

### **MTM medium speed trapezium mill(Raymond Mill)**

MTM medium speed trapezium mill(Raymond Mill) is a new patent product developed from high pressure suspension grinding mill. The Raymond Mill is mainly applied in metallurgy, construction, chemical industry, mining industry, road building, water conservancy, fireproof materials, steel, etc. this machine adopts several patents such as trapezium working surface, flexible connection, roll linked pressure boost, etc.

#### **主机工作原理:**

主机通过减速机带动中心轴转动,轴的上端联结着梅花架,架上装有磨辊装置并形成摆动支点。磨辊装置不仅围绕中心轴回转,还围绕磨环公转,磨辊本身因摩擦作用而自转。梅花架下装有铲刀系统,其位置处于磨辊下端,铲刀与磨辊同转过程中把物料抛起喂入磨辊磨环之间,形成垫料层,该料层受磨辊旋转产生向外的离心力(即挤压力)将物料碾碎,由此而达到制粉目的。

选粉机通过调速电机带动转盘上的叶片旋转,对粉末进行分级。合格的成品粉子进入旋风收集器内,气流与粉子被分离后,粉子被收集。不合要求的粉子被叶片抛向外壁与气流脱离,粗粉子因自身重力的作用落入研磨装置进行反复碾磨。

#### **Operation principle of main unit:**

Main unit runs with the central shaft that is driven by a decelerator. The top of the shaft is connected with a quincunx stand, on which a grinding roller is installed to form a swing support. The grinding roller not only rotates around the central axle and grinding roller, but also rotates around its own axle due to the friction. There is pallet knife system at bottom of quincunx stand. The pallet knife system is under the grinding roller. With co-rotation of pallet knife and grinding roller, pallet knife will lift the materials into the space between roller and ring to form a material layer. The materials will be grinded due to centrifugal force of roller.

The classifier drives the impellers on the tray to rotate through speed adjusting motor, so that powder can be separated. The standard particles will enter cyclone collector. After being separated from the air flow, powder will be collected. Substandard particles will be thrown to the outside wall, to be separated from the air flow. Heavy powder will fall into the grinding chamber to regrind due to self gravity.

#### **磨粉机生产线流程:**

物料经颚式破碎机破碎后由斗式提升机送至储料仓,振动给料机可以把物料均匀、连续地送到主机进行研磨。研磨后的粉末在鼓风机作用下吹向选粉机进行分选。分选后的物料由管道送到储料仓,最后经出料阀输出即为成品。整套生产线工作过程中气压为负。首先,鼓风机吹出的空气伴随着粉末物料经管道进入储料仓上部的旋风收集器内,由回风管道返回鼓风机,形成空气循环利用。其次,集粉器下端装有锁粉器,其作用是将外界正压气体与集粉器负压气体隔离开,大大提高了产量。再次,主机底部残留的空气和粉尘通过管道被送到布袋除尘器进行过滤,粉尘等杂物被布袋除尘器吸附,净化后的空气排放到外界,有效地保护了环境。

#### **Powder making production line:**

Materials first enter jaw crusher to be crushed to smaller size. Then they are lifted to storage room by elevator. Vibrating feeder will feed materials into grinding chamber evenly and gradually. After being grinded, the powder will be blown to cyclone by blower. Then the material will be transferred to storage room through pipes, and then will be discharged as final products. The

whole process works in a negative pressure environment. First, through pipes, the air from the blower enters the cyclone collector above the storage room along with powder, and then returns to the blower through return pipe. In the way, air can be recycled. There is a powder locking equipment under the cyclone, which isolates the outside positive air pressure and the negative air pressure inside cyclone. And this ensures high productivity. In addition, the residual air and dust under the main unit will be transferred to dust catcher equipment through pipes and be cleaned there. The clean air will be discharged so that environment will be protected.

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