

XSG Series High-speed Rotating Dryer XSG 系列快速旋转闪蒸干燥机

概述

XSG系列旋转闪蒸干燥机是我公司在引进吸收国外先进技术的基础上，自行开发成功的新型干燥设备。该机技术先进，设计合理，结构紧凑，适用范围广，生产能力大，产品质量好，效率高，节能，在一个设备内干燥、粉碎、筛分一次完成，消除环境污染，整机性能达到国际先进水平。闪蒸干燥机具有原来的轴承感应冷却（水冷却），设计用油泵联接送油润滑、冷却轴承，密封装置性能优异，在主轴设计上采用半环式，电机利用调速电机，传递平稳、噪声小，使用寿命是同类产品的10倍。

Description

XSG series roasting drier is developed by our company, and its technology is based on advance technology adored. The machine is including many superiority, such as reasonable design, compact stuction, widely utilization, grrat productive capacity, good quality, high effect and save energy, Drying, grinding and sieve are completed in one equipment in once time. It eliminate pollution and the technolgy is reached international advance level.



原理

热空气切线进去干燥器底部，在搅拌器带动下形成强有力的旋转风场。膏状物料由螺旋加料器进入干燥器内，在高速旋转搅拌桨的强烈作用下，物料受撞击、摩擦及剪切力的作用下得到分散，块状物料迅速粉碎，与热空气充分接触、受热、干燥。脱水后的干物料随热气流上升，分级环将大颗粒截留，小颗粒从环中心排出干燥器外，由旋风分离器和除尘器回收，未干透或大块物料受离心力作用甩向器壁，重新落到底部被粉碎干燥。

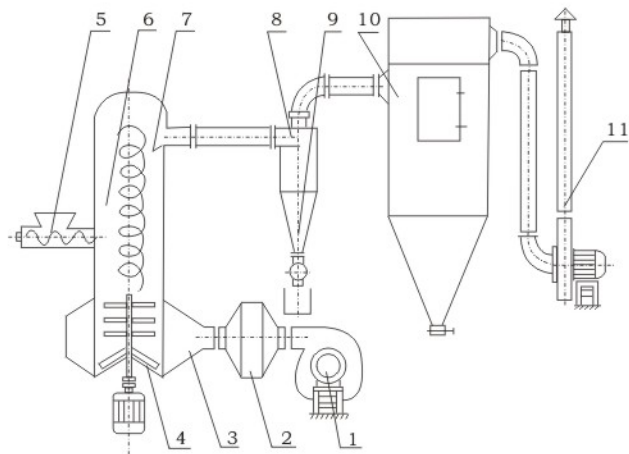
Principle

The hot air enters into the bottom of the drier in tangent direction. Under the driving of the stirrer, a powerful rotating wind field is formed. The paste state materials enter into the drier through the screw charger. Under the powerful function of the stirring vanes at high-speed rotation, the materials are distributed under the function of strike, friction and shearing force. The block state materials will soon be smashed and contact the hot air fully and the materials are heated and dried. The dried materials after the dewatering will go up with the heat air flow. The step rings will stop and keep the big particles. Small particles will be discharged out of the drier from the ring center and will be restored by the whirl separator and dust remover. The not-fully-dried or big piece materials will be sent to the wall of the equipment by centrifugal force function and be smashed again after they fall down to the bottom.

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结构示意图
Schematic of structure



- | | |
|-----------|---------------------------------|
| 1. 送风机 | 1. blower |
| 2. 加热器 | 2. heater |
| 3. 空气分配器 | 3. air distributor |
| 4. 搅拌机 | 4. stirrer |
| 5. 螺旋加料器 | 5. screw particle adding device |
| 6. 干燥器 | 6. drier |
| 7. 分级器 | 7. sorter |
| 8. 旋风分离器 | 8. whirl separator |
| 9. 星形卸料器 | 9. star shaped dust remover |
| 10. 布袋除尘器 | 10. cloth bag dust remover |
| 11. 引风机 | 11. induced draft fan |

特点

- 旋流、流化、喷动及粉碎分级技术的有机结合。
- 设备紧凑, 体积小, 生产效率高, 连续生产, 实现了“小设备, 大生产”。
- 干燥强度大, 能耗低, 热效率可达70%以上。
- 物料停留时间短, 成品质量好, 可用于热敏性物料干燥。
- 负压或微负压操作, 密闭性好, 效率高, 消除环境污染。

Features

- This machine combines the whirl technology with the fluidity, ejection and smashing step technologies.
- The equipment is compact and small in size, high in production efficiency and continuous in the production. It has realized that "a small equipment can perform the large production".
- The drying capacity for this machine is big but its energy consumption is low. Its heat efficiency can go up to more than 70%.
- The material stay time is very short. The quality of the final products is very good. The machine can be used for drying the heat sensitive materials.
- For the negative pressure or the micro-negative pressure operation, the machine is good for its tightness and high in the efficiency so as to eliminate the environmental pollution.

技术参数 Technical parameters

型号Type	筒体直径(mm) Barrel diameter	主机尺寸(mm) Main machine dimensions	主机功率(kw) Main machine power	处理风量(m ³ /h) Treatment wind capacity	蒸发水量(kg/h) Water evaporation quantity
XSG-2	200	250 × 2800	5-9	300-800	10-20
XSG-3	300	400 × 3300	8-15	600-1500	20-50
XSG-4	400	500 × 3500	10-17.5	1250-2500	25-70
XSG-5	500	600 × 4000	12-24	1500-4000	30-100
XSG-6	600	700 × 4200	20-29	2500-5000	40-200
XSG-8	800	900 × 4600	24-35	3000-8000	60-600
XSG-10	1000	1100 × 5000	40-62	5000-12500	100-1000
XSG-12	1200	1300 × 5200	50-89	10000-20000	150-1300
XSG-14	1400	1500 × 5400	60-105	14000-27000	200-1600
XSG-16	1600	1700 × 6000	70-135	18700-36000	250-2000
XSG-20	2000	2100 × 6800		28200-56500	1000-1500

注: 部分参数设计时视不同物料有所调整, 以设计为准。

干燥实例 Dried samples

类别 Category	物料名称 Name of raw material	初水分 (%) Initial water content	终水分 (%) Final water content	使用设备型号 The use of device models	
农药和农药中间体	草甘膦	12	0.02	XSG-6, XSG-8, XSG-12, XSG-14	
	阿特拉津	40	1	XSG-6, XSG-8, XSG-12, XSG-14	
	莠灭津	35	1	XSG-6, XSG-8	
	扫螨净	20	1	XSG-6, XSG-8	
	阿维菌素	80	15	XSG-12, XSG-14	
	代森锰锌	30	1	XSG-10, XSG-12	
	精喹禾灵	40(湿份为:酒精或甲苯)	1	XSG-4	
	三环唑	28	1	XSG-4	
	甲酸钙	12	1	XSG-6	
	杀虫单	18	1	XSG-6, XSG-8, XSG-10	
	巴丹	20	1	XSG-6, XSG-8,	
	氢氧化铜	35	1	XSG-8	
	中间体	间苯二甲腈	25	1	XSG-6, XSG-10
		二羟基化合物	12	1	XSG-4
咪唑烷		25~30	0.2	XSG-10	
盐化合物单质类	活性碳酸钙	22	3	XSG-12	
	纳米碳酸钙	40	1	XSG-10	
	普通碳酸钙	20	2	XSG-12	
	碳酸锌	65	1	XSG-10	
	碳酸铜	10	1	XSG-8, XSG-10	
	磷酸轻钙	40	1.8	XSG-14	
	碳酸氢钠	8	0.5	XSG-6	
	氯化钙	12	2	XSG-8	
	硫酸钙	12	2	XSG-8	
	硫酸钡	20	0.5	XSG-8	
	焦亚硫酸钠	8	0.5	XSG-6	
	有机盐	4A沸石	28	2	XSG-8, XSG-12, XSG-14
		硫酸钠	20	3	XSG-8
		硬脂酸锌	40	0.5	XSG-8, XSG-10
		硬脂酸镁	40	5	XSG-8
		硬脂酸钙	40	2	XSG-8
		三盐基硫酸铅	25	0.5	XSG-8
		二盐基硫酸铅	25	0.5	XSG-8
		化合物和单质	碳化硅	26~30	1
	硅粉		30	1	XSG-10
	白炭黑		82	4~6	XSG-10
	炭黑		70	3	XSG-10
活性炭	40		0.5	XSG-8	
纳米氧化锌	55		4	XSG-4	
氧化铝			0.5	XSG-4	
氧化锆	80		1	XSG-8	
二氧化硅	25		0.2	XSG-4	
氧化铁红				XSG-8	
其它	氢氧化铝		50~60	0.3	XSG-10
	氢氧化铝	85~87	0.3	XSG-10	
	高岭土	26~30	6	XSG-10	
	氯醚树脂	40~45	0.3	XSG-14	
颜料、染料和中间体	酞青蓝	40	0.5	XSG-10	
	活性黄	60	3	XSG-8	
	碱性嫩黄	40	0.3	XSG-8	
	吡啶酮	25~30	0.3	XSG-8	
	H酸	40~50	1	XSG-14	
	J酸	45	1	XSG-10	
	吐氏酸	15	1	XSG-6	