**LM Vertical Mill**

1. **Product Description**

**Applications of LM Vertical Mill**

LM vertical mill is one advanced mill, adopting top technology domestic and abroad, and based on many years mill experiences. It can crush, dry, grind, and classify the materials.

LM vertical mill can be widely used in such industries as cement, power, metallurgy, chemical industry, non-metallic mineral. It is used to grind granular and powdered materials into powder with required fineness.

备用方案

Type: Mineral Ore Powder Making

Input Size: 38-55 mm

Processed Materials:

Limestone, calcite, barite, dolomite, potassium feldspar, marble, talcum, gypsum, kaolin, bentonite, medical stone, rock phosphate, manganese ore, iron ore, quartz, active carbon, carbon black, ceramic, clinker, ect.

Applications:

Cement, coal, power plant desulfurization, metallurgy, chemical industry, non-metallic mineral, construction material, ceramics.

**Advantages of LM Vertical Mill**

1. Low Investment Cost. This mill itself can crush, dry, grinding, classifying, so the system is simple, and occupation area is about 50% of ball mill system. In addition, it can be installed outside, so it will reduce a large number of investment costs.
2. Low Operation Cost. ⑴ High efficiency: roller compacted materials directly onto the grinding disc, so power consumption is low. Compared with ball mill, it saves energy consumption by 30% ~ 40%. ⑵ Less wear and tear: As the roller is not in direct contact with the disc, and material of the roller and liner is high quality, so life lime is long.
3. The stability of product quality. As the material stays in the mill for a short time, it is easy to detect and control the product particle size and chemical composition, to reduce duplication of milling, stable product quality.

4. Simple and reliable operation, Maintenance convenience, Environmental protection.

备用方案

1. Low Investment Cost
2. Low Operation Cost
3. High Drying Ability
4. Simple and reliable operation
5. The stability of product quality
6. Maintenance convenience
7. Environmental protection

**Working principle of LM Vertical Mill**

LM vertical mil has two pairs of grinding rollers, each pair of roller composed of two narrow rollers, mounted on the same axis and can rotate at different speeds. Disc roller and the relative sliding velocity between small and roller can swing, even if the roller sleeve and the disc after the liner wear can guarantee a good abrasive, will not affect the grinding effect. Material grinding process: hydraulic pneumatic roller device through the pressure applied to the material on the crushing of materials, the materials have been moved to crush the edge of disc, from the disc around the nozzle from the exhaust air to improve these materials to Separator.Meal to separate returns after a concentrated mill, fine powder was collected in the precipitator unloading.

ring by adjusting the air valve, can change the product fineness can shide mill bed load material uniformity and stability, improving the grinding efficiency;

coarse particles in the external circulation, helps reduce Fan power consumption and overall system power.

**Specifications of LM Vertical Mill**

Ore Mill

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Contents|Data/Model | | LM130K | LM150K | LM170K | LM190K | LM220K | LM240K |
| Disc Dia. (mm) | | 1300 | 1500 | 1700 | 1900 | 2200 | 2400 |
| Capacity (t/h) | | 10~30 | 13~40 | 18~57 | 23~72 | 36~114 | 41~128 |
| Output fineness | micron | 170~45 | 170~45 | 170~45 | 170~45 | 170~45 | 170~45 |
| mesh | 80~325 | 80~325 | 80~325 | 80~325 | 80~325 | 80~325 |
| Product moisture | | ≤1% | ≤1% | ≤1% | ≤1% | ≤1% | ≤1% |
| Max.input size (mm) | | <38 | <40 | <42 | <45 | <50 | <55 |
| Best input moistrure | | <4% | <4% | <4% | <4% | <4% | <4% |
| input moistrure(drying required) | | <15% | <15% | <15% | <15% | <15% | <15% |
| Inlet air temperature (℃) | | <350 | <350 | <350 | <350 | <350 | <350 |
| Outlet air temperature (℃) | | 70~95 | 70~95 | 70~95 | 70~95 | 70~95 | 70~95 |
| Main mill power (KW) | | 185~220 | 250~280 | 355~400 | 450~500 | 710~800 | 800~900 |
| Dimension | Lmm | 3500 | 4200 | 4700 | 8500 | 10200 | 11700 |
| Wmm | 3400 | 3900 | 4500 | 5600 | 6700 | 7700 |
| Gmm | 5800 | 7100 | 8300 | 8800 | 10600 | 12200 |
| Weight (t) | | 48 | 75 | 90 | 100 | 125 | 160 |

Notes:  
1. Material should be with hardness less than 7 in Mohs.  
2. Hot air is only necessary if outlet moisture is required to be less than inlet moisture.  
3.When grinding mateiral that is difficult to grind, please use the largest power.

Coal Mill

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Contents|Data/Model | | LM130M | LM150M | LM170M | LM190M | LM220M | LM240M |
| Disc Dia. (mm) | | 1300 | 1500 | 1700 | 1900 | 2200 | 2400 |
| Capacity (t/h) | | 10~15 | 16~22 | 20~28 | 26~35 | 35~45 | 40~50 |
| fineness (R0.08) | | <15% | <15% | <15% | <15% | <15% | <15% |
| Coal powder moisture | | <1% | <1% | <1% | <1% | <1% | <1% |
| Max.input size (mm) | | <38 | <40 | <42 | <45 | <50 | <55 |
| input moistrure | | <15% | <15% | <15% | <15% | <15% | <15% |
| Inlet air temperature (℃) | | <350 | <350 | <350 | <350 | <350 | <350 |
| Outlet air temperature (℃) | | 75~95 | 75~95 | 75~95 | 75~95 | 75~95 | 75~95 |
| Hardgrove index of raw coal (HGI) | | >55 | >55 | >55 | >55 | >55 | >55 |
| Main mill power (KW) | | 185 | 250 | 315 | 400 | 500 | 560 |
| Dimension | Lmm | 3500 | 4200 | 4700 | 8500 | 10200 | 11700 |
| Wmm | 3400 | 3900 | 4500 | 5600 | 6700 | 7700 |
| H mm | 5800 | 7100 | 8300 | 8800 | 10600 | 12200 |
| Weight (t) | | 46 | 75 | 94 | 100 | 122 | 157 |

1. **Grinding project case**

**The grinding site of LM Vertical Mill**

# **Silica sand LM130N Grinding Plant in Indonesia**

Raw Material: silica sand

Output size: 325 mesh

Quantity: 2 sets LM130N

Capacity: 10-12 t/h

Application: fiberglass

Brief Introduction:

Our Indonesian customer is using two sets of our LM130N to process silica sand. The final powder of 325 meshes will be used to make fiberglass. His raw materials have large content of Sio2., he finally choose our LM Vertical mill other than from other company. Because no other company’s grinding mill can process such hard materials.

Through using roller spacing limited device, removable roller sleeve and other advanced technologies, LM vertical mill reduce the consumption of wearing parts and prolong the service life of wearing parts. Our LM vertical mill solves the problems of grinding high hardness materials in the industry field.

Indonesia has always been our important market. We have an office in Indonesia. We will provide you the most comprehensive and timely service in Indonesia.