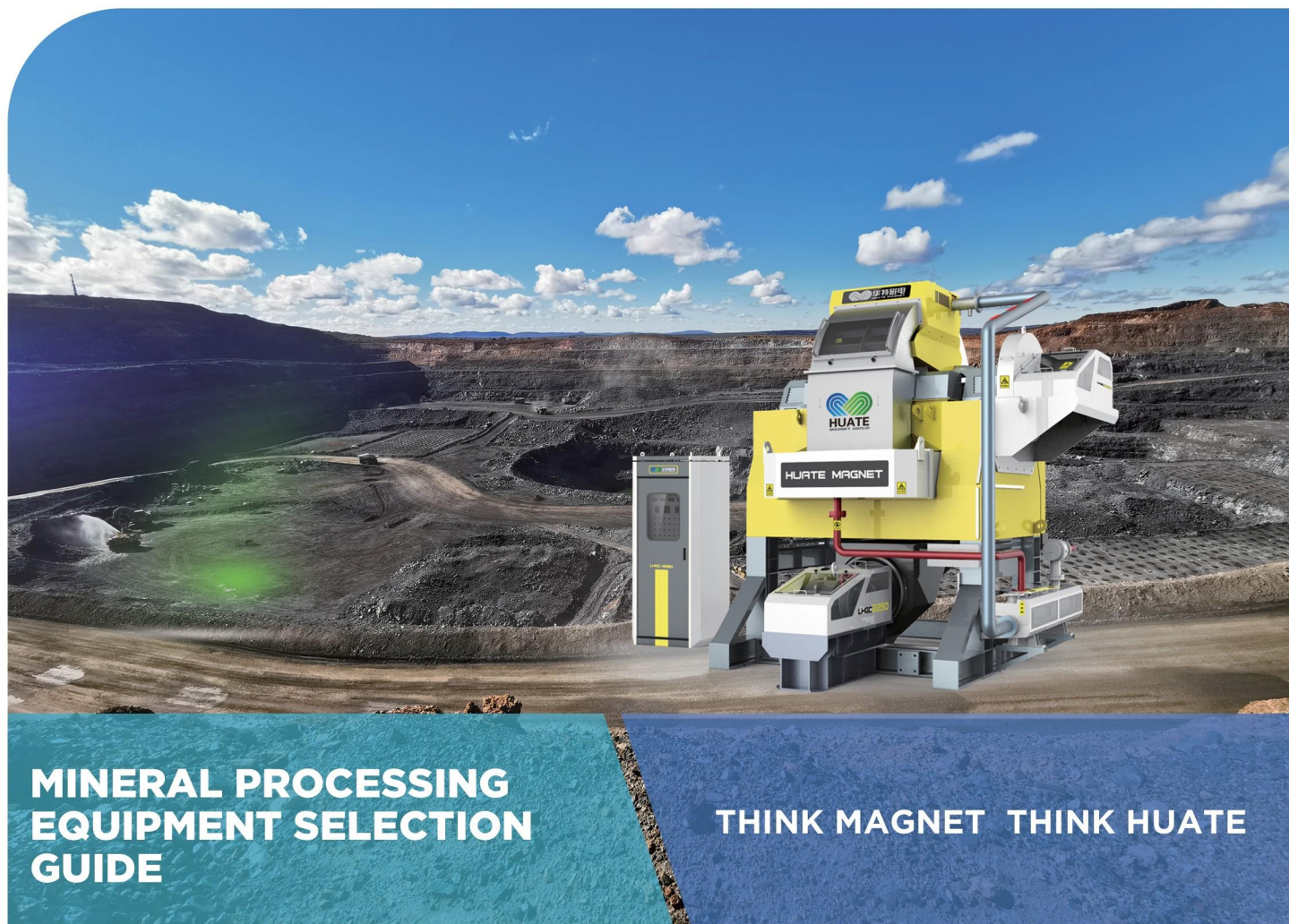


Stock code:831387



30⁺ YEARS
EXPERIENCE IN MINERAL
PROCESSING INDUSTRY



**MINERAL PROCESSING
EQUIPMENT SELECTION
GUIDE**

THINK MAGNET THINK HUATE

**GLOBAL LEADING MAGNETIC
SEPARATION EQUIPMENT SUPPLIER**

WWW.HUATEMAGNETS.COM



COMPANY PROFILE

Founded in 1993, Shandong Huate Magnet Technology Co., Ltd. is a publicly listed company on the innovation division of Beijing "New Third Board" stock exchange market (stock abbreviation: Huate Magnet, stock code: 831387).

Huate Magnet has been engaged in R&D, manufacturing, and providing technical services of magnetic separation equipment for more than 30 years. As a global magnetic separation equipment leading supplier and the biggest supplier in China, Huate specializes in manufacturing superconducting magnetic separators(5.5Tesla), electromagnetic high intensity separators(1.8Tesla), permanent magnetic separators, overhead iron magnetic separators, eddy current separators, X-ray optical sorters, grinding & classifying systems, and other mineral processing equipment. With more than 30 years in mineral processing industry, Huate Magnet has successfully created high values in processing metallic and industrial minerals. Huate's service scope involves coal, mine, electricity, building material, metallurgy, port, environmental protection, etc. With more than 30,000 customers around the world, the products have been exported to Australia, Germany, Austria, Finland, South Africa, Brazil, Peru, India, Malaysia, etc.





1000⁺

Employees

350,000⁺

Square Meters Plant

30,000⁺

Global Customers

15⁺

International Offices



HUATE MAGNET



Huate Magnet Group has established two main manufacturing plants with a total area of 350,000 square meters. In order to provide the best service to customers, Huate Magnet Group owns 10 subsidiaries including Huate Magnet Australia, Xinlin Superconducting, Hengbiao Inspecting and Testing, Anshan Huate Magnet, etc. By expending in the international market, Huate has successfully established 10 business offices & R&D centres all over the world including in Australia, South Africa, Germany, Brazil, Malaysia, etc.

THE CULTURE OF HUATE



CORPORATE VISION

GLOBAL LEADING MAGNETIC EQUIPMENT SUPPLIER

CORE VALUE

ENDLESS INNOVATION

CORPORATE PRINCIPLE

COOPERATIVE INNOVATION, THE PURSUIT OF EXCELLENCE

CORPORATE SLOGAN

THINK MAGNET, THINK HUATE



CUSTOMER SERVICE CONCEPT

CUSTOMER IS ALWAYS THE FIRST

QUALITY MANAGEMENT CONCEPT

QUALITY IS THE COMPANY'S LIFE

[illegible]

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RCDD Self-Cleaning Electric Magnetic Tramp Iron Separator
RCBDD- Explosion Proof Electromagnetic Iron Separator For Mine
RCDEJ Forced Oil Circulation Electromagnetic Separator
RCDFJ Forced Oil Circulation Self-Cleaning Electromagnetic Separator
RCDE Oil-cooling Electromagnetic Separator
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SGB Wet Belt Strongly Magnetic Separator
YCW Self-discharging Recovery Machine
CS Magnetic Desliming Tank
CXJ Dry Powder Drum Permanent Magnetic Separator
CGT High Field Strength Drum Permanent Magnetic Separator
CFLJ Roller Strong Magnetic Separator
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FCX High Frequency Pulsation Powder Ore Air Force Magnetic Separator
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RCYK Armoring Permanent Magnetic Separator
RCYF Pipeline Magnetic Separator
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CONCENTRATORS

CGC LOW TEMPERATURE SUPERCONDUCTING MAGNETIC SEPARATOR

APPLICATION

This series of products has an ultra-high background magnetic field that cannot be achieved by ordinary electromagnetic equipment, and can effectively separate weakly magnetic substances in fine-grained minerals. It is suitable for beneficiation of rare metal ores, non-ferrous metal ores and non-metallic minerals, such as cobalt ore enrichment, impurity removal and purification of kaolin and feldspar, and can also be used in sewage treatment and seawater purification and other fields.



TECHNICAL CHARACTERISTICS

- ◆ High background magnetic field strength, the coil made of Nb-Ti superconducting material has a magnetic field strength of more than 5T, while the field strength of a conventional magnet is generally less than 2T, that is 2-5 times than the traditional product.
- ◆ Strong magnetic field force, under the background field strength above 5T, the surface of the magnetically permeable matrix in the separation chamber generates a very large magnetic force, which can effectively separate weak magnetic impurities, greatly improve the quality of non-metallic minerals, and meet the requirements of high-end products.
- ◆ Zero volatility of liquid helium, the 1.5 W/4.2 K refrigerator can continue to refrigerate, so that the liquid helium does not volatilize outside the magnet, ensuring that the total amount of liquid helium remains unchanged, and there is no need to replenish liquid helium within 3 years, reducing maintenance costs.
- ◆ Low energy consumption, using cryogenic superconducting technology, the resistance of the coil is zero after reaching the superconducting state. Only the refrigerator that maintains the cryogenic state of the magnet needs to work, which saves more than 90% of electricity compared with the normal conducting magnet.
- ◆ Short excitation time. It is less than 1 hour.
- ◆ The dual cylinders are performing separation and washing alternately, and can run continuously without demagnetization, which improves production efficiency. The 5.5T/300 type superconducting magnetic separator can process kaolin up to 100 tons/day of dry mineral, and the 5T/500 type superconducting magnetic separator can process 300 tons/day of kaolin.
- ◆ The whole process is controlled by microcomputer, and the parameters can be collected in real time, which is beneficial to production control and quality control.
- ◆ The equipment runs stably, the maintenance cost is extremely low, the magnet has a long service life, light weight and easy installation.

RCC SUPERCONDUCTING OVERHEAD MAGNETIC SEPARATOR

APPLICATION

RCC series low temperature superconducting magnetic separator uses superconducting magnets to generate a strong magnetic field required for iron removal. The advantage is that in the superconducting state (-268.8°C), there is current without resistance, and the current passes through the superconducting coil to generate a super-strong magnetic field. High magnetic field strength, large magnetic field depth, strong iron attraction ability, light weight, low energy consumption, energy saving and environmental protection, etc., the advantages that ordinary electromagnetic separators cannot match. It is mainly used to remove fine iron impurities contained in the coal stream.



01

Superconducting Magnetic Separators

TECHNICAL CHARACTERISTICS

The low temperature superconducting magnetic separator has passed the provincial and ministerial technical appraisal and product appraisal in November 2008 and June 2010 respectively, and obtained the following three patents:

- ◆ One invention patent has been confirmed, the patent name is "Low Temperature" (ZL200710116248.4)
- ◆ One utility model patent has been confirmed, and the patent name is "Superconducting Magnetic Separator Suspension Device" (ZL 2007 2 0159191.1)
- ◆ One utility model patent has been confirmed, and the patent name is "Flexible protection device for the bottom plate of superconducting Magnetic Separator" (ZL 200820023792.4)

WHIMS-LHGC VERTICAL RING HIGH INTENSITY MAGNETIC SEPARATOR

APPLICATION

It is suitable for wet concentration of various weakly magnetic metallic ores such as hematite, limonite, specularite, manganese ore, ilmenite, chrome ore, rare earth ore, etc., as well as for iron removal and purification of non-metallic minerals such as quartz, feldspar and kaolin.

TECHNICAL CHARACTERISTICS

- ◆ The Oil-Water Cooling Vertical Ring High Gradient Magnetic Separator has an advanced cooling system and the coil utilizes a fully sealed external circulation forced oil-cooled method. The coil adopts large-flow external circulation oil-water heat exchange heat dissipation.
- ◆ The two ends of the coil are armored to recycle the divergent magnetic field. The utilization rate of magnetic energy is increased by about 8%, and the background magnetic field reaches above 1.4T.
- ◆ The coil adopts a fully sealed structure, which is rain-proof, dust-proof and corrosion-resistant, which can adapt to various harsh working environments.



HI FILTER-HTDZ HIGH GRADIENT SLURRY ELECTROMAGNETIC SEPARATOR

The HTDZ series High Gradient Slurry Electromagnetic Separator is the latest magnetic separation product developed by our company. The background magnetic field can reach 1.5T and the magnetic field gradient is large. The medium is made of special magnetically permeable stainless steel to meet the beneficiation needs of minerals in different regions and types.

APPLICATION

Suitable for iron removal and purification of non-metallic minerals such as quartz, feldspar, kaolin, etc. It can also be used for wastewater treatment in steel and power plants, as well as cleaning contaminated chemical raw materials.



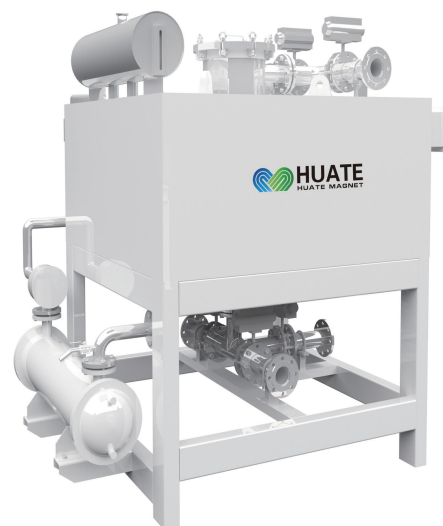
WVMF-HCTS WET VERTICAL ELECTROMAGNETIC FILTER

APPLICATION

It is mainly used to remove ferromagnetic particles from slurry materials, and is widely used in battery positive and negative materials, ceramics, kaolin, quartz(silica), clay, feldspar and other industries.

TECHNICAL CHARACTERISTICS

- ◆ Unique electromagnetic coil design and efficient cooling method. The excitation coil of the slurry high-gradient electromagnetic separator is cooled by fully sealed cooling oil, and the external high-efficiency heat exchanger performs oil-water heat exchange to realize oil-water combined cooling, with fast cooling speed, low temperature rise and stable magnetic field.
- ◆ The sorting matrix generates a very high magnetic field gradient, and the iron removal effect is better. The matrix is made of special magnetically conductive stainless steel, which can generate a very high gradient magnetic field under the excitation of the background magnetic field. It has a strong attraction effect on low-content weak magnetic impurities, and the iron removal effect is better.



TCXJ ELECTROMAGNETIC ELUTRIATION SEPARATOR



APPLICATION

This product is specially designed to purify strong magnetic minerals with a specific magnetization coefficient greater than $3000 \times 10^{-6} \text{ cm}^3/\text{g}$, or to increase the coarse grinding size while ensuring the grade of the original concentrate to improve production efficiency. The concentrate grade can be increased by 2 to 9%. It can also be used as a concentrator in concentrate concentration operations, and the concentration can reach more than 65%.

TECHNICAL CHARACTERISTICS

- ◆ Mineral grades have been greatly improved
- ◆ Low tailings grade and high recovery rate of concentrate
- ◆ Even feeding and thorough sorting
- ◆ Isolate non-magnetic and weak magnetic areas, suitable for ultra-fine mineral sorting
- ◆ Stable sorting indicators

DVMF-HCT DRY VERTICAL ELECTROMAGNETIC FILTER

APPLICATION

It is mainly used to remove magnetic substances in battery materials, ceramics, carbon black, graphite, flame retardants, food, rare earth polishing powder, photovoltaic materials, pigments and other materials.

TECHNICAL CHARACTERISTICS

The finite element analysis of the magnet by computer simulation technology can quantitatively calculate the distribution and size of the magnetic field, ensuring the rational design of the magnetic circuit.

The exciting coil is the core component of the whole machine, which provides a stable magnetic field for the equipment. In order to ensure the rapid cooling of the heat generated by the coil, the coil adopts a three-dimensional winding structure oil channel, which doubles the heat dissipation area and is conducive to the heat convection of the transformer oil.

Adopting oil-water combined cooling method, and use the large-flow oil pump to speed up the hot oil circulation to quickly take away the heat, and the coil temperature rise is low to ensure that the coil can work reliably at low temperature. The coil housing adopts a fully sealed structure, which is moisture-proof, dust-proof and corrosion-proof, and can adapt to various harsh environments.



DVMF-HCTG DRY VERTICAL ELETROMAGNETIE FILTER

APPLICATION

This equipment is used to remove weakly magnetic oxides, crumb iron rust and other contaminants from fine materials. It widely applies to material purification in refractory material, ceramics, glass and other non-metallic mineral industries, medical, chemical, food and other industries.

TECHNICAL CHARACTERISTICS

- ◆ The magnetic circuit adopts computer simulation design with scientific and rational magnetic field distribution.
- ◆ Both ends of the coils are wrapped by steel armor to raise the utilizing rate of magnetic energy and increase the magnetic field intensity in the separation area by more than 8%, and the background magnetic field intensity can reach 0.6T.
- ◆ The shell of excitation coil is in wholly sealed structure, moisture, dust and corrosion proof, and can work in harsh environments.



RCDB DRY ELECTRIC- MAGNETIC IRON SEPARATOR

APPLICATION

For different working conditions, especially for harsh working conditions.

TECHNICAL CHARACTERISTICS

- ◆ Featuring with dust and rain-protection, wearing erosion, it can run in the harsh environment.
- ◆ Low energy consumption and reliable performance.
- ◆ Optional magnetic force at SHR: 500 Gs, 700 Gs, 1200 Gs, 1500 Gs or more.



EXPLOSION-PROOF ELECTROMAGNETIC IRON SEPARATOR FOR MINE

APPLICATION

RCBDB series mine flameproof electromagnetic iron remover is suitable for coal mine with methane and coal dust.

TECHNICAL CHARACTERISTICS

- ◆ Perfect magnetic circuit design, large magnetic potential, strong suction and high iron removal rate
- ◆ Stable mechanical and electrical properties of special resin pouring for electrical engineering
- ◆ Self-cooling shell design is small in size, fast in heat dissipation and light in weight



RCDD SELF-CLEANING ELECTRIC MAGNETIC TRAMP IRON SEPARATOR

APPLICATION

To remove the tramp iron from the various material on the belt conveyor before crushing.

TECHNICAL CHARACTERISTICS

- ◆ The computer simulating design for magnetic circuit, and strong magnetic force.
- ◆ The interior uses the special resin to cast with wholly sealed structure.
- ◆ Self-cleaning, easy maintenance, drum-shape structure, automatic belt-off-position correct.
- ◆ Remote and site control.

Eliminate the ferrous material with weight from 0.1-50 kg.



RCBDD- EXPLOSION PROOF ELECTROMAGNETIC IRON SEPARATOR FOR MINE

APPLICATION

- ◆ RCBDD series mine flameproof electromagnetic iron separator is suitable for coal mine with methane and coal dust.

TECHNICAL CHARACTERISTICS

- ◆ Perfect magnetic circuit design, large magnetic potential, strong suction and high iron removal rate
- ◆ Stable mechanical and electrical properties of special resin pouring for electrical engineering
- ◆ Self-cooling shell design is small in size, fast in heat dissipation and light in weight



RCDEJ FORCED OIL CIRCULATION ELECTROMAGNETIC SEPARATOR

APPLICATION

For the port of coal transportation, big thermal power plant, mine and building material. It can also work in the harsh environment such as dust, humidity, salt fog.

TECHNICAL CHARACTERISTICS

- ◆ High-quality cooling oil and optimizes oil circulating design.
- ◆ No noise, quick heat releasing, low temperature rising.
- ◆ Compact structure, easy maintenance, reliable operation and long-term trouble-free operation.



RCDFJ FORCED OIL CIRCULATION SELF-CLEANING ELECTROMAGNETIC SEPARATOR

APPLICATION

For the port of coal transportation, big thermal power plant, mine and building material. It can also work in the harsh environment such as dust, humidity, salt fog.

TECHNICAL CHARACTERISTICS

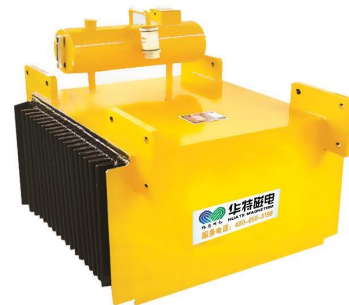
- ◆ Magnetic route is short, magnetic waste less; the gradient is high and removing iron efficiently.
- ◆ Light weight reasonable oil line, compact cooling structure and high heat-releasing efficiently.
- ◆ The exciting coil is featured with dustproof, moisture-proof and anti-corrosion.
- ◆ Quickly heat releasing. automatically iron-cleaning, easy maintenance.
- ◆ Drum shape structure, special designed wholly sealed structure.
- ◆ Optional magnetic force at SHR: 900 Gs, 1200 Gs, 1500 Gs or more.



RCDE OIL-COOLING ELECTROMAGNETIC SEPARATOR

APPLICATION

For occasions with particularly high requirements for the removal of iron such as large-scale thermal power plants, coal ports, coal mines, mines, building materials. It can also work in the harsh environments such as dust, humidity, salt fog. It utilizes the most commonly used cooling method for Suspended Electromagnets internationally.



TECHNICAL CHARACTERISTICS

The magnetic circuit is designed by computer simulation, with a large magnetic penetration depth and strong magnetic force.

- ◆ The excitation coil is specially designed with longitudinal and transverse oil channels, which is extremely conducive to transferring heat to the transformer oil and effectively reducing the temperature of the coil. The coil operating temperature is under 60°C, reaching the level of similar foreign products.
- ◆ The coil insulation is above F class. New high-temperature heat transfer oil is adopted. The design of the oil circuit is reasonable, unobstructed, with fast circulation and high heat-releasing efficiently

RCDF SUSPENDING OIL-COOLING SELF-CLEANING ELECTROMAGNETIC SEPARATOR

APPLICATION

Used for removing iron from any materials, such as materials before crushers and materials on conveyor belts. It can also work in various harsh environments.



TECHNICAL CHARACTERISTICS

- ◆ The magnetic circuit is designed by computer simulation, with a large magnetic penetration depth and strong magnetic force.
- ◆ The excitation coil is specially designed with longitudinal and transverse oil channels, which is extremely conducive to transferring heat to the transformer oil and effectively reducing the temperature of the coil.
- ◆ The coil is soaked and cured by special epoxy resin, which improves the insulation performance of the whole machine. The fully sealed structure is dustproof, rainproof and corrosion-resistant.

RCDC SUSPENSION SELF-CLEANING AIR-COOLING ELECTROMAGNETIC IRON SEPARATOR

APPLICATION

It is suitable for iron and steel plants, cement plants, power plants and other occasions. Mostly used for slag iron removal and protection of roller press, vertical mill, crusher and other important equipment. Suitable for occasions with good environmental conditions.



TECHNICAL CHARACTERISTICS

The magnetic circuit is designed by computer simulation, with large magnetic penetration depth and strong magnetic force.

The special air duct design, axial flow fan forced air cooling, large air volume, high air pressure, makes the coil dissipate heat quickly, low temperature rise, and small difference between hot and cold magnetic fields.

The coil adopts advanced dipping insulation and curing treatment technology to protect the coil from being eroded by dust and harmful gases, improve the insulation performance of the whole machine, and ensure long-term continuous operation without aging.

HTK IRON SEPARATOR FOR MAGNETIC ORE

APPLICATION

It can be used to eliminate the waste iron from the original ore, sinter ore, pellet ore, block ore and others on the conveying belt. It can separate ferromagnetic materials with the least ore to protect the crushers.



TECHNICAL CHARACTERISTICS

- ◆ The design of the magnetic field in this system was selected based on the optimal computerized simulation.
- ◆ Used in conjunction with a metal detector to form an automatic iron detection and separation system without iron leakage.
- ◆ Intermittent excitation, low energy consumption, stable and reliable performance.
- ◆ The sorting area adopts multi-stage repeated magnetic separation to ensure a small amount of ore during iron separation.

02

Electromagnetic Overhead Iron Separators
Magnetic Separation Equipment

CTY WET PERMANENT MAGNETIC PRE-SEPARATOR

APPLICATION

Series CTY wet permanent magnetic pre-separator is designed for the magnetic ore before grinding to pre-separate and discard tailings.

TECHNICAL CHARACTERISTICS

- ◆ The feed box equipped with material mixed device to make the material into the tank body uniform in the drum longitudinal direction.
- ◆ The wear resistant layer in the tank and outside of the magnetic drum can increase wear resistance and prolong the service life.
- ◆ The diameter of the feed particle can reach 16 mm.
- ◆ The magnetic minerals in the tailing are reduced apparently, it can be reduced by 1-3% than the normal separation.
- ◆ The magnet system adopts large wrap angle design, in order to prolong separation operation and improve the concentration grade about 2-4%.
- ◆ Keep a certain height of the liquid level make the recover of the magnetic minerals easy.



CTB WET DRUM PERMANENT MAGNETIC SEPARATOR

APPLICATION

To separate the magnetic particle or eliminate the magnetic waste from non-magnetic mineral.

TECHNICAL CHARACTERISTICS

- ◆ Advanced magnetic circuit design, deep magnetic effective depth and high recovery.
- ◆ Simple and compact structure, strong magnetic force. Easy to maintain, easy installation, reliable performance.
- ◆ Stable and reliable driving device, no malfunction or breakdown for a long time.



JCTN PERMANENT DRUM MAGNETIC SEPARATOR

This product is a wet magnetic separator designed for rinsing and purification of magnetic ore. According to the process requirements, the magnetic ore is washed, selected and purified, deslimed and concentrated. Applicable to: sorting and desliming of graded overflow products after primary grinding; mineral concentration before secondary grinding and filtration; desliming of magnetite before entering fine sieve screening and desliming before reverse flotation; It is the ultimate selection of magnetite.



TECHNICAL CHARACTERISTICS

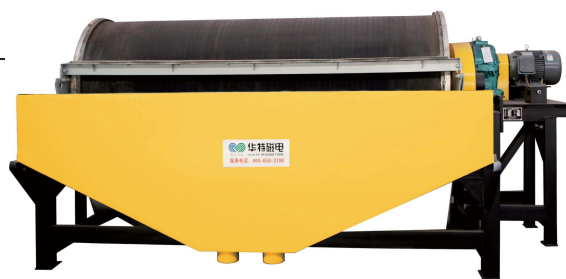
- ◆ Adopt the pipe-feeding devices and over-flow system to feed the material evenly.
- ◆ With 240-270 degree magnetic element and the multi-pole design to achieve the ideal beneficiation indicator. The magnetic element structure can be designed accordingly.
- ◆ Magnetic blending system inside of the tank.
- ◆ Downstream feeding, Counter-rotation drum and sufficiency multi-stage washing water(It can be opened and closed selectively according to the situation).
- ◆ Two-stage discharging system with Polyurethane scraper.

NCTB CONCENTRATION AND DEWATERING MAGNETIC SEPARATOR

APPLICATION

Specially designed for concentrating and increasing the concentration of low concentration pulp in magnetic separation process.

It is mainly used to concentrate coarse-grained minerals under high-frequency sieve, which is beneficial to improve the efficiency and production cost of secondary mill.



TECHNICAL CHARACTERISTICS

- ◆ The magnetic system adopts large wrap angle design to prolong the separation length and discharge time.
- ◆ Optimal design of tank body, Optimize the ore discharge gap and ore discharge height of tank body, the Concentration of concentrate discharge is over 68%, with high recovery rate.
- ◆ The magnetic system adopts high gradient design and large wrap angle structure, which effectively controls the high grade recovery rate of magnetic separation tailings and can directly discard tailings during concentrating operations.

CTN PERMANENT-MAGNETIC DRUM SEPARATOR

APPLICATION

CTN permanent wet drum magnetic separator for iron ore is mainly used for the wet pre-separation of minerals after fine crushing before grinding and the roughing operation of minerals after 1st stage of ball mill to improve the grade of ore entering the mill and the operation efficiency of the later wet separation stage and reduce production costs.



TECHNICAL CHARACTERISTICS

The magnetic system and tank body are designed with matching partitions. The magnetic curve is pulsatingly distributed. The design takes into account the control of waste rejection rate and recovery rate indicators. The demagnetization rate shall not exceed 3% within 10 years.

◆ The magnetic pole bottom plates are seamlessly butted. Non-magnetic stainless steel plates are used to connect the yoke plate and the main shaft, and there is no magnetic leakage transmitted to the main shaft. The magnetic system is designed with a large wrap angle and triple protection. The magnetic blocks are fixed on the yoke with stainless steel screws. The surface of the magnetic system is cured with resin and wrapped with stainless steel bandages.

SGB WET BELT STRONGLY MAGNETIC SEPARATOR

APPLICATION

It is used for iron removal and purification of non-metallic minerals in wet processing, especially for wet iron removal of non-metallic minerals such as quartz sand, potassium feldspar, and soda feldspar. In addition, it has a good separation performance for weak magnetic minerals such as hematite, limonite, specularite, siderite, manganese ore, and tantalum-niobium ore.



TECHNICAL CHARACTERISTICS

SGB Wet Belt Strongly Magnetic Separator is a new type of magnetic separation equipment developed by Huate Company, which summarizes the advantages and disadvantages of traditional magnetic separation equipment and breaks the conventional design concept. Integrating magnetic separation and gravity separation, it has the advantages of high magnetic field strength, significant iron reduction effect, large processing capacity, energy-saving, water-saving, and simple operation. This equipment has applied for a national patent.

YCW SELF-DISCHARGING RECOVERY MACHINE

APPLICATION

YCW Series Self-discharging Recovery Machine is a new type of product developed by our company according to foreign advanced technology. The magnetic system of the machine is made of a group of magnetic rings which are inlaid by bare magnetic blocks and arranged according to a certain gap. The magnetic system directly acts on the magnetic material with high magnetic field strength, large action gradient and high recovery rate up to 85% ~ 95%. Especially, the V-shaped scraper is used to realize one-time discharge without water or with little water by means of the weight of the magnetic material itself. This machine is widely used in metallurgy, mines, non-ferrous metals, gold, building materials, electric power, coal and other industries for efficient recovery and utilization of magnetic substances in waste slurry discharged from coal washing plants, iron and steel plants (steel slag) sintering plants, etc.



02

Wet/Dry Permanent Magnetic Separators
Magnetic Separation Equipment

CS MAGNETIC DESLIMING TANK

APPLICATION

CS series magnetic desliming tank is a magnetic separation equipment that separates magnetic mineral particles and non-magnetic mineral particles (sludge) under the action of gravity, magnetism and rising water force. It is mainly used in separation and other industries.

This product adopts computer optimized design, has high working efficiency, good reliability, reasonable structure and simple operation. It is an ideal equipment for slime separation.



CXJ DRY POWDER DRUM PERMANENT MAGNETIC SEPARATOR

APPLICATION

Removing iron pollutants from powdery or fine-grained materials. It is used for the purification of non-metallic minerals such as refractory materials, glass, ceramics, abrasive abrasives, etc. mpurity removal from chemical, grain, and non-magnetic metal ore, as well as dry pre-separation of hematite and limonite.



TECHNICAL CHARACTERISTICS

Equipped with a vibrating feeder for uniform feeding.

The unique design for magnetic circuit and the magnetic source is made up from the NdFeB with high

- ◆ A new type of compensated magnetic pole type magnetic system, resulting in higher magnetic field strength and greater gradient.
- ◆ Multi pole magnetic system increases the number of rolling times of magnetic material passing through the surface of drum, resulting in better sorting effect.

CGT HIGH FIELD STRENGTH DRUM PERMANENT MAGNETIC SEPARATOR

APPLICATION

Removing weak magnetic impurities from granular or coarse powder materials. It can be used for the purification of non-metallic minerals such as ceramics, glass, refractory materials, as well as the purification of chemical, food, and pharmaceutical industries. It can also be used for the dry pre-separation of weakly magnetic minerals such as hematite and limonite, as well as the dry separation of manganese ore.



TECHNICAL CHARACTERISTICS

- ◆ The reasonable combination of permanent magnetic drum and permanent magnetic roller can achieve better iron removal effect.
- ◆ The drum adopts a new type of compensated magnetic pole magnetic system, which has higher magnetic field strength and stronger suction.
- ◆ The magnetic system of the drum can be made into a flipping type, greatly improving the cleaning rate.
- ◆ The surface magnetic field of the drum can reach 8000Gs.

CFLJ ROLLER STRONG MAGNETIC SEPARATOR

APPLICATION

This product is suitable for the separation of -40 mm weakly magnetic metallic minerals as well as the impurity removal and purification of non-metallic minerals. It can be used for ferrous metallic minerals such as hematite, pseudo-hematite, semi-artificial hematite, limonite, chromite, ilmenite, manganese oxide ore, manganese carbonate ore; non-ferrous metallic minerals such as tantalum-niobium ore, vanadium-titanium ore, etc.; zircon, andalusite, garnet and other non-metallic minerals.

TECHNICAL CHARACTERISTICS

Concentrated multiple magnetic system, dual magnetic pole structure, high magnetic field intensity and large gradient.

The use of soft magnetic materials to conduct magnetism minimizes magnetic field loss and greatly improves the specific magnetic force.

Equipped with controllable feeding system.



CTF POWDER ORE DRY MAGNETIC SEPARATOR

APPLICATION

Adaptive for pre-separation of low grade magnetite and dry powder ore with particle size 0~16 mm and grade between 5% to 20%. To improve the grade of feed ore for the grinding mill and reduce the mineral processing cost.

TECHNICAL CHARACTERISTICS

- ◆ Adopt small pole pitch and multi-pole magnetic system design to increase the number of magnetic flips and facilitate the discharge of miscellaneous stone.
- ◆ 180° large wrapping angle design effectively extends the length of the sorting area and improves the recovery rate of iron ore.
- ◆ The surface of the drum is made of wear-resistant ceramics with a hardness of HRA ≥ 85 and can reach a maximum of HRA92 or above. It has superior properties that cannot be replaced by other wear-resistant metal materials.
- ◆ Simple material distribution structure can more conveniently control the grade of concentrate and tailings.



FCX HIGH FREQUENCY PULSATION POWDER ORE AIR FORCE MAGNETIC SEPARATOR

APPLICATION

This product is a beneficiation equipment for fine-grained dry materials. It is suitable for magnetite separation in arid and cold areas. It is also suitable for iron recycling of fine-grained steel slag.



TECHNICAL CHARACTERISTICS

- ◆ Use vibrating feeder to feed materials;
The magnetic system is designed with multiple magnetic poles, large wrap angle (up to 200-260 degrees), and high field strength (3000-6000 Gs). The magnetic system structure can be transformed according to the mineral properties to achieve reasonable beneficiation indicators;
- ◆ The linear speed of the drum can be adjusted within 1-20 m/s, and the appropriate linear speed can be selected according to the properties of the mineral;

ECS EDDY CURRENT SEPARATOR

APPLICATION

- ◆ Purification of waste aluminum
- ◆ Non-ferrous metal sorting
- ◆ Separation of scrapped automobiles and home appliances
- ◆ Separation of waste incineration materials

TECHNICAL CHARACTERISTICS

- ◆ Easy to operate, automatic separation of non-ferrous metals and non-metals;
- ◆ It is easy to install and can be effectively connected with new and existing production lines;
- ◆ NSK bearings are used for high-speed rotating parts, which improves the stability of the equipment;



RCYB SUSPENSION PERMANENT MAGNETIC IRON SEPARATOR

APPLICATION

For belt conveyor, vibrating conveyor and feeding chute to eliminate the tramp iron.

TECHNICAL CHARACTERISTICS

- ◆ Employing NdFeB magnet featuring with high coercion and remanence to compose the combined magnetic system.
- ◆ Simple installation, convenient and reliable operation.
- ◆ No power consumption.



RCYD SELF-CLEANING PERMANENT MAGNETIC SEPARATOR

APPLICATION

For cement, thermal power plant, metallurgy, mining, chemical, paper making and coal industry, etc.

TECHNICAL CHARACTERISTICS

- ◆ Employing the computerized simulating design for magnetic field.
- ◆ With perfect double magnetic poles, drum shape compact structure, automatic belt-off-correct.
- ◆ To remove scrap iron in thick material layer continuously.
- ◆ Easy maintenance, low power consumption, low noise.
- ◆ Optional magnetic force at SHR: 500 Gs, 700 Gs, 900 Gs, 1200 Gs, 1500 Gs or more.



RBCYD EXPLOSION-PROOF PERMANENT MAGNETIC IRON SEPARATOR FOR MINE

APPLICATION

RBCYD series mine flameproof electromagnetic iron separator is suitable for coal mine with methane and coal dust .



TECHNICAL CHARACTERISTICS

- ◆ The combined magnetic circuit with concentrated magnetism has high magnetic field strength, large gradient and strong suction.
- ◆ Using neodymium iron boron as the magnetic source, it has extremely high magnetic energy and stable magnetic field, ensuring that the magnetic force attenuation does not exceed 4% in eight years.
- ◆ The magnetic pole has a large area to ensure that there is enough time to pick up iron impurities from the running materials.

RCYP PERMANENT MAGNETIC IRON SEPARATOR

APPLICATION

For different kinds of working conditions, especially for removing the iron scrap from various material during the processing of conveying.



TECHNICAL CHARACTERISTICS

- ◆ Computerized simulating magnetic field circle design and perfect double magnetic poles structure.

RCY-Q LIGHT-DUTY PERMANENT MAGNETIC IRON SEPARATOR

APPLICATION

For industrial fields such as environmental protection, timber, foodstuff, foundry, chemical industry, building material, mine, light industry and so on.

TECHNICAL CHARACTERISTICS

- ◆ Light weight, small volume, low weight.
- ◆ Compact structure.
- ◆ Lower noise and continuous work.
- ◆ Optional magnetic force at SHR: 500 Gs, 700 Gs, 1200 Gs, 1500 Gs or more.



RCYK ARMORING PERMANENT MAGNETIC SEPARATOR

APPLICATION

For iron separation in metallurgy, iron recovery factory, casting workshop and other working condition.

TECHNICAL CHARACTERISTICS

- ◆ With unique armoring design, to prevent the sharp impurities damaging the belt.
- ◆ Lower energy consumption and reliable performance.
- ◆ High magnetic intensity and magnetic grade, strong magnetic force at rated suspension height.
- ◆ Self-cleaning, easy maintenance. We have different model, and special design for anti-explosion (just like underground coal-mining).
- ◆ Optional magnetic force at SHR: 500 Gs, 700 Gs, 1200 Gs, 1500 Gs or more.



02

Permanent Overhead Magnetic Iron Separators
Magnetic Separation Equipment

RCYF PIPELINE MAGNETIC SEPARATOR

APPLICATION

RCYF is suitable for removing iron from powdery, granular and lump materials in the industries of cement, building materials, chemical industry, coal, grain, plastics, refractory materials, etc. It can be connected with conveying pipeline and installed vertically.

TECHNICAL CHARACTERISTICS

- ◆ Using high-performance strong magnetic material neodymium iron boron as the magnetic source, it has high temperature resistance, stable performance and is not easy to demagnetize.
- ◆ The unique magnetic circuit design and double magnetic pole structure greatly deepen the magnetic field strength of the magnetic field area through which the materials pass, and the suction force is 2-3 times that of ordinary pipeline iron separators.
- ◆ The pipeline has a fully sealed structure, and the iron separator is installed externally to avoid damage to the iron separator due to long-term use.



RCGZ SELF-CLEANING PIPELINE MAGNETIC IRON SEPARATOR

APPLICATION

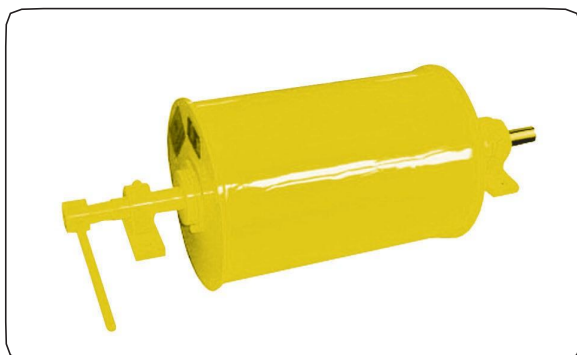
RCGZ is mainly used in the cement industry: iron removal of the coarse powder after the classifier and iron removal of the fine powder after the clinker is pre-crushed to prevent the accumulation of iron particles in the mill, thereby improving the production efficiency of the mill and the specific surface area of the cement; iron removal before the cement filling process, can automatically clean and discharge the iron impurities mixed in the cement to ensure the stable operation of production.



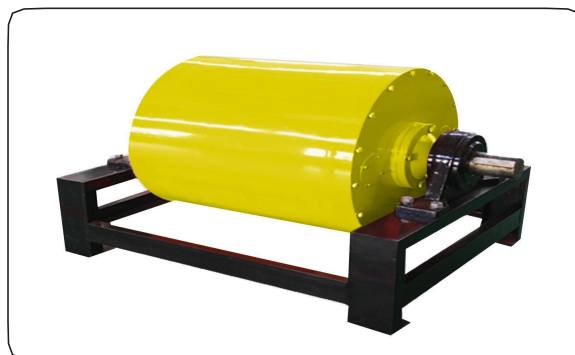
TECHNICAL CHARACTERISTICS

The shell rotation is changed to magnetic system rotation. Structurally, the action process of the magnetic system is enlarged. Equipped with a unique separation mechanism, the separation of iron impurities is more thorough. Using neodymium iron boron magnetic material with high temperature resistance and strong magnetic force, the magnetic field strength is high. The whole machine is connected in series in the powder conveying pipeline, with flange connection, which is convenient for installation. Iron removal and discharge are completed automatically, and the equipment operation does not require special personnel to watch. The permanent magnet is used as the magnetic source, without power consumption. The low-power electric impurity discharge consumes extremely low power. The structure is compact, and the operation is stable and reliable.

CTZ (CTDG)MEDIUM STRONG PEMMANENT MAGNETIC PULLEY



CTZ Medium Magnetic
Field Intensity Permanent-Magnetic Pulley



CTDG Permanent-Magnetic Dry Lump Sep-
arator

APPLICATION

For the powder, granular and bulk material or to recover the iron impurities to protect the crusher, grinder and presser from being damaged.

TECHNICAL CHARACTERISTICS

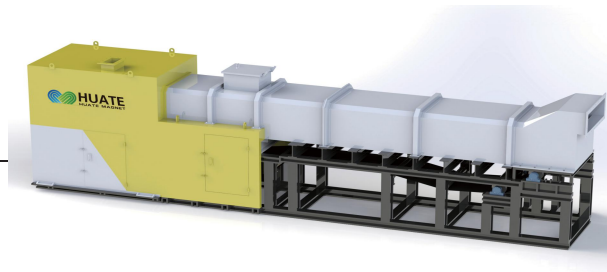
- ◆ With convenient installation, easy maintenance, reliable performance.
- ◆ Continuous work and simple operation, it can meet the user's requirement for powerful magnetic field and magnetic separation.
- ◆ Optional magnetic force: 150 mT~500 mT or more.
- ◆ Good collecting effect for the iron scrap buried deeply in the material layer.

HTRX INTELLIGENT SENSOR BASED SORTER

APPLICATION

It is used for large-size dry separation of coal and coal gangue, replacing traditional manual picking. Manual picking has problems such as low picking rate

of gangue, poor working environment for manual workers, and high labor intensity. The intelligent dry sorter can remove most of the gangue in advance, reduce the labor intensity of workers, reduce the power consumption and wear of the crusher, greatly reduce the amount of ineffective washing entering the main washing system, reduce the sludge of gangue and the load of the slime water system, and effectively improve and stabilize the quality of raw coal for washing, and reduce the cost of coal preparation.



TECHNICAL CHARACTERISTICS

- ◆ Sorting particle size: 300-25 mm.
- ◆ The upper limit of the actual maximum effective sorting particle size can reach 400 mm.
- ◆ There are field application examples for 300-50 mm and 100-25 mm.
- ◆ At present, Huate is conducting research on small particle size HTRX, and the lower limit of HTRS sorting has been reduced to 10 mm. If customers have needs, welcome to send samples for testing.

NEAR-INFRARED HYPERSPECTRAL INTELLIGENT SENSOR BASED SORTER

APPLICATION

It is widely used for precious metals such as gold, silver and platinum group metals; non-ferrous metals such as molybdenum, copper, zinc, nickel, tungsten, lead-zinc and rare earth; dry pre-separation of non-metallic minerals such as feldspar, quartz, calcium carbonate and talc.



TECHNICAL CHARACTERISTICS

- ◆ Core components imported from Germany, mature and advanced.
- ◆ Through the NIR spectrum, the computer accurately analyzes the elements and content of each piece of ore.
- ◆ Sorting parameters can be flexibly adjusted according to the requirements of the sorting index, with high sensitivity.
- ◆ Centralized control of equipment, high degree of automatic operation.
- ◆ The material conveying speed can reach 3.5 m/s, and the processing capacity is large.
- ◆ Equipped with uniform material distribution device.
- ◆ Very low energy consumption, small floor space and easy installation.

MQ WET GRID TYPE BALL MILL. MQY OVERFLOW TYPE BALL MILL.

APPLICATION

The ball mill is suitable for grinding various ores of different hardness and other grindable materials. It can grind various grindable materials to the particle size required by the process and can be widely used in industries such as metallurgy, beneficiation, building materials, chemical industry, and ceramics.



TECHNICAL CHARACTERISTICS

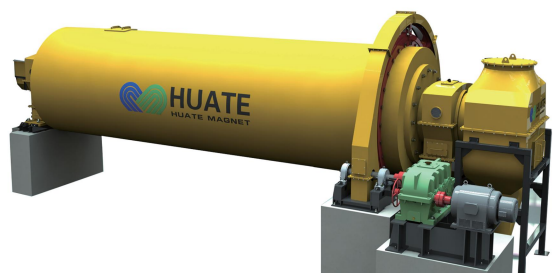
- ◆ The drum-type ball mill has a hollow cylinder. At both ends of the cylinder are hollow journal shafts with end caps. The journal is supported on bearings.
- ◆ The cylinder is filled with grinding media of various diameters - steel balls. When the cylinder rotates around the horizontal axis at a specified number of revolutions, the steel balls and materials loaded in the cylinder rise to a certain height along the cylinder wall under the action of centrifugal force and friction force, and then fall or roll down freely from the cylinder wall.
- ◆ The grinding of materials mainly depends on the impact force when the grinding media falls and the abrasion effect during movement. Materials are continuously fed in through the hollow journal at one end of the cylinder, and the ground products are continuously discharged through the hollow journal at the other end of the cylinder.

04

Grinding Equipment

M DRY BALL MILL

It is composed of feeding part, discharging part, rotary part, transmission part (reducer, small transmission gear, motor, electric control) and other main parts.



TECHNICAL CHARACTERISTICS

- ◆ High efficiency and low energy consumption. Scientific calculation of the specifications and quantity of grinding media, reasonable ratio, maximises the grinding efficiency and reduces the production cost.
- ◆ Product purity is guaranteed. The internal design of the ball mill has aluminum oxide liner, and the aluminum oxide balls are used as the grinding medium, which effectively prevents the secondary pollution.
- ◆ Ball mill and classifier form a closed system, negative pressure conveying, no dust spillage.

MBY(G) ROD MILL.

APPLICATION

The rod mill is named after the grinding medium loaded in the cylinder is steel rods. Generally, the rod mill adopts wet overflow type and can be used as the first-stage open-circuit grinding. It is widely used in the first-stage grinding industries in artificial stone sand, beneficiation plants, chemical plants and power departments. The rod mill is driven by the motor through the reducer and the surrounding large and small gears for transmission, or directly by the low-speed synchronous motor through the surrounding large and small gears for transmission to drive the cylinder to rotate.



TECHNICAL CHARACTERISTICS

The cylinder is equipped with an appropriate grinding medium - steel rods. Under the action of centrifugal force and friction force, the grinding medium is lifted to a certain height and falls in a throwing or slumping state. The ground material continuously enters the inside of the cylinder from the ore inlet, is crushed by the moving grinding medium, and the product is discharged from the mill by the force of overflow and continuous feeding for the next process treatment.

DRY QUARTZ-PROCESSING EQUIPMENT

APPLICATION

This machine is specially designed for quartz-making field for glass industry. It is composed of mill, sieve (for different size product), coarse material-returning system, and dust-collecting system. And you can get the product from different sieve with size 60-120 mesh for glass industry. The size for powder material coming from dust collector is about 300mesh (you can use this for other business).



TECHNICAL CHARACTERISTICS

- ◆ It has simple structure, high classification efficiency and low failure rate.
- ◆ It is simple to operate, has high classification accuracy and is easy to maintain.
- ◆ No impact, little vibration, little noise and long service life.
- ◆ The screen mesh is easy to replace, and the classification particle size can be adjusted by changing the mesh number of the screen mesh.
- ◆ The inclination design facilitates the discharge of coarse and fine-grained products.
- ◆ Submersible screening can be used to improve screening accuracy and reduce screen wear.

HIGH-PRESSURE GRINDING ROLL-ER(SINGLE DRIVE)

APPLICATION

Single-drive high pressure grinding roll is specially designed to pre-grind the cement clinkers, the mineral dross, the steel clinkers and so on into small granules, to ultra-crush the metallic minerals (iron ores, manganese ores, copper ores, lead-zinc ores, vanadium ores and others) and to grind the non-metallic minerals (the coal gangues, feldspar, nepheline, dolomite, limestone, quartz, etc.) into powder.

TECHNICAL CHARACTERISTICS

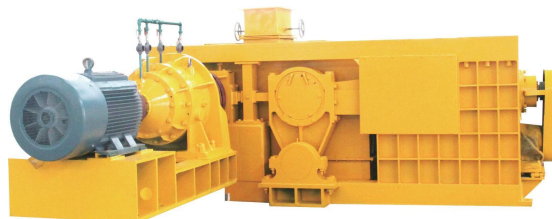
◆ High Working Efficiency. Compared with the traditional crushing equipment, the processing capacity increases by 40 - 50%. The processing capacity for PGM1040 can reach around 50 - 100 t/h, with only 90 kw power. consumption is very low. Compared with the traditional double drive HPGR, it can reduce the energy consumption

◆ Low Energy Consumption. As per the single roll driving way, it needs only one motor to drive. The energy

by 20~30%.

◆ Good Wear-resistant Quality. With only one motor driving, the synchronization performance of the two rolls is very good. With wear-resistant welding surfaces, the rolls are with good wear-resistant quality and can be easily maintained.

◆ High Operation Rate: ≥95%. With scientific design, the equipment can be pressurized by the high pressure spring group. The working pressure can be adjusted automatically as per the spring group compress. There is no malfunction point.



04

Grinding Equipment

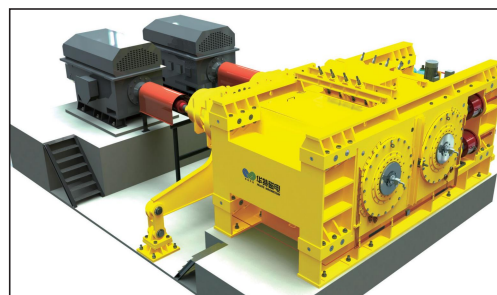
HIGH-PRESSURE GRINDING ROLLER (DOUBLE DRIVE)

APPLICATION

- ◆ Medium, fine and ultrafine grinding of bulk materials.
- ◆ In the mineral processing industry, can be placed before the ball mill, as a pre-grinding equipment, or make up a combined grinding system with a ball mill.
- ◆ In the oxidized pellet industry, can replace the commonly used damp mill.
- ◆ In building materials, refractory materials and other industries, have been successfully applied in cement clinker, limestone, bauxite and other grinding.

TECHNICAL CHARACTERISTICS

- ◆ New type stud roll surface technology
- ◆ Separation technology of roll bushing and main shaft
- ◆ Bearing quick mounting and dismounting technology
- ◆ High quality and reliable hydraulic system



DRUM SCREEN

APPLICATION

Drum screen is mainly used with equipment that has requirements on the particle size of the incoming mineral, such as strong magnetic separator. It is used for slag separation process before feeding, and can also be widely used for particle size classification of small and medium-sized slurries in metallurgy, mining, chemical abrasive and other industries.

TECHNICAL CHARACTERISTICS

- ◆ It has a simple structure and low failure rate.
- ◆ Simple operation and easy maintenance.
- ◆ No impact, low vibration, low noise and long service life.
- ◆ The screen mesh is easy to replace, and the classification particle size can be adjusted by replacing the screen mesh.



HF PNEUMATIC CLASSIFIER

APPLICATION

The classifying device is composed of pneumatic classifier, cyclone, collector, induced draft fan, control cabinet and so on. Equipped with second air inlet and vertical impeller rotor, the materials are fed in via the bottom roller under the force generated from the induced draft fan and then mixed with first input air to disperse particle and then brought to classifying zone. Owing to the high rotary speed of classifying rotor, the particles are under the centrifugal force produced by the classifying rotor and centripetal force generated from induced draft fan. When the centrifugal force is stronger than the centripetal force, the coarse particles fall down along inside roller. The second air is induced to sieve the coarse material and separate the fine powder that stick on or mixed with the coarse. After the coarse material is discharged from classifier, the over-milled powder are collected by the cyclone and pulse collector.



TECHNICAL CHARACTERISTICS

- ◆ With special design for classifying structure and its high classifying precision, it can block big granular strictly.
- ◆ To get the required product, you can adjust the rotary speed of classifying wheel and air inlet volume.
- ◆ Single vertical rotor with low speed, steady flow field, high efficiency and robust performance.
- ◆ With multi-series structure, it can get products with different size to meet requirements.

HFW PNEUMATIC CLASSIFIER

APPLICATION

Widely used for chemical, minerals (especially applicable for non-mineral products classification, such as calcium carbonate, kaolin quartz, talc, mica, etc), metallurgy, abrasive, ceramics, fire-proof material, medicines, pesticides, food, health supplies, and new materials industries.



TECHNICAL CHARACTERISTICS

Classified products size to D97:3~150 micrometers, adjustable products granularity-level, extremely convenient to replace species.

Classification efficiency (extraction rate) 60%~90%, which is influenced by materials and consistent of the particles meeting the size; with good mobility and high consistent of the particles meeting the size, the materials classification efficiency is high; while without those, the efficiency is low.

High speed and top-cutting precision. Multi-level classification machine can be cascaded, and production of various products size.

Control system employs programmed control to indicate real-time operational status that is easy to operate.

System operation under negative pressure, dust emissions is not exceeding $40\text{mg}/\text{m}^3$ and with noise-eliminator to confirm it is no more than 75dB (A).

FGFC SPIRAL CLASSIFIER

APPLICATION

The spiral classifier is widely used in the metallic ore beneficiation process to classify the particle size of the ore pulp in metallic ore beneficiation. It can also be used for desliming and dewatering in washing operations. It is often used in a closed circuit with a ball mill.



TECHNICAL CHARACTERISTICS

◆ The classifier is classified based on the principle that solid particles have different sizes and specific gravities, and thus have different settling velocities in liquids. The finely ground ore pulp is fed into the water tank from the feed inlet located in the middle of the settling area. The lower end of the inclined installed water tank is the ore pulp classification settling area. The spiral rotates at a low speed and stirs the ore pulp to suspend the light and fine particles on top and flow over the overflow weir and enter the next process. The coarse and heavy particles settle to the bottom of the tank and are conveyed to the discharge port by the spiral and discharged as return sand. Usually, the spiral classifier and the mill form a closed circuit, and the coarse sand is returned to the mill for regrinding.

HYDRAULIC CLASSIFIER

APPLICATION

In the hydraulic classifier, rising water forms turbulent flow in the container. Big particle or big density materials will be concentrated to the bottom of the container and be expelled out from the bottom valve, while small particle or small density materials will overflow from the overflow weir into the overflow tank, achieving the separation of minerals. Hydraulic classifier is mainly used for strict classifying and concentration of glass sand, eliminating of coarse particle and heavy minerals from the sand, recovery of qualified foundry sand, eliminating of oil shale, tin, lead and zinc from the coal, and separation of other materials.

TECHNICAL CHARACTERISTICS

Hydraulic classifier is a kind of hindered (or interfered) settling machine, using rising water to form turbulent flow in the container. The rising water enters the water box in a predetermined flow rate and pressure, and the materials are fed into the equipment through the feeding device. With the same density, big particles settle faster than small particles in the water; With the same particle size, big density particles settle faster than small density particles in the water. Particle sizes in a certain range will keep suspended state under effect of rising water, and this region is called turbulent flow region. Bigger particles or bigger density particles in the materials will settle down through the turbulent flow region, while the smaller particles or smaller density particles will float upward instead of passing through the turbulent flow region, and overflow from the overflow weir into the overflow tank. The manometer is inserted in the slurry in the turbulent flow region to show the pressure of the slurry. The materials will be separated continuously according to the above process.



HINDERED SEDIMENTATION MACHINE

APPLICATION

Strict classification of coarse and fine particles of silica sand or other minerals for particle size control; separation of minerals with specific gravity differences.

WORKING PRINCIPLE

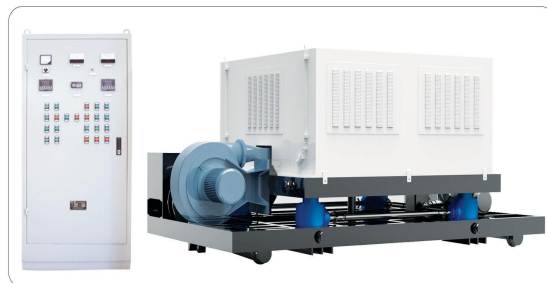
The mixture of sand and water is fed from the upper part through the ore feeding pipe and moves downward in the cylinder under the action of gravity. At the lower part of the cylinder, there is a porous water spray turbulent plate. The newly fed water rises evenly. The rising water flow interacts with the falling solid particles and gradually forms a fluidized bed. Particles of different particle sizes will fall downward or move upward at the hindered settling velocity at this volumetric concentration. With the help of an electronic pressure sensor, the pressure condition of the fluidized bed layer can be measured and the opening of the discharge valve can be automatically adjusted to ensure accurate classification according to the required separation particle size, so that the product has stability and uniformity.



ENERGY-SAVING AND ENVIRONMENTAL PROTECTION DC ELECTROMAGNETIC STIRRER(INSTALL UNDER THE FUR- NACE)

APPLICATION

Environmental protection bottom mounted type direct current electromagnetic stirrer is widely used in the contactless stirring in the non-ferrous metal smelting process, especially for the aluminum alloy melting furnace, holding furnace, alloy furnace, tilting furnace and double chamber furnace, etc. It is an energy saving, high efficiency and environmental protection equipment.



TECHNICAL CHARACTERISTICS

Adapting computer simulation design, this product has the features of unique magnetic circuit, high magnetic intensity and large magnetic penetration depth.

Adapting electrical pure iron material with high permeability and high saturation magnetic induction intensity, reducing the hysteresis loss, and improving the stability of the magnetic field.

The use of advanced varnished insulating and curing processing technology, protecting the coil will not be affected by dust erosion, the coil has a good insulation properties.

07

Magnetic Stirring

AC-AC ELECTROMAGNETIC STIRRER



TECHNICAL CHARACTERISTICS

- ◆ Small installed power, low power consumption
- ◆ High power factor, grid side harmonic current is substantially zero.
- ◆ Intuitive operation, flexible movement, Human Machine interface graphic display, high automatic degree.
- ◆ The parameter is reasonable designed and advanced, with high magnetic field strength and large depth.
- ◆ Lifting, moving both by mechanical transmission, reliable work, long service life, safety, no pollution.

AIR COOLING AC-DC-AC ELECTROMAGNETIC STIRRER

TECHNICAL CHARACTERISTICS

The coil adopts stratified structure, dipped in insulating varnish and dried, with insulation grade H and temperature resistance of 180 degrees.

The air hood completely wraps the coil. By adjusting the size of the air inlet and outlet, the air pressure inside the hood is always maintained at a positive pressure state. The cooling air evenly passes through between the layers, and the heat dissipation efficiency is high and the service life is long.

The coil adopts a low-density design, which greatly reduces the heat generation of the coil. It can reach a thermal equilibrium state at a certain temperature and long-time stirring can be achieved.

◆ There is a air port between the top of the air hood and the shell, which can form a air curtain between them to effectively cut off the heat from the bottom of the furnace, which effectively reduces the coil temperature and improves the working efficiency.



ENERGY-SAVING AND ENVIRONMENTAL PROTECTION PERMANENT MAGNETIC STIRRER(INSTALL UNDER THE FURNACE)

APPLICATION

With the unique magnetic circuit design and special treated alnico, it features with robust performance, high temperature resistance and long service life.

Adopting the alternatively clockwise and anticlockwise rotary with adjustable speed and interval, the solution can be fully stirred with depth of 100-700 mm.

With low running cost and electricity consumption, stirrer for 25 t furnace consumes only 6-8 KW/h.

Matching with the perfect wind-cooling system, the temperature of working system can be controlled within 65 °C .

High efficiency, continuous work and multi-controlling function.

With the advanced remote controlling system, it is of high automation and simple operation.



CENTRIFUGAL CONCENTRATOR

APPLICATION

When the centrifuge rotates at high speed, it generates a great centrifugal force and strengthens the gravity separation process, so that fine mineral particles can be recovered more effectively. Its appearance has successfully solved the full recovery of fine particles. At present, it is widely used in the recovery of ore slimes such as tungsten, tin, and iron, as well as the beneficiation of many elements such as gold, silver, tin, manganese, tungsten, iron, uranium, and rare earths. It is also widely used in the concentration of strongly magnetic minerals such as iron ore.



SPIRAL CONCENTRATOR

TECHNICAL CHARACTERISTICS

Suitable for roughing, cleaning, and scavenging of various minerals, such as rutile, ilmenite, zircon sand, monazite, iron ore, chromite, pyrite, manganese ore, tin ore, tantalum niobium ore, tungsten ore, gold ore, primary copper ore, metal recovery, quartz sand impurity removal and purification, pumice sand separation, vanadium titanium magnetite, garnet, kyanite, sillimanite, andalusite... tailings after flotation of various minerals.



HMB PULSE BAG DUST COLLECTOR

APPLICATION

Induced by the fan and distributed by the diversion, the dust in air is attracted onto surface of filter components while the purified air is discharged to the atmosphere. The dust on filter will be cleaned by electric magnetic valve and then discharged from the valve at the bottom of dust collector.



XGN INCLINED TUBE THICKENER

APPLICATION

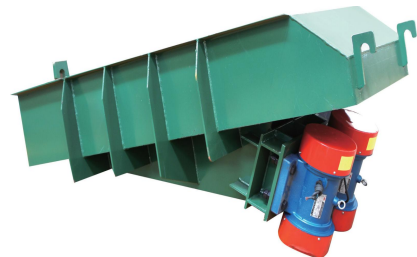
The XGN series high-efficiency inclined tube thickener is a new generation of high-efficiency sedimentation and thickening equipment developed on the basis of the "shallow sedimentation theory". This equipment combines the advantages of ordinary inclined tube thickening tanks and deep cone thickeners: it occupies less land and has high sedimentation efficiency; the discharge concentration is high. In recent years, it has been widely used in metallurgy, mining, chemical industry, ceramics, coal and other industries.



MOTOR VIBRATION FEEDER

APPLICATION

It is used to transport the block, granular and powder material into the hopper from storage tank evenly and continuously. And it can be widely arranged in the lines such as metallurgy, coal, chemical industry, building material, ceramics, grinding and foodstuff etc.



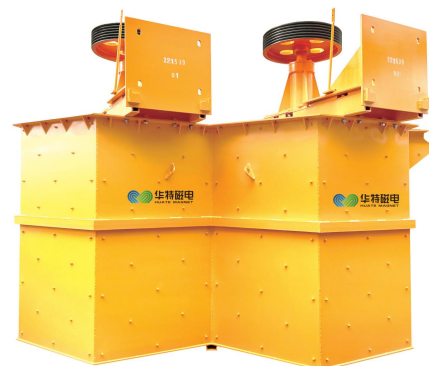
CX SCRUBBING MACHINE

APPLICATION

The scrubbing machine is particularly effective for crushing and dispersing mud masses with big viscosity. It is suitable for processing hard-to-wash ores with few large ore blocks and much mud, creating conditions for subsequent beneficiation processes. The machine is widely used for minerals such as quartz sand, kaolin, potassium feldspar and sodium feldspar.

TECHNICAL CHARACTERISTICS

The motor drives the impeller on the main shaft to rotate through the belt pulley and generates a negative pressure area. The material enters from the inlet. When passing through the negative pressure area, it is fully stirred and scrubbed. Under the powerful stirring action of the impeller, the ore pulp flows at high speed. There is violent collision and friction between mineral particles. The adhered or wrapped impurities on the mineral surface are separated from the mineral surface under the soaking and scrubbing of water. The scrubbed ore pulp is discharged from the overflow port.



JYG-B METAL DETECTOR

APPLICATION

The JYG-B series metal detector adopts dedicated chip digital circuit technology and is suitable for various industries with belt conveyor and processing systems for magnetic and non-magnetic materials.

The ore grade, belt speed, and ore type can be digitally set. It has a self-checking function, which is convenient for adjustment and maintenance. The sensitivity adjustment is intelligent and can effectively detect and eliminate metal foreign objects, which improves product quality and ensures the safe operation of the crushing equipment.



09

Other Equipment

ZPG DISC VACUUM FILTER

APPLICATION

This product is suitable for dehydration of metallic and non-metallic solid and liquid products.



MEDICAL MRI SUPERCONDUCTING MAGNET



10

Medical MRI Superconducting Magnet



1.5T Liquid Helium Zero Volatilization
MRI Superconducting Magnet
(whole body type)



3.0T MRI Superconducting Magnet
(whole body type)



3.0T Portable Multi-Functional MRI
Superconducting Magnet



3.0T Brain-dedicated Magnetic
Resonance Imaging System

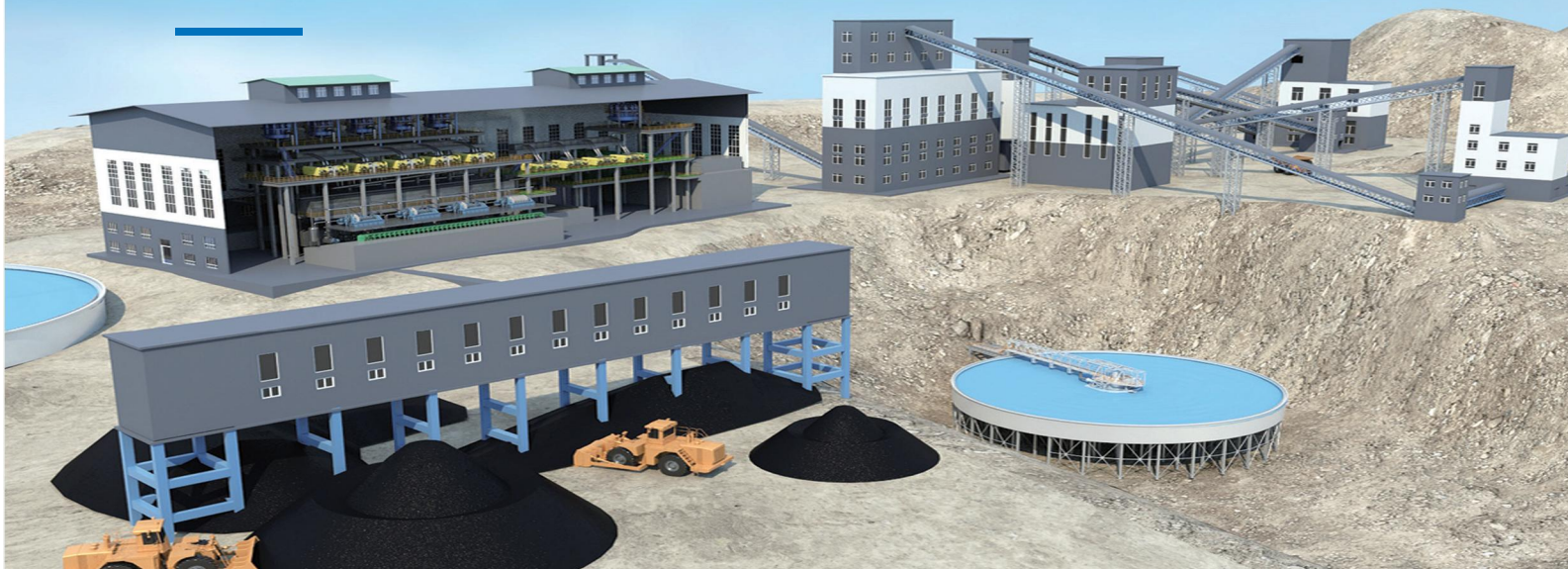


1.5T Neonate-dedicated Magnetic
Resonance Imaging System



3.0T Pediatric Magnetic
Resonance Imaging Complete System

PLANT EPC+M&O GENERAL CONTRACTING SERVICE

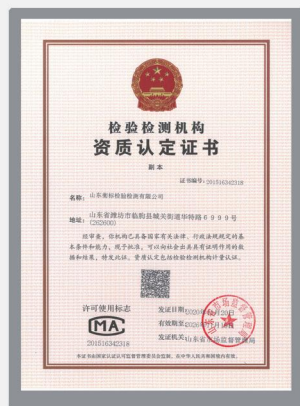


Huate Mineral Processing Engineering Institute is committed to providing "Mining Industry Chain Services", including "Mining Design Services and Research, Complete Equipment Manufacturing and Procurement, Commissioning and Delivery, Production and Operation, and Sales and Marketing Development" for mineral processing plants. We have established overseas offices in many countries such as Australia, Africa, Asia, South America and so on.





SHANDONG HENGBIAO INSPECTION AND TESTING CO., LTD.



Shandong Hengbiao Inspection and Testing Co., Ltd. has a total area of more than 1,800 square meters, fixed assets of CNY 6 million, and 25 professional inspection and testing personnel, including 10 senior title engineers and laboratory technicians. It is a public service platform with national recognition and independent legal responsibility that provides professional inspection and testing, information technology consulting, education and training and other services for the mining industry and metal materials related industry chain. The company operates in accordance with CNAS-CL01 (Testing and Calibration Laboratory Accreditation Criteria), has chemical analysis room, instrument analysis room, material testing room, physical performance testing room, etc., and is equipped with more than 300 sets of main testing equipment and supporting facilities including American Thermo Fisher X-ray fluorescence spectrometer and atomic absorption spectrometer, inductively coupled plasma atomic emission spectrometer, carbon sulfur analyzer, spectrophotometer, direct reading spectrometer, impact testing machine, universal testing machine, etc.



Heating Room



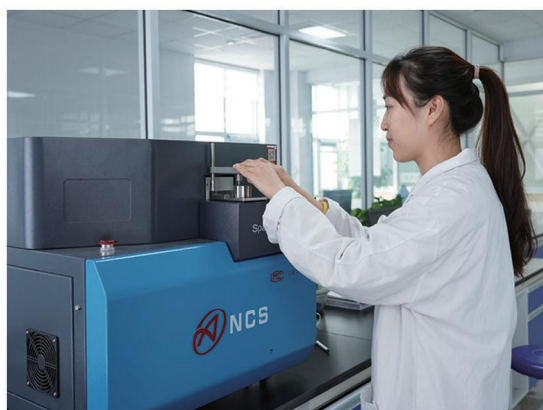
Weighing Room



X Fluorescence Spectroscopy Room



ICP Room



IDirect Reading Spark Spectrometer



Titration Room



Small Instrument Room

SINO-GERMAN TECHNOLOGY DEVELOPMENT KEY LABORATORY OF ELECTRO-MAGNETIC SEPARATION AND MINERAL PROCESSING WITH ARTIFICIAL INTELLIGENCE



The laboratory was founded in 2004. In 2019, it was re-expanded and put into use in accordance with the national laboratory standards, and jointly built a laboratory focused on the research and development of intelligent mineral processing technology with RWTH Aachen University in Germany. By introducing German intelligent sensor sorting technology as well as combining superconducting magnet application technology and high intensity magnetic application technology, it is committed to providing scientific guidance, application demonstration and backbone talent training for the global mineral processing and sorting industry.

The laboratory covers an area of 8,600 square meters and currently has 120 full-time and part-time research staff, including 36 with senior or higher professional titles. It is equipped with over 300 various global leading experimental devices and analytical instruments such as sensor sorting machines, superconducting magnetic, electromagnetic and permanent magnetic wet/dry separators that can generate up to 80,000GS magnetic intensity. It is one of the largest and most comprehensive professional laboratories for mineral processing and sorting around the world.



Sensor Based Sorter Test Area



Cryogenic Superconducting Magnetic Separation Testing Area

GLOBAL LEADING MINERAL PROCESSING LABORATORY



Wet Strongly Magnetic Separation Testing Area



Continuous Test Area



Dry Magnetic Separation Testing Area



Electromagnetic Dry Powder Testing Area



Sample Area



Professional Technical
Service Team



Solution Feedback
within 24 hours



On-Site Servicing
within 48 Hours

PROFESSION · QUALITY · SERVICE

APPLICATION SITE



APPLICATION SITE



PARTNERS





OUR STRENGTH

MINERAL PROCESSING TECHNOLOGY COMPLETE SET SOLUTION
GLOBALLY LEADING SERVICE PROVIDER OF MAGNETIC APPLICATION SYSTEM

1000⁺

MORE THAN
1000 EMPLOYEES

350,000⁺m²

MANUFACTURING
WORKSHOP PLANT PARK

30,000⁺

GLOBAL CUSTOMERS SERVED



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GLOBAL LEADING MAGNETIC SEPARATION & MINERAL PROCESSING EXPERT
— SINCE 1993 —