Detailed Product Description

We provide complete technology for automatic plaster of paris production

1. Brief Introduction of Gypsum Powder
The natural gypsum powder includes anhydrous gypsum and CaSO4.2H2O, if you want to commercialize the gypsum powder, you should adopt the CaSO4.2H2O, after removing part of water by heating, it will become CaSO4.1/2 H2O. CaSO4.1/2 H2O is the final product which you can use it to produce gypsum board other gypsum product. After calcining, CaSO4.1/2H2O is widely used in paper faced gypsum board and gypsum block and painting gypsum powder and model.
Natural gypsum generally includes dehydrate gypsum and anhydrous gypsum. In order to get the valuable materials, generally, we get semi-hydrated gypsum through heating the dehydrate gypsum.
The calcined semi-hydrated gypsum can widely be used for plasterboard, decoration board, gypsum block, stucco gypsum, and molding gypsum etc.
Content of CaSO4·2H2O in gypsum mine > 80%.

Gypsum board production line adopts the German GRENZEBACH BSH and GYPTECH company, Lafarge, the United States INC companies and domestic well-known enterprises Kitashinchi Group, Taihe Group advanced technology. We adopts the horizontal flow, vertical airflow heat exchanger heating system, the raw material feeding system and edge cutting and edge sealing and edge grinding and recycling system and stacking system are all controlled by computer. All the whole line is full automation.

Gypsum powder production line adopts boiling furnace, high-voltage electrostatic dust removing and other advanced equipment, it is energy-saving and environmental protection.

Technology introduction of boiling furnace
With the development and progress of gypsum industry, the need of gypsum powder is growing, also with the quality of gypsum powder. During the whole procedure, the drying and dehydration are the key link, and it is also the difficult part. According to such a condition, after many years researching and exploring, we have developed a new generation dehydration device which are suitable for all kinds of gypsum
Principle of working
The main principle of drying system: the boiling furnace body is consist of delicate and intensive cooling coil pipe. Put the heat conductive oil in the pipe, and release the heat into the inside of furnace. There is a Roots blower under the bottom of boiling furnace, and blow the air into the furnace, until blowing the powder into boiling status. Under a certain temperature, the dried and dehydrated powder become light, and flow to the outlet automatically. The quality of this kind of gypsum powder is stable, because the equipment adopts dried electrostatic dust remover, so the dust-removing efficiency is above 95%.

Structure simple and durable
Because we realize fluidization, the furnace does not need moving component, and the structure of the furnace becomes simple. Not only it is easy to manufacture, but also we do not need maintenance after put into operation. Because we use low-temperature source, so the furnace does not have any risk of being burnt in any condition, also the equipment will have a long life.

Compact equipment, low area coverage
The boiling equipment is vertical-arranged equipment, and the dust remover on the top of the furnace, make a complete body with the furnace. So the equipment is compact and low area coverage.

Low energy consumption
The boiling furnace with low heat and electricity consumption. In the part of energy: Most of the heat is used to dehydration and decomposition, and the rest of small part is used to heat the air from the bottom of the furnace. The heat efficiency of the furnace is above 95%. Of course the boiling furnace uses the second heat source, and final heat efficiency is amounting to the furnace efficiency multiply the boiler efficiency. But the steam boiler and the hot oil boiler are all mature hot equipment with high heat efficiency. The steam boiler can reach to 60%-70%, hot oil boiler can reach to 70%-80%. (our company adopts heat conductive oil furnace), so the general heat efficiency is high. Use steam, it can reach to 57%-67%. Use hot oil, it can reach 67%-77%.
In the parts of electricity: the boiling furnace does not need move, also without mixer, it realize the fluidization by the steam of gypsum dehydration, because blow limit air into the bottom of the furnace, so the power of the blower is low, and the boiling furnace have less electricity consumption than the traditional calciner.
Good quality and stable performance

Because adopt low-temperature heat source, so the gypsum is not easy to be burnt, as long as the temperature is controlled properly, there will not have CaSO4 2H2O in the finished product, and the anhydrous gypsum is within 5%, and the rest are CaSO4 1/2H2O.

In order to reach the above requirement, our company have researched and developed a whole set of boiling furnace processing technology, the main material is good-quality steel. For example, heat conductive oil pipe adopts seamless steel pipe (GB3087-82). Steel plate adopts carbon steel and low-alloy steel (GB713-86); Frame steel adopts international product. Furthermore, in the work of welding, all the workers have work certificate, after welding, the coil pipe will have a water pressure test, just in case of leakage of heat conductive oil. The product is qualified if there is no leakage under the water pressure of 1.0~1.5Mpa for 24 hours.