

DEMONSTRATION OF BALL MILL

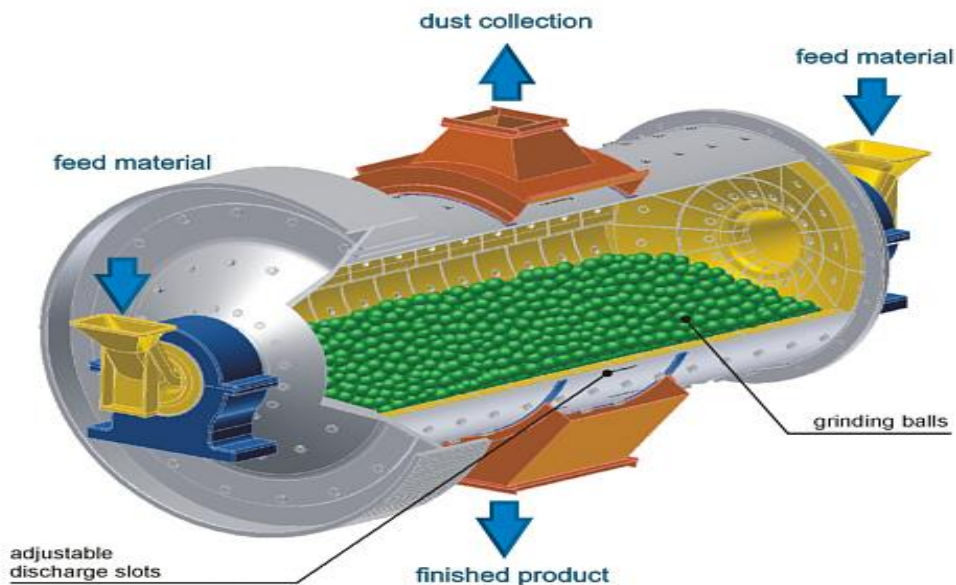
AIM:Demonstrating Ball Mill

Ball Mill

A ball mill also known as pebble mill or tumbling mill is a milling machine that consists of a hollow cylinder containing balls; mounted on a metallic frame such that it can be rotated along its longitudinal axis. The balls which could be of different diameter occupy 30 -50% of the mill volume and its size depends on the feed and mill size. The large balls tend to break down the coarse feed materials and the smaller balls help to form fine product by reducing void spaces between the balls. Ball mills grind material by impact and attrition.

The degree of milling in a ball mill is influenced by;

- Residence time of the material in the mill chamber.
- The size, density and number of the balls.
- The nature of the balls (hardness of the grinding material)
- Feed rate and feed level in the vessel.
- Rotation speed of the cylinder.



CORRECT CASCADE OF ACTION OF A BALL MILL IN OPERATION

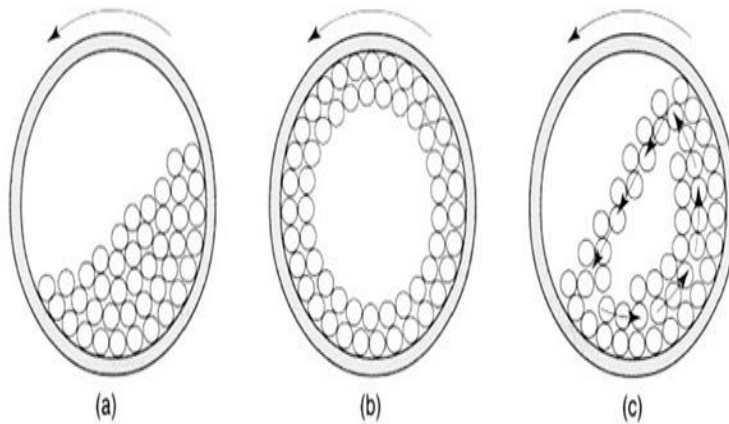


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Several types of ball mill exist. They differ to an extent in their operating principle. They also differ in their maximum capacity of the milling vessel, ranging from 0.010 litres for planetary ball mill, mixer mill or vibration ball mill to several 100 litres for horizontal rolling ball mills.

Pharmaceutical uses of Ball Mill

- The small and average capacity Ball mills are used for the final grinding of drugs or for grinding suspensions.
- The maximum capacity Ball mills are used for milling ores prior to manufacture of pharmaceutical chemicals.
- Video link-<https://youtu.be/L6sgGXXYdEU>