

## **Grinding mill,vertical roller mill in china,grinding mill's working principle**

**Vertical Roller Mill** based on the world advanced technology and years' production experience,Shanghai Shibang Group have produced this kind of advanced grinding equipoement . **Vertical Roller Mill** is an ideal equipement which have intergrated the crushing,dry,powder grinding,and graded deliver into a single whole .And now Vertical Roller Mill has found its extensive application in the field of Cement, electric power, metallurgy, chemical industry, non-metallic mineral,etc.Abd Vertical Roller Mill is mainly used to grind the materials with block,and particle size to the required powder materials .

### **Main structures of vertical roller mill**

Its main structures are including the classifier,roller,plate,pressure,reducer,motor,shell equipement and so on.The seperator is a kind of high-efficient and energy-saving equipement .And the roller is a kind of spare parts used to grind and crush the materials .The plate is installed on the output axis of the reducer,which is the place the materials is crushed by the roller.And the pressure equipment is a kind of spare parts providing the pressure to the grinding roller,thus crushing the materials .

### **Working Principle of vertical roller mill**

During the operation,the motor wil drive the plate to rotate by the reducer and then the materials will fall down on the central place of the plate from the inlet by the qir-locking feeder .While at the same time,the hot air will enter the grinder from the air inlet.With the rotation of the plate,the materials will move to the edge of the plate by the centrifugal force and the materials will received the pressure from the roller and be crushed when it passes the circle ring sink on the plate.The crushed materials will be brought away by the high speed air and the big size will fall down on the plate and be reginded .And the coarse powder will fall down from the cone hopper and then repeat this kind of process when materials in the air stream passes the upper seperator by the effect of the rotors.And during the process,the fine powder will flow out with the air stream .By the dust catcher,the final products will be collected .The materials with moisture will be dry when it contact with the hot air stream.By adjusting the temperature of the hot air,we can satisfy materials with various moisture degree,thus achieving the required products moisture.By the seperator,we can also achieve the required coarse and fine degree of the products .

### **Structure Features of vertical roller mill**

1high performance

- 1)The hot air will contact with the materials in the grinder,with strong dry ability and energy-saving.
- 2)By adjusting the temperature of the hot air,it can meet the requirements of materials with various degrees of moistures.
- 3)Short stay in the grinder and convenient to inspect and control the particle size and the chemical components,which have reduced repeating grinding and improved the products' stability.
- 4)The equipement have been installed on the roller and the grinding plate,which can avoid the destructive shock and the shake .

2 low investment cost

- 1)This series of grinder have intergrated the crushing,dry,powder grinding and the graded transmitting into the single whole,whose cover area is just 80% of the ball mill system.
- 2)The roller can directly grind and crush the materials on the grinding plate,whose consumption is just 30%-40% of the ball mill system.
- 3)The roller and the plate adopts the quality materials,which have reduced the wearing consumption and expand the service life .
- 4)Installation on the open air environment can save the investment cost.

3 reliable function

- 1)Automatic control system realize the remote control and the convenient operation.
- 2)By inspecting the oil cylinder and turning over the can flexible arm ensure the convenient change of the roller sheet and the plate,which have reduced the down-time lost.
- 3)The whole seal system and the woring under the negative encironment ensure the clean environment with no dust leaking.
- 4)Low vibration and noise

**Products advantages of vertical roller mill**

Vertical Roller Mill produced by Shanghai Shibang Group features high dry efficient,longer service life,higher reliability,more cleaner and environment-friendly. And with all of the advantages,it has been exported to abroad and win the internatioanl popularity.

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