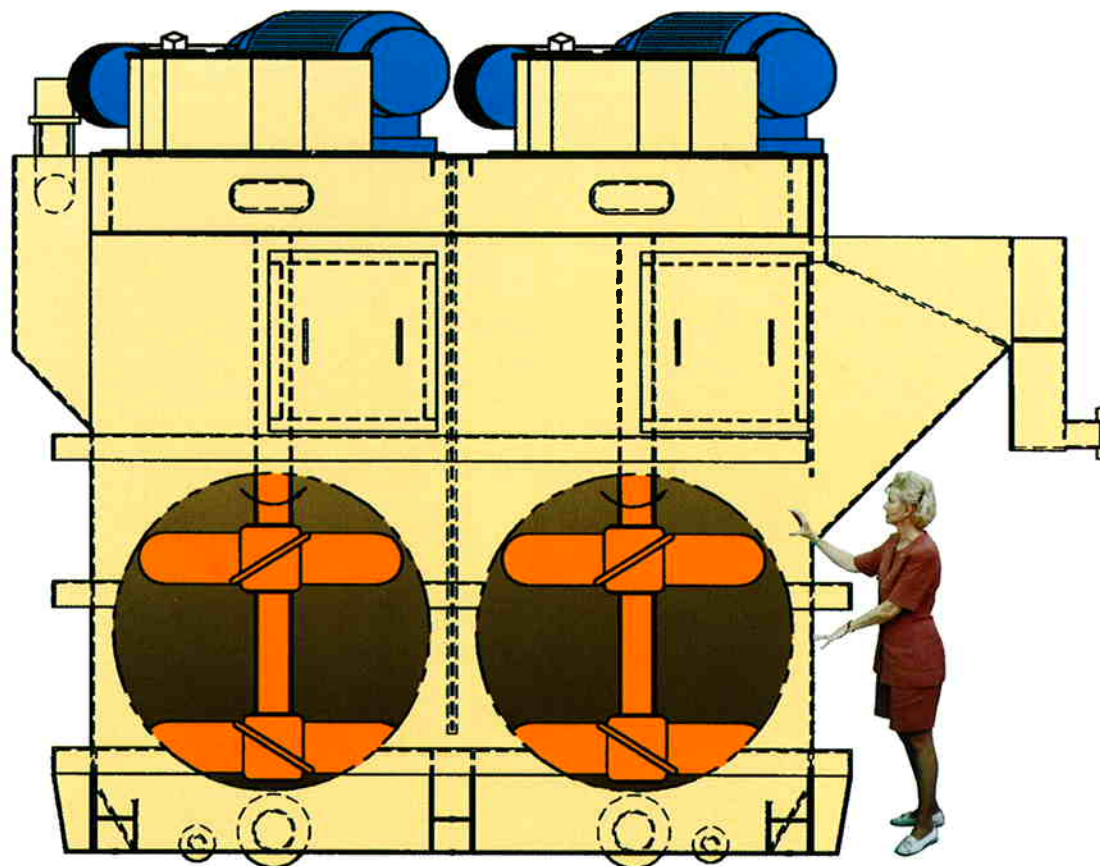


IMPEX[®]

TWO CELL FMM

DELAMINATOR

The **IMPEX Two Cell FMM Delaminator** is a Fine Media Milling (FMM) mill of high intensity grinding using the latest technology for delamination of kaolin type clays. The mill is suitable for light (nylon/styrene), medium (glass/sand) or heavy (alumina/zirconia) microspheres grinding media. Dr. Joe Iannicelli, et al., now Vice President with IMPEX, patented the delamination of kaolin clays with ultra fine glass microspheres media in this type of mill in 1972.



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FEATURES OF IMPEX FMM TWO CELL DELAMINATOR

TWO CELL VESSEL

The IMPEX delaminator is designed with two cells separated by a vertical partition that prevents short circuiting of feed to product.

TWIN SHAFTS AND DRIVE

Each cell has its own shaft with propellers, motor, v-belt drive, gearbox and extra heavy adjustable coupling for true alignment of shafts. Shafts and drives are identical in each cell.

LINING

All wetted surfaces of the vessel, shaft and propellers are protected with 12mm (1/2") thick special rubber coating vulcanized to the surfaces to prevent abrasive wear from the grinding media and feed mineral.

PROPELLER PITCH

Each shaft has two 1066mm (42") diameter propellers. The top propeller has a 150 percent pitch driving the slurry downward while the bottom propeller has a 100 percent pitch driving the slurry upward. This opposing action creates intensive contact of the media with the mineral to be delaminated.

INTERNAL SCREENS

In order to contain fine micro-spheres, a double mesh stainless wire screen is strategically mounted internally near the discharge outlet.

MOTORS AND DRIVE

Each cell is driven by a 100 HP, 1750 RPM, 480/380 V, 3 Ph, 60/50 Hz, TEFC, 1.15 SF motor, v-belt drive with guard, a self-lubricating, high efficient, rigid supported helical gearbox with 220 HP rating.

RIGID COUPLINGS AND SHAFTS

An extra heavy double cone shaped coupling with flanges is used to connect the heavy duty shaft to the gearbox. This specially designed coupling permits true alignment of the shaft as well as simplifying maintenance.

AIR VENTS

Due to the intensive action within the delaminator, air vents are installed on each cell.

GRINDING MEDIA

Various forms of grinding media may be used with this mill. The most common used on kaolin clays are nylon, styrene, glass, sand, and alumina micro spheres.

FEED AND DISCHARGE PORTS

The feed and outlet ports may vary with customer request, but normally the feed is a 101mm (4") 150 psi flanged port and the outlet is a 152mm (6") 150 psi flanged port.

MAINTENANCE ACCESS

A bolted 609mm x 609mm (24" x 24") maintenance access door is installed in each compartment for filling the mill with grinding media and maintenance.

DRAIN AND AIR PURGE PORTS

Each compartment has a 152mm (6") 150 psi flanged drain outlet plus a 50mm (2") 150 psi flanged inlet for air purging and agitating the grinding media and processing slurry after prolonged shutdowns.

INSPECTION PORTS

Each cell has two quick opening inspection ports for visual inspection of operations inside of the vessel.

CHEMICAL ADDITION PORTS

Each cell has a 101mm (4") threaded pipe coupling on the top cover for the installation of a chemical addition system used to avoid sedimentation of grinding media and contained slurry on prolonged shut downs.

NOMINAL CAPACITY

On kaolin slurries in the 30-40% solids range, the delaminator is capable of a nominal 2 MTPH when delaminating from a 30-40% < 2 um feed to a 75-80 < 2 um product. The liquid volume of each cell is approximately 4.9 cubic meters (1300 gallons). A minimum of 50% by volume of grinding media is required.

MAINTENANCE

Most of the maintenance problems are created by improper shut-downs or start-up procedures. However, preventive maintenance programs including oil changes in the gearboxes plus periodic inspection of the rubber lining will give years of trouble free operation. An owners manual with operating and maintenance advice is included with each order.



SHOP FABRICATION



RIGID GEARBOX SUPPORT AND DRIVE



SPECIAL RUBBER LINING



PROTECTIVE COATING ON FINISHED MILLS



ABRASION RESISTANT PROPELLERS



LOADING FOR SHIPMENT