mbe
beyond engineering

An ISO 9001:2000 Company

McNally Sayaji Engineering Limited

A Subsidiary of McNally Bharat Engineering Company Limited

Grinding Mill | A complete range of both Mineral Processing and Material Handling Applications

At MBE we believe in constantly reinventing ourselves. And in line with this we are always on the lookout for new avenues and opportunities.

McNally Sayaji Engineering Limited (MSEL), with factories in Kumardhubi, Asansol, Bangalore and Baroda, is one of the country's leading manufacturer of Crushing, Screening, Milling, Material Handling and other heavy equipment, serving the core sectors of the economy. These sectors include Coal, Mining and Mineral Processing, Power, Steel, Ports, Cement, Aluminium and Non-Ferrous Metals.

The manufacturing units have ISO 9000 certification. We have marketing and branch offices at Kolkata, Baroda, Mumbai, Kumardhubi, Bangalore, Chennai, Secunderabad, Cochin, Nagpur, Vizag and Vijaywada. This makes us capable of comprehensive customer support at all times.

MSEL has inducted technology over the years through strategic alliances and developed focused R&D and Design & Development teams, who offer optimum and cost effective solutions to meet customer needs.

® SAYAJI ®

MSEL offers a wide range of standard and custom designed mills. Sizes range from 1.2 m diameter for laboratory use to 4.8m diameter for large mining operations. Drive power range from 22 KW to 2500 KW. The mills utilize the trunnion bearing support. MSEL has over 210 mills in operation throughout India with various units in overseas territories. Mills are identified by the type of grinding media used (i.e. rod, ball, etc.). Each design has characteristics that suit it to a certain grinding application. MSEL also offers installation, commissioning, spares, reconditioning and after sales service, plus the capability to supply the right unit for any type of enquiry.

In addition, Mills compliment MSEL's wide range of screens, jaw crushers, gyrasphere cone crushers, feeders, scrubbers and idlers. Turnkey plant capability is also available.

Rod Mills | Rod Mills can accept feed up to approximately 50 mm and are generally selected to grind products in the 4 mm to +0.8 mm range. Grinding action is by line contact between rods, which extend the length of the mill. Rod mills are usually operated in open circuit. Most rod mill applications involve wet grinding where materials are reduced in size from crusher product size to a size suitable for ball mill feed. To avoid breakage or tangling of rods the L/D ratio of rod mills is kept within the limits of 1.4:1 to 1.6:1. Reduction ratio of ROD Mill for efficient grinding are usually limited in the range of 1:15 to 1:20. MBE supplies the three most common rod mill types, overflow, end peripheral and centre peripheral discharge.

Overflow | An overflow mill is constructed with a feed opening at one end and a discharge opening at the other, both on the axis of the mill. Material leaves the mill by overflowing at the discharge end. Overflow mill is used for producing the finer end of the product range.

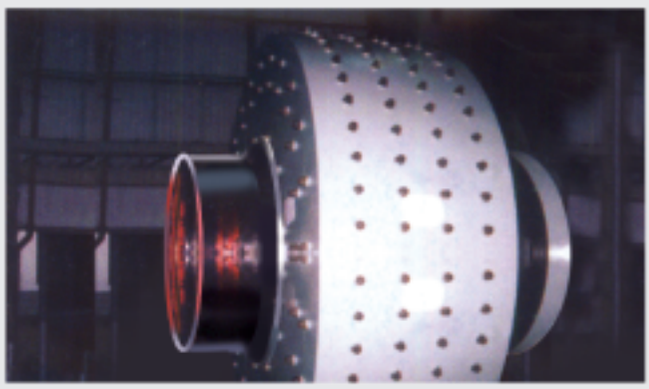
End Peripheral Discharge (EPD) | The end peripheral discharge mill's steeper gradient produces a shorter retention time and thus a coarser product than the overflow type. Product is discharged through port openings equally spaced around the periphery of the shell, than at the discharge end. Grinding may be accomplished for dry. End peripheral discharge is used to good advantage in damp grinding of coke on steelwork sinter plants.

Centre Peripheral Discharge (CPD) | Feed is from both ends and is discharged at the centre through discharge ports. The fact that the particles only travel half the mill length makes the CPD rod mill an outstanding unit for coarse grinding and rapid removal of finished material.

Ball Mills | Ball Mills accept feed that range in size from 80% passing 20mm to fine feeds in regrind operations. Products may be as coarse as 0.5mm or as fine as 80% of 40 microns. In a ball mill the length may be less than, equal to, or greater than its diameter. A short length mill has a lower retention time and produces a coarser product. Longer mills have a longer retention practice and generally utilize closed circuit operation. Most Ball Mills operate with a reduction ration of 1:20 to 1:200.

Grate Discharge | This mill type embodies the principle of stoop pulp gradient, quick discharge operation. A grate and pulp lifter assembly at the discharge end of the mill enables a ball charge of 45%. The quick removal of ground material reduces over grinding, especially when operated in closed circuit with a classifier.

Overflow | As the name implies, material is discharged from an overflow mill by overflowing the discharge opening. The overflow mill is simple to operate and maintain and is ideal for producing fine products such as in regrind operations.



Autogenous Mill

ROD Mill

McNally Sayaji Engineering Company Limited

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