ~ 60HRC GH钢砂：60 ~ 64HRC	1.0mm: 42 ~ 53 HRC 1.5mm: 41 ~ 45 HRC	45 ~ 60HRC	常规：42 ~ 47HRC 特殊：52 ~ 56HRC 特殊：56 ~ 60HRC
硬度偏差 Hardness Deviation	最大偏差范围为 ± 3.0HRC Max Deviation ± 3.0HRC				
抗拉强度 Tensile Intensity	—		1300 ~ 2200Mpa	2200 ~ 2800Mpa	—
欧文寿命 Durability	2000 ~ 2800次 Times		3300 ~ 4000次 Times	4000次 Times	2800 ~ 3300次 Times
金相组织 Microstructure	均匀的回火马氏体或回火屈氏体 Tempered Martensite or Sorbite		形变珠光体 Deformed Pearlite	形变屈氏体 Deformed Sorbite	均匀的回火马氏体或回火屈氏体 Tempered Martensite or Sorbite
密度 Density	7.4g/cm ³	7.6g/cm ³	7.8g/cm ³	7.8g/cm ³	7.4g/cm ³
堆积密度 Bulk Density	4.4g/cm ³	4.2g/cm ³	4.5g/cm ³	4.5g/cm ³	4.4g/cm ³

符合GB/T 18838.3-2008《高碳铸钢丸、铸钢砂》、GB/T 18838.4-2008《低碳铸钢丸》，GB/T 18838.5-2015《钢丝切丸》，JB/T 8354.1-2013《钢丝切丸》、JB/T 8354.2-2015《高碳铸钢丸》，JB/T 8354.3-2015《高碳铸钢砂》，JB/T 8354.4-2015《低碳铸钢丸》，SFS-A20-69铸钢磨料，SAE J527铸钢丸，SAE J1993高碳铸钢砂，ISO11124-3高碳铸钢丸和砂标准，JIS G5903高碳铸钢丸铸钢砂，SAE AMS2431/4C 钝化不锈钢丸经冷轧、切割、磨圆形 过程，部分奥氏体 为马氏体，也带微磁性。

In accordance with GB/T 18838.3-2008 "High Carbon Cast Steel Shot, Cast Steel Grit", GB/T 18838.4-2008 "Low Carbon Cast Steel Shot", GB/T 18838.5-2015 "Steel Cut Wire Shot", JB/T 8354.1-2013 "Steel Cut Wire Shot", JB/T 8354.2-2015 "High Carbon Cast Steel Shot", JB/T 8354.3-2015 "High Carbon Cast Steel Grit", JB/T 8354.4-2015 "Low Carbon Cast Steel Grit", SFS-A20-69 Cast Steel Abrasive, SAE J827 Cast Steel Shot, SAE J1993 High Carbon Cast Steel Grit, ISO11124-3 High Carbon Cast Steel Shot and Grit, JIS G5903 High Carbon Cast Steel Shot Cast Steel Grit, SAE AMS2431/4C Purified Stainless Steel Cut Shot, SAE J441 Steel Cut Wire Shot. Remark: The 304 Austenite stainless steel shot experienced cold drawing, cutting, grinding progress, which also makes the product with weak magnetic.



产品系列 Products Series



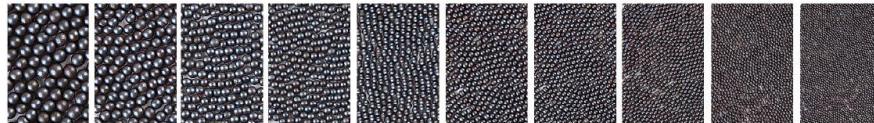
名称 Products	不锈钢丸 Stainless Steel Shot	不锈钢丝切丸 Stainless Steel Cut Wire Shot	铝丝切丸 Aluminium Cut Wire Shot	锌丝切丸 Zinc Cut Wire Shot	铜丝切丸 Copper Cut Wire Shot
形状 Shape	A close-up image of dark, hexagonal stainless steel shot particles.	A close-up image of dark, hexagonal stainless steel cut wire shot particles.	A close-up image of light-colored hexagonal aluminum cut wire shot particles.	A close-up image of light-colored hexagonal zinc cut wire shot particles.	A close-up image of reddish-brown hexagonal copper cut wire shot particles.
化学成分 Chemical Composition	304奥氏体型(304 Austenite Type); 碳(C)<0.15%, 镍(Ni)=16~18%, 镍(Ni)=6~10%, 硅(Si)<1%, 锰(Mn)<2% 430型铁素体(430 Ferrite Type); 碳(C)<0.15%, 镍(C)=16~18%, 硅(Si)<1%, 锰(Mn)<1% 410型马氏体(410 Martensite Type); 碳(C)<0.15%, 镍(C)=11~13%, 硅(Si)<1%, 锰(Mn)<1% 注: 可根据用户需求, 提供其它化学成分。 Note: we could also provide other chemical composition according to customer requirements.		Al≥99%	Zn≥99%	Cu=58~99%,余Zn
平均硬度 Hardness	308 ~ 509 HV 32 ~ 50 HRC		45 ~ 50HV	45 ~ 50HV	110 ~ 300HV
抗拉强度 Tensile Intensity	490 ~ 1520Mpa		80 ~ 240Mpa	90 ~ 120Mpa	200 ~ 500Mpa
欧文寿命 Durability	6500次 Times (1.0mm, VDF18001)	7000次 Times (1.0mm, VDF18001)	6500次 Times	6000次 Times	5000次 Times
金相组织 Microstructure	304型Type: 形变奥氏体 Deformed Austenite 430型Type: 形变铁素体 Deformed Ferrite 410型Type: 形变铁素体 Deformed Ferrite		形变α相 Deformed α	形变α相 Deformed α	形变α相或α+β相 Deformed α or α + β
密度 Density	7.8g/cm ³		2.7g/cm ³	7.1g/cm ³	8.9g/cm ³
堆积密度 Bulk Density	4.5g/cm ³		1.5g/cm ³	4.1g/cm ³	5.1g/cm ³

符合JB/T 8354.5~2015《不锈钢丸》标准。注: 304奥氏体不锈钢丸经冷拔、切割、磨圆形 过程, 部分奥氏体 为马氏体, 也带微磁性。
In accordance with standard of "Stainless Steel Shot" in JB/T 8354.5~2015. Remark: The 304 Austenite stainless steel shot experienced cold drawing, cutting, grinding progress, which also makes the product with weak magnetic.

产品系列

Products Series

铸造丸系列 Steel Shot Series



S780/SS2.5 S660/SS2.0 S550/SS1.7 S460/SS1.4 S390/SS1.2 S330/SS1.0 S280/SS0.8 S230/SS0.6 S170/SS0.5 S110/SS0.3

铸造砂系列 Steel Grit Series



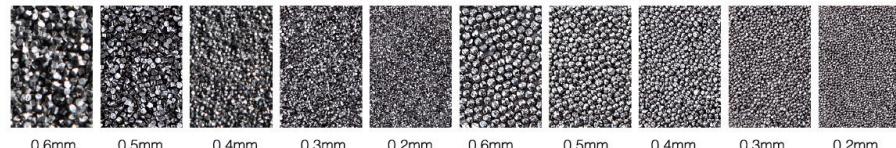
G10/SG2.5 G12/SG2.0 G14/SG1.7 G16/SG1.4 G18/SG1.2 G25/SG1.0 G40/SG0.7 G50/SG0.4 G80/SG0.3 G120/SG0.2

目数 mesh	铸造丸规格 mm Specifications of Cast Steel Shot mm											
	SS-2.5	SS-2.0	SS-1.7	SS-1.4	SS-1.2	SS-1.0	SS-0.8	SS-0.6	SS-0.5	SS-0.3	SS-0.2	
7	2.80	all pass										
8	2.36		all pass									
10	2.00	85%min		all pass	all pass							
12	1.70	97%min	85%min		5%max	all pass						
14	1.40		97%min	85%min		5%max	all pass					
16	1.18			97%min	85%min		5%max	all pass				
18	1.00				96%min	85%min		5%max	all pass			
20	0.850					96%min	85%min		10%max	all pass		
25	0.710						96%min	85%min		10%max		
30	0.600							96%min	85%min		all pass	
35	0.500								97%min		10%max	
40	0.425								85%min		all pass	
45	0.355									97%min		10%max
50	0.300										80%min	
80	0.180										90%min	80%min
120	0.125											90%min
200	0.075											
325	0.045											
SAE J444	S-780	S-660	S-550	S-460	S-390	S-330	S-280	S-230	S-170	S-110	S-70	

目数 mesh	铸造砂规格 mm Specifications of Cast Steel Grit mm											
	SG-2.5	SG-2.0	SG-1.7	SG-1.4	SG-1.2	SG-1.0	SG-0.7	SG-0.4	SG-0.3	SG-0.2		
7	2.80	all pass										
8	2.36		all pass									
10	2.00	80%min			all pass							
12	1.70	90%min	80%min			all pass						
14	1.40			90%min	80%min		all pass					
16	1.18				90%min	75%min		all pass				
18	1.00					85%min	75%min		all pass			
20	0.850											
25	0.710								85%min	70%min		all pass
30	0.600											
35	0.500											
40	0.425									80%min	70%min	all pass
45	0.355											
50	0.300										80%min	65%min
80	0.180											65%min
120	0.125											75%min
200	0.075											60%min
325	0.045											70%min
SAE J444	G-10	G-12	G-14	G-16	G-18	G-25	G-40	G-50	G-80	G-120		

产品系列 Products Series

不锈钢丝切丸系列 Stainless Steel Cut Wire Shot Series



不锈钢丸系列 Stainless Steel Shot Series

目数 mesh	mm	不锈钢丝切丸规格 mm Specifications of Stainless Steel Shot mm									
		1.4	1.2	1.0	0.8	0.6	0.5	0.4	0.3	0.2	
12	1.70	5%max									
14	1.40		5%max								
16	1.18	90%min		5%max							
18	1.00		90%min	5%max							
20	0.85			90%min	5%max						
30	0.60				90%min	5%max					
35	0.50					5%max					
40	0.425					90%min	5%max				
45	0.355						90%min	5%max			
50	0.30						90%min				
80	0.18							90%min			
120	0.125								90%min		

不锈钢丝切丸、不锈钢丸
Stainless Steel Cut Wire Shot,
Stainless Steel Shot Series

适用范围 Application scope

2.5 mm 2.0 mm 1.5 mm	大型不锈钢及高合金钢精密铸件、不锈钢锻件、冲压件、不锈钢钢板及不锈钢钢管、石材表面等清理、清砂、去氧化皮、去毛刺及强化。 For surface, sand, oxide skin, burr cleaning and strengthening of large stainless and high-alloy steel precision castings, stainless steel forgings, stampings, stainless steel plates and pipes and dimension stone surface etc.
1.0 mm 0.8 mm 0.6 mm	中小型不锈钢精密铸件、铝合金及镁合金压铸件、铜锌合金精密铸件、不锈钢锻件、冲压件、不锈钢钢板及不锈钢钢管、模具、玻璃制品、石材等表面清理、清砂、去氧化皮、去毛刺及强化。 For surface, sand, oxide skin, burr cleaning and strengthening of medium-sized stainless steel precision castings, aluminium and magnesium alloy die castings, mach metal precision castings, stainless steel forgings, stampings, stainless steel plates and pipes and dimension stone surface etc.
0.5 mm 0.4 mm 0.3 mm 0.2 mm	小型不锈钢精密铸件、铝合金及镁合金压铸件、铜锌合金精密铸件、不锈钢锻件、冲压件、不锈钢钢板及不锈钢钢管、模具、玻璃制品等表面清理、清砂、去氧化皮、去毛刺及强化。 For surface, sand, oxide skin, burr cleaning and strengthening of small-sized stainless steel precision castings, aluminium and magnesium alloy die castings, mach metal precision castings, stainless steel forgings, stainless steel plates and pipes, mould, glass products etc.

销售服务 Sales Service

KTF 集团总部

● 办事处或分公司



国内各销售分公司 Domestic Sales Branches

- 华南销售分公司 (Huanan Sales Branch): **15905431052**
- 苏北销售分公司 (Subei Sales Branch): **15905431083**
- 浙江销售分公司 (Zhejiang Sales Branch): **15905431090**
- 华北销售分公司 (Huabei Sales Branch): **13655433002**
- 东北销售分公司 (Dongbei Sales Branch): **13805431327**
- 西北销售分公司 (Xibei Sales Branch): **13561553977**
- 西南销售分公司 (Xinan Sales Branch): **15169940199**
- 华东销售分公司 (Huadong Sales Branch): **13455780866**
- 山东销售分公司 (Shandong Sales Branch): **15169940699**
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