

Vertical Mill Rocker Arm and Separator



Vertical Mill Rocker Arm



Vertical Roller Mill Separator

Vertical Mill Pressure Device Overview

LM Series Vertical mill is from the main structure of separators, roller devices, disc devices, pressure devices, reducer, motor, shell and other components. Vertical mill pressure device is to provide the pressure roller milling parts, which consists of high-pressure filling stations, hydraulic cylinder rod, accumulator etc, able to exert enough pressure roller to crush material. Reducer is the main power transmission components, disc rotation speed is the speed reducer output shaft.

Working Principle

LM series vertical roller mill can fully meet the requirement of clients in the high production of powder, and its main technical and economy indicator reaches the international level. It is mainly suitable to crush the medium hard



materials with the crushing pressure of less than 170MPa, and surface moisture of less than 8%. The system works under negative pressure, so there is no dust going out. It meets the requirements of the state Environmental Protection.

Vertical Mill Rocker Arm Overview

Based on illuminating the structure, working principle and force analysis of vertical mill, the finite element analysis of vertical mill rocker arms is carried out. First of all, the structure of rocker arms and grinding roll components are simplified, then the three-dimensional entity model and meshing model of vertical mill both are established. Secondly, the material attribute, contact type, loads and constraints of rocker arms and grinding roller components are defined, and the total deformation, equivalent stress and safety factor of vertical mill rocker arm are gained after numerical calculation. Results show that the up rocker could meet basically application requirements for its uniform stress distribution. But the lower rocker cannot meet the strength requirements for its low safety factor, and it is necessary to optimize the structure for improving the safety coefficient of lower rocker.

Working Principle

This known mill is a so-called vertical mill and comprises a casing or mill body with a horizontal grinding table positioned within the mill body mounted for rotation about a vertical axis. Drive means such as a motor and a gear reducer, situated beneath the grinding table, are provided for rotating the grinding table. Vertical Mill rocker arms are mounted in the roller mill structure and in the end of each rocker arm a grinding roller is mounted for rotation about an axis, which is situated at a predetermined angle to the table. The load-carrying mill structure is assembled from a plurality of mill stands, one for each grinding roll. Each grinding roll assembly, consisting of a grinding roller, axle, hub and bearing, requires a mill stand to support the force mechanism, such as a hydraulic cylinder, which generates the grinding pressure and which is mounted in the mill stand.

By turning the rockers well as oil jack maintenance, the hard surfacing and lining and plates can be maintained within short time, which decreases the outage loss.



Vertical Mill Separator Overview

LM Series Vertical mill is mainly from the separator, roller device, disc device, pressure device, reducer, motor, housing and other components. Vertical mill separator is one high efficiency and power saving classifier device. Through adjusting the temperature of the hot airstream, the Vertical Mill can meet different material's requirement, and also through adjusting separator, the Vertical Mill can reach proper fineness of materials.

Working Principle

The crusher material continue to move to the edge of the grinding table until taken away by the airstream. Then the bigger material fall down the grinding table and the process of crushing continues. When the material the airstream pass the separator on the top of the mill, the material fall down the grinding table from the taper filler under the force of rotating roller, the fine powder gathered is the final product of roller mill. In the process of the contact of airstream, the moisture materials are dried to meet the clients' need at the proper moisture. Through the adjustment of separator, it can reach the proper fineness of the materials.

Features And Benefits

1. Reliability, safety.
2. Low energy consumption, low noise.
3. Easy maintenance and adjustment.
4. Excellent performance, long service life

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