

MECHANICAL PULVERIZER

机械粉碎机



研发
R&D



生产
Production



销售
Sales



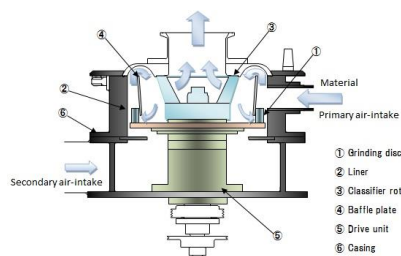
售后
After sales



兮然科技(江苏)有限公司

XiRan XiRan Technology (Jiangsu) Co., Ltd.

设备原理 Equipment principle



通过高速旋转刀盘产生的气流以及与内衬之间的撞击粉碎原料。
通过内藏分级轮的转速调整粉碎得到希望粒度的产品。
粉碎过程中的循环空气可抑制产生热量，
特别适合于食品等对温度有要求的原料的粉碎。

The raw materials are crushed by the air flow generated by the high-speed rotating cutter head and the impact with the liner.
The product with desired particle size can be obtained by adjusting the rotation speed of the internal grading wheel.
The circulating air in the grinding process can suppress the generation of heat,
It is especially suitable for grinding raw materials with temperature requirements such as food.

设备名：机械粉碎机

用途：原材料超细粉碎用

型号：XRV-200 XRV-300 XRV-400 XRV-600 XRV-900

磨盘径：φ200mm φ300mm φ400mm φ600mm φ900mm

Equipment name：Mechanical Pulverizer

Use：For superfine grinding of raw materials

Model：XRV-200 XRV-300 XRV-400 XRV-600 XRV-900

Grinding disc diameter：φ200mm φ300mm φ400mm φ600mm φ900mm



XRV-200



XRV-400



XRV-300



XRV-900



XRV-600

【应用领域】

化学品：电池材料 粉体涂料 硅石 颜料 树脂 化纤纤维等

食品：淀粉 色素 砂糖 食盐 脱脂大豆 米粉 蕎麦等

医药品：全粉末材料

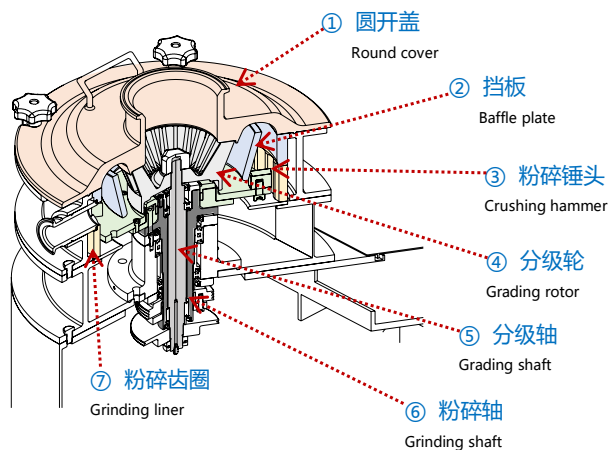
【Application】

Chemicals：Battery material Powder coating Silica Pigment Resin Chemical fiber etc.

Food：Starch Food coloring Sugar Salt Defatted soybean Rice flour Buckwheat etc.

Pharmaceutical products：All powder materials

设备结构 Equipment structure

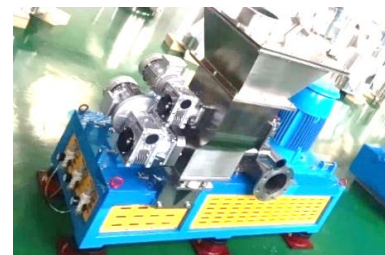
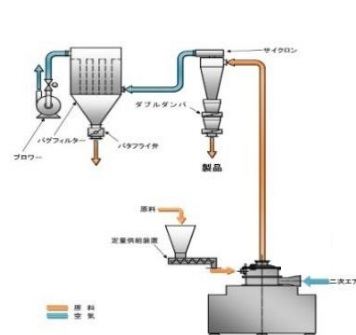


- ❖ 利用高效分级功能防止过粉碎
- ❖ 粉碎粒径可控,产品分布均匀集中
- ❖ 粉碎物料过程不接触金属异物且不产生任何金属异物
- ❖ 专业的养料装置、防架桥装置、螺杆输送+气力输送

- ❖ use high-efficiency classification function to prevent over crushing
- ❖ the particle size of powder is controllable, and the product distribution is uniform
- ❖ the material crushing process does not contact with metal foreign matters and does not produce any metal foreign matters
- ❖ professional feeding device, anti bridging device, screw conveying + pneumatic conveying

通过引风机负压,气流从下部经过粉碎部产生回旋流,再穿过分级轮转子。可通过粉碎盘的转速调整处理量和粒度。

Through the negative pressure of the induced draft fan, the airflow flows from the lower part through the pulverizing part to generate a swirling flow, And then passes through the rotor of the grading wheel. The rotation speed of the comminutable disc can adjust the processing capacity and particle size.



线速度是120m/s 国内制造厂的2倍!
成为代替气流粉碎机的机器!

Circumferential velocity of 120m/sec.,
double that of domestic manufacturers!
Equipment that can replace airflow pulverizers!

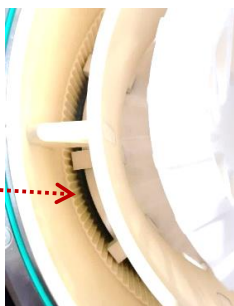
型号 Model	XRV-200	XRV-300	XRV-400	XRV-600	XRV-900
粉碎电机/转速 Motor/Disk speed	3.7kW 13,000r/min	11kW 8,500r/min	22kW 7,000r/min	45kW 3,600r/min	110kW 2,200r/min
分级电机/转速 Motor/Wheel speed	0.75kW 10,000r/min	2.2kW 7,300r/min	5.5kW 6,000r/min	7.5kW 3,000r/min	22kW 2,200r/min
需要风量 Required airflow	7m ³ /min	15m ³ /min	30m ³ /min	60m ³ /min	100m ³ /min
机器尺寸 Machine size	W1,000×L500×H800mm	W1,350×L600×H1,000mm	W1,800×L750×H1,300mm	W2,300×L900×H1,300mm	W2530×L1400×H2700mm
设备重量 Equipment weight	600kg	700kg	1,000kg	2,000kg	6,000kg

Equipment features

Grinding of single crystal high nickel raw materials!

Evolution of liner

Corresponding single crystal
raw material liner

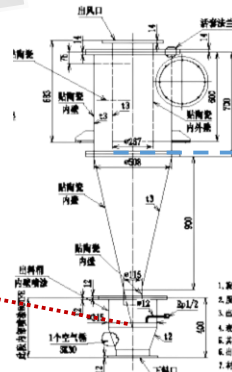


其他公司不具备的优点和特长

旋风分离器的进化



Material out of barrel Excellent separation effect!



Polyurethane



陶瓷片内衬 Ceramic chip lining

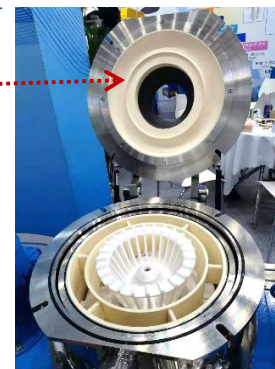


耐磨聚氨酯内衬

Wear resistant polyurethane lining

迅速落回粉碎盘,达到尖锐的粒度分布曲线。

Quickly fall back to the grinding disc to achieve a sharp particle size distribution curve.



Advantage of equipment

Technological innovation of lithium hydroxide comminution



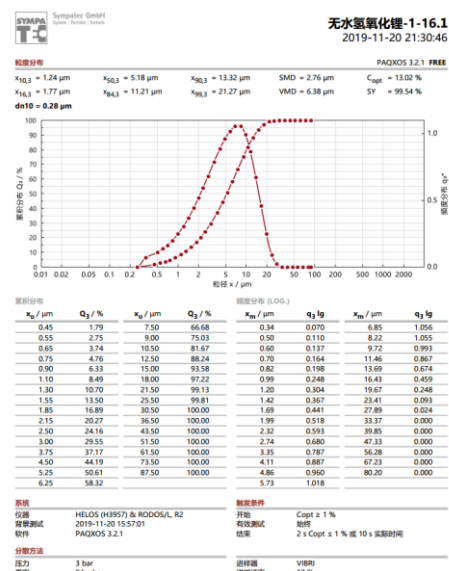
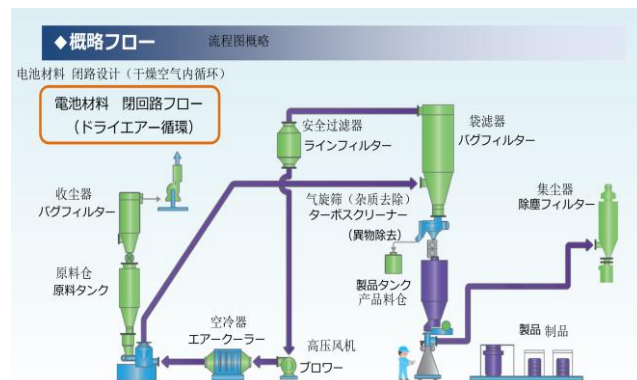
主机为全不锈钢!
Equipment body is all stainless steel

Advantages : Low energy consumption, High energy yield, Stable operation time
and reliable particle size distribution
Capacity : 500 ~ 700kg/hr

- ❖ Processing of highly corrosive materials
- ❖ Medicine, Food, Fine chemicals

❖ Anti corrosion & Sanitary!

- ❖ It can be used as closed and open circuit system.



异物混入防止对策 Measures to prevent contamination

① 料斗内原料接粉部 特氟龙涂层

① Raw material powder receiving part in hopper
teflon coating.



③ 原料投入部管道内衬氧化铝

③ Pipeline of raw material input department
lined with alumina.



④ 主机内原料接粉部 内衬氧化铝

④ Raw material powder receiving
section in the main machine
lined with alumina.



⑤ 粉碎后管道内衬氧化铝

⑤ After crushing, the pipeline is lined with alumina.



⑥ 管道观察部位可用耐高温 强化玻璃制造

⑥ The observation part of the pipeline
can be high-temperature resistant
reinforced glass manufacturing.



② 陶瓷磨盘

② Ceramic grinding rotor



课题研究 Topics

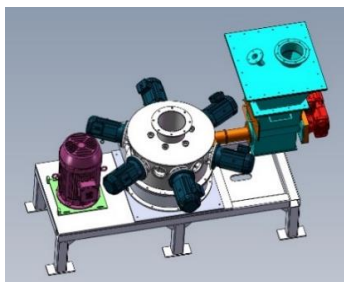
要求 磷酸铁锂的比重很低，所以需要加强分级能力

Problem Lithium iron phosphate is light in specific gravity,
so we need to enhance the classification capacity.

XRV-600多头分级轮 XRV-600 Multi head grading wheel

新开发! New Development!

没有过粉碎
细小的颗粒被立即
分类并送走
No overgrinding,
fines are immediately
separated and sent out.



XRV-600多头分级轮 Multi head grading wheel

Topics

XRV-600C 气势恢宏的首次亮相!

XRV-600C An imposing debut!



世界上最大等级的陶瓷粉碎盘!!

World's largest class ceramic grinding rotor!



要求 防止粉碎刀盘磨损的措施

Problem Countermeasures against wear of grinding rotors.

对于磨损的根本解决方案!

The fundamental solution to wear!

中国首例 氮化硅粉碎盘 China's first silicon nitride grinding rotor.

新开发! New Development!

氧化铝和氧化锆是

目前粉碎盘的主流 · ·

The current mainstream is alumina
and zirconia grinding rotors...



中国首例氮化硅粉碎盘研究开发成功! 我们在韩国国内公司有丰富的业绩!

China's first silicon nitride rotor, We succeeded in our R&D!
We have rich achievements in Korean domestic companies!

- ❖ 出类拔萃的密度!
- ❖ 出类拔萃的硬度!
- ❖ Outstanding density!
- ❖ Outstanding hardness!



【陶瓷材质】

Ceramic material

氧化铝 Al₂O₃

Alumina

氧化锆 ZrO₂

Zirconia



碳化硅 SiC

Silicon carbide

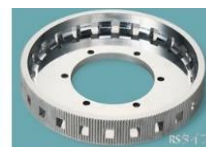
氮化硅 Si₃N₄

Silicon nitride



不锈钢SUS304 SUS316系列

Stainless steel SUS304 SUS316 series



试验案例

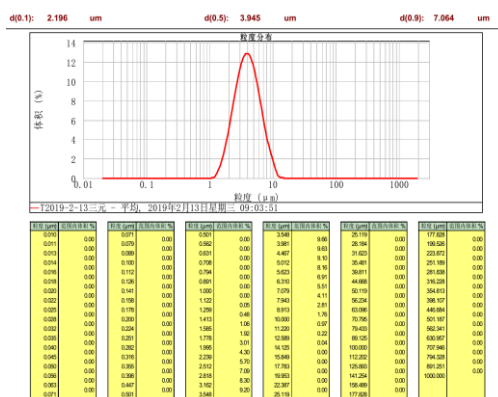
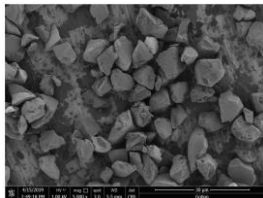
Experimental cases

正极高镍材料粉碎测试

Crushing test of cathode high nickel material

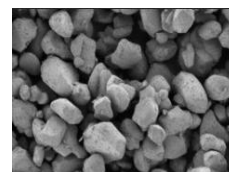
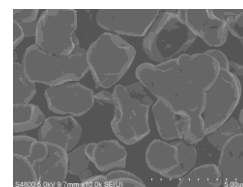
粉碎后粒径: D50 3.945μm

Particle size after crushing: D50 3.945 μm



正极材料粉碎SEM报告

SEM report on crushing of cathode material

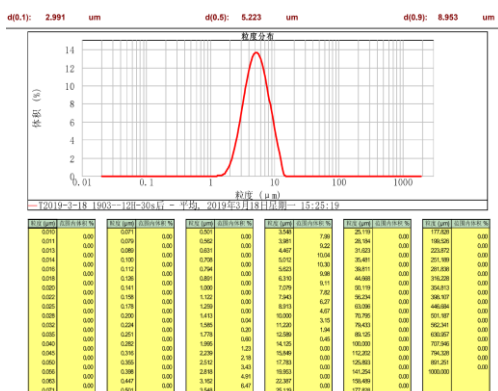
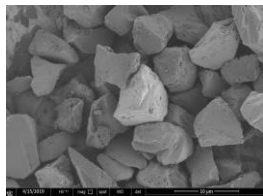


正极钴酸锂粉碎测试

Crushing test of cathode lithium cobaltate

粉碎后粒径: D50 5.223μm

Particle size after crushing: D50 5.223 μm





高新技术企业
High-tech enterprise



高新技术产品认定
High-tech product identification



中国科学院苏州纳米研究所产学研基地
Suzhou Institute of Nanotechnology, Chinese Academy
of Sciences, Designation of Joint Research Centers



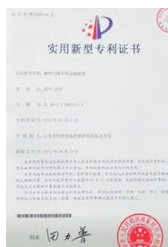
中南大学合作设立博士生工作站
Collaboration with Central South University
to establish a doctoral internship



ISO9001认证
ISO9001 certification



ISO14001认证
ISO14001 certification



专利证书
Patent certificate

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欧洲CE认证
CE certification in Europe



韩国KCs认证
KCs certification in Korea



进出口业务许可证
License of import and export business



防爆设备安装认证
Explosion-proof equipment
installation certification



防爆设备维护认证
Explosion-proof equipment
maintenance certification

锂电设备 粉体机器

