

LPG Series High Speed Centrifugal Spray Dryer LPG 系列高速离心喷雾干燥机



概述 Description

离心喷雾干燥是液体工艺成形和干燥工业中应用最广泛的工艺。最适用于从溶液、乳液、悬浮液和糊状液体原料中生成粉状、颗粒状固体产品。因此,当成品的颗粒大小分布、残留水份含量、堆积密度和颗粒形状必须符合精确的标准时,喷雾干燥是一道十分理想的工艺。

Spray drying is the technology most widely used in the liquid technology shaping and in the drying industry. The drying technology is most suitable for producing solid powder or particle products from liquid materials, such as: solution, emulsion, suspension and pumpable paste states. For this reason, when the particle size and distribution of the final products, residual water contents, mass density and the particle shape must meet the precise standard, spray drying is one of the most desired technologies.

原理 Principle

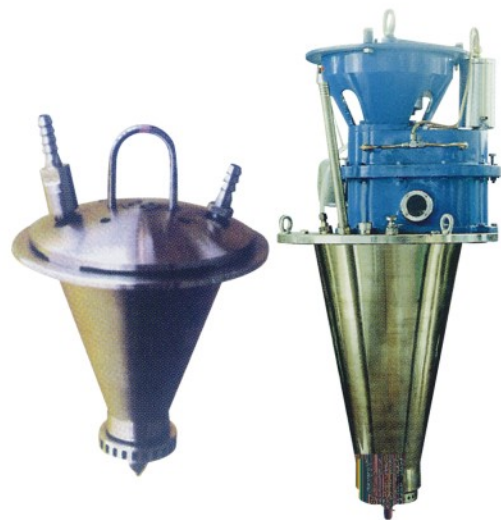
空气经过过滤和加热,进入干燥器顶部空气分配器,热空气呈螺旋状均匀地进入干燥室。料液经塔体顶部的高速离心雾化器,(旋转)喷雾成极细微的雾状液珠,与热空气并流接触,在极短的时间内可干燥为成品。成品连续地由干燥塔底部和旋风分离器中输出,废气由风机排空。

After the air been filtered and heated the air enters into the air distributor on the top of the dryer. The hot air enters into the drying room in the spiral form and uniformly. Passing through the high-speed centrifugal sprayer on the top of the tower, the material liquid will rotate and be sprayed into the extremely fine mist liquid beads. Through the very short time of contacting the heat air, the materials can be dried into the final products. The final products will be discharged continuously from the bottom of the drying tower and from the cyclones. The waste gas will be discharged from blower.

特点 Features

- 干燥速度快,料液经雾化后,表面积大大增加,在热风气流中,瞬间就可蒸发95%~98%的水份,完成干燥时间仅需数秒钟,特别适用于热敏性物料的干燥。
- 产品具有良好的均匀度、流动性和溶解性、产品纯度高、质量好。
- 生产过程简化,操作控制方便。对于湿含量40~60%(特殊物料可达90%)的液体能一次干燥成粉粒产品,干燥后不需粉碎和筛选,减少生产工序,提高产品纯度。对产品粒径、松密度、水份,在一定范围内可通过改变操作条件进行调整,控制和管理都很方便。

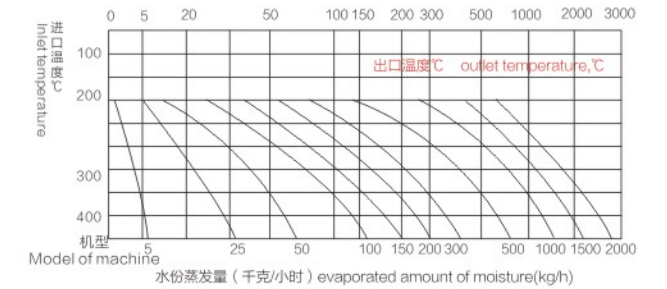
- The drying speed is high when the material liquid is atomized, the surface area of the material will increase greatly. In the hot-air flow, 95%~98% of water can be evaporated at a moment. The time of completing the drying is only several seconds. This is especially suitable for drying the heat sensitive materials
- Its final products own the good uniformity, flow ability & solubility. And the final products are high in purity and good in quality.
- The production procedures are simple and the operation and control are easy. The liquid with moisture contents of 40~60% (for special materials, the contents might be up to 90%) can be dried into the powder or particle products once a time. After the drying process, there is no need for smashing and sorting, so as to reduce the operation procedures in the production and to enhance the product purity. The product particle diameter, looseness and water contents can be adjusted through changing the operation condition within a certain range. It is very convenient to carry out control and management.



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水份蒸发曲线 Evaporated curve of moisture



应用 Application

化学工业: 氟化钠(钾)、碱性染料颜料、染料中间体、复合肥、甲醛硅酸、催化剂、硫酸剂、氨基酸、白炭黑等。
塑料树脂: AB, ABS乳液、尿醛树脂、酚醛树脂、密胺(脲)甲醛树脂、聚乙烯、聚氯乙烯等。
食品工业: 富脂奶粉、酪朊、可可奶粉、代乳粉、猪血粉、蛋清(黄)等。
食物及植物: 燕麦、鸡汁、咖啡、速溶茶、调味香料肉、蛋白质、大豆、花生蛋白质、水解物等。
糖类: 玉米浆、玉米淀粉、葡萄糖、果胶、麦芽糖、山梨酸钾等。
陶瓷、氧化铝、瓷砖材料、氧化镁、滑石粉等。

- Chemical Industry: Sodium fluoride (potassium), alkaline dyestuff and pigment, dyestuff intermediate, compound fertilizer, formic silicic acid, catalyst, sulphuric acid agent, amino acid, white carbon and so on.
- Plastics and resin: AB, ABS emulsion, uric acid resin, phenolic aldehyde resin, urea-formaldehyde resin, formaldehyde resin, polythene, polychloroprene and etc.
- Food Industry: Fatty milk powder, protein, coco milk powder, substitute milk powder, egg white (yolk), food and plant, oats, chicken juice, coffee, instant dissolvable tea, seasoning meat, protein, soybean, peanut protein, hydrolysate and so forth.

