

## 在线检测智能化气流粉碎系统 On-line Test Intelligent Jet Mill System

### 特点

在线检测智能化气流粉碎系统是在本公司原有的气流粉碎机技术基础上，结合在线检测技术和自动控制技术的一项高科技新产品。

物料在气流粉碎室内的数个喷嘴产生的高速气流冲击下，相互碰撞、相互摩擦、瞬间破裂，实现超细粉碎。通过内置分级轮分选，合格产品随气流排出。进入旋风分离器、除尘器收集，粗颗粒返回粉碎室继续粉碎。整个粉碎过程的产品粒度状况由在线检测仪连续检测监控、显示并记录，控制系统根据粒度的波动变化自动调整粉碎工艺参数，使产品质量、系统性能达到最大化。

### 工作原理

所需即所得，只要您输入粒度要求，系统可以自动调整工艺参数至最佳值。

实时跟踪、监测物料的粒度状况，并提供多种显示界面，对过程中粒度波动及时自动调整和补偿。

自动生成粒度报告。

只需稍作调整，可用作离线粒度测试仪。



### PRINCIPLE

On-line inspection jet mill is a new high-technology product based on the original technology of pulverizers in our company, combining online inspection technology with automatic control technology.

The high-speed airflow impact arising from several nozzles in the pneumatic pulverizing chamber enables the materials to collide and abrade each other, fracture instantly and finally achieve the purpose of superfine pulverization. After being sorted from the classifier, the conformable products will be discharged with airflow and fed into the cyclone separator and then collected by the collector. The coarse particles are fed back to the coarse crusher for continuous pulverization. The situation of the particle

size in the whole process is constantly inspected, shown and recorded by online inspector. According to the fluctuation of the particle size, the controlling system automatically regulates the milling parameter so as to make the quality of products and function of the system as perfect as possible.

### FEATURES

The on-line test system can autoregulate the parameter to a best value according to your input mesh data.

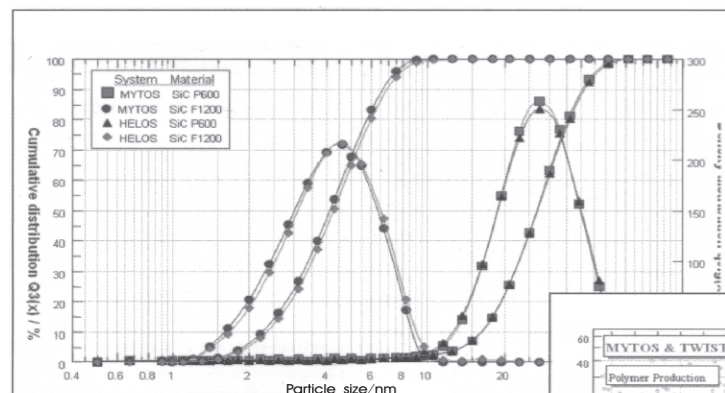
The particle mesh condition tracking and inspecting can be referred from the display interface. The granularity rebound data can be adjusted in the processing.

The granularity mesh report can be made up automatically.

The unit can be used as an off-line granularity tester with little adjustment.

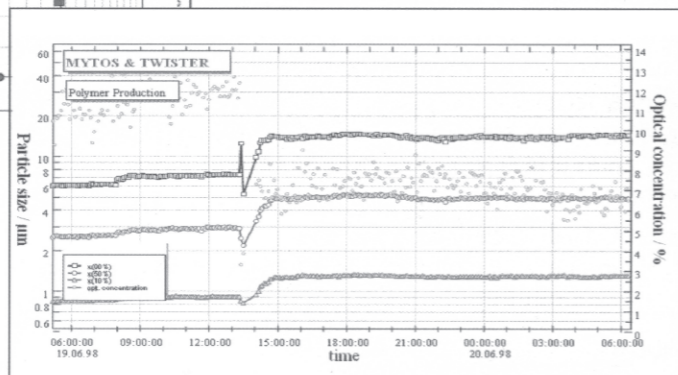
在线检测结果与离线检测结果具有高度的重合性（见左图），因此在线生成的测试报告可作为产品的化验报告使用。

The on-line test result is superposition with off-line test data (see left chart). The record of on-line test report can be used as product analysis report.



产品的粒度变化实时显示，非常直观（见右图），在控制软件的作用下，当前粒度不断向目标粒度逼近。

It is obvious that product particle varies with time (see right chart). Under the control of software, the material particle size keeps approaching to the target size.



## 深冷气流粉碎系统 (提供深冷粉碎加工服务) Deep-cold Jet Milling System (Offer the Tolling process service of deep-cold pulverizing)



grains will enter the grading wheel and be blasted to cyclone separator and collector. They cannot enter the grading wheel and will be swirled back into the milling chamber to further milling. The cooled gas will return to the compressor and will be compressed for recycling.

### FEATURES

The cold source forms a closed circuit and therefore causes little energy loss. The cooling method is green as no polluting coolant is used. The milling temperature can be brought down to as low as  $-140^{\circ}\text{C}$ , and the grinding size reaches  $d_{97}=2\mu\text{m}\sim 15\mu\text{m}$ . The milling temperature is controllable. It can be adjusted to the best milling temperature of a particular material to lower energy consumption. Inert gas can be used as media to achieve integrated effect of low temperature, anti-explosion and anti-oxidation.

### APPLICATION SCOPE

The system is applicable to the materials that cannot be pulverized in normal temperature. It can be widely used in such fields as traditional Chinese medicine, chemical industry, plastic and rubber industries.

### 工作原理

压缩气体通过制冷系统，将气体温度降至 $-120^{\circ}\text{C}\sim -140^{\circ}\text{C}$ ，用于气流粉碎。0.8MPa的研磨介质通过制冷系统使其温度降至 $-120^{\circ}\text{C}\sim -140^{\circ}\text{C}$ ，实现物料在深冷状态下的超细气流粉碎。物料通过冷却呈低温脆化易粉碎状态后，进入粉碎室，冷却后的压缩气体通过特殊配置的超音速喷嘴向粉碎室高速喷射，物料在超音速喷射流中加速，并在喷嘴交汇处反复冲击、碰撞，达到粉碎效果。

### 特点

冷源形成一个闭路系统能得到充分的运用，省能耗。

制冷方式为“绿色”制冷方式，没有运用对环境造成危害的制冷剂，粉碎温度可达到 $-140^{\circ}\text{C}$ ，粉碎细度可达到 $d_{97}=2\mu\text{m}\sim 15\mu\text{m}$ 。

粉碎时温度可控，能根据物料的脆化温度随机调节，选择最佳粉碎温度，降低能耗。

可以用惰性气体作为研磨介质实现低温、防爆、防氧化综合效果。

### 适用范围

该系统适用在常温下具有韧性、粘性、强纤维性的物料，广泛用于中药、西药、农药、化工、塑料、橡胶等多个行业的超细粉碎。

### PRINCIPLE

The compressed gas is cooled down to  $-120\sim -140$  through the refrigeration system, it can bring the temperature of the 0.8Mpa milling media down to  $-120\sim -140$ ; through the refrigeration system, thus render the superfine pneumatic pulverization possible under deep cold conditions. The materials, when cooled to breakable state, are fed to the milling chamber, where the cooled compressed gas is injected at a high speed by means of special ultrasonic nozzles. Therefore, the materials will be ground by being accelerated, impacted and collided repeatedly in the midst of ultrasonic injection flow. The ground materials will be brought together with up flow to the grading chamber. The thinner

参数 Parameter	型号 Model	QSF-260	QSF-400	QSF-600
生产能力(kg/h) Capacity(kg/h)		15~80	30~180	80~300
气体耗量( $\text{m}^3/\text{min}$ ) Air Consumption( $\text{m}^3/\text{min}$ )		6	10	20
工作压力(Mpa) Working Pressure(Mpa)		0.75~0.85	0.75~0.85	0.75~0.85
进料粒径(目) Feed Diameter(mesh)		60~325	60~325	60~325
粉碎细度( $\mu\text{m}$ ) Grinding Size( $\mu\text{m}$ )		0.5~30	0.5~30	0.5~30