

# McNALLY SAYAJI ENGINEERING LIMITED

(A Member of the Williamson Magor Group)



For Fine Screening with Moisture

## HIGH PARTICLE ACCELERATION (HPA) SCREEN

At MSEL 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 mineral processing and other heavy equipment, serving the core sectors of the economy. These sectors include Coal, Mining, Power, Steel, Ports, Cement, Aluminium and Non-Ferrous Metals.

All manufacturing units of MSEL are ISO 9001-2008 certified with well established quality assurance department supported by modern testing facilities and

managed by a team of highly experienced professionals.

MSEL has branch offices at Kolkata, Bangalore, Chennai, Delhi, Mumbai, Hyderabad, Nagpur, Vishakhapatnam, Kochi, Vijaywada, Coimbatore. This makes MSEL capable to render comprehensive customer support.

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.

# APPLICATION

When a conventional circular motion screen or a linear action screen is unable to screen, or does not handle the moistened screening job efficiently, then High Particle Acceleration screen is one of the alternatives. It is suitable for screening at small separation of 2 - 10 mm with high moisture (up to 45%). It can be used for screening lignite, coal, coke, limestone, slag, iron ore, pet coke etc.

# OPERATING PRINCIPLE

HPA screen operates in the same principle as “flip flow” or “flip flop” screen does. Polyurethane flexible mats are used as screening surface. These mats are alternately tensioned and relaxed in each cycle, which breaks or loosens the adhesive bond within the materials, and between the material and flexible screen mats.

During these stretch & relax moments, the openings or aperture in the screen mats get elongated, stretched or bent which tremendously helps in release of particles which might have trapped inside the mat opening. The machine is subjected to low acceleration, but the material is thrown up by the screen mats with very high acceleration ( 40g - 50g ).

# CONSTRUCTIONAL FEATURES

The H.P.A. Screening Machine consists of an inner and an outer screen frame. The screen panels or mats are clamped with the cross beams of the two frames. These frames are having opposite reciprocating motion at any point of time. The cross beams are having special profiles which ensure maximum space between them without sacrificing their rigidity. All cross beams are covered with rubber apron. The side walls of the inner frame are protected with stainless steel liners. The feed plate and the discharge lip are also provided with wear resistant liners. The inner frame is mounted on a set of rubber springs at each end while the outer frame is suspended from the inner frame by means of non-metallic spring elements. The reciprocating motion is imparted to the frames by a vibrator unit which is similar to a crank shaft

mechanism. The vibrator unit consists of an eccentric shaft, four anti friction bearings, bearing housings, labyrinths and seals. It is mounted on the inner frame and connected with the outer frame also through a set of flexible non-metallic plates. The vibrator shaft is connected to the drive motor by a v-belt and cardan shaft arrangement ( for bigger size screen).

The screening zone is fully covered and the screen has a downward inclination of 20 – 25 degree.

MSEL HPA screen is always supplied with the Top Cover.

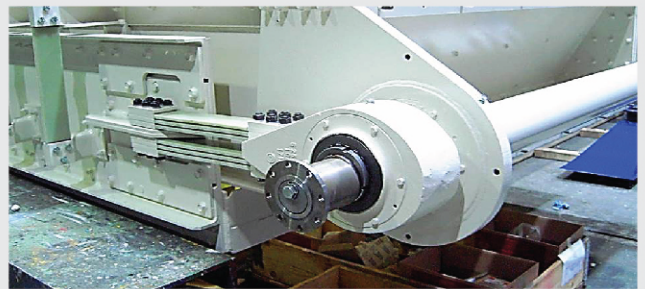
# SALIENT FEATURES

- Efficient screening for moist material.
- Efficient screening at low cut point.
- All indigenous components.

# AVAILABLE SIZES

WIDTH (m)	LENGTH (m)	NOMINAL MOTOR POWER (kW)	SCREEN Wt. (TON) WITHOUT DRIVE, SUPPORT & COVER
1.5	4.4	18.5	3.3
1.5	5.0	18.5	3.8
1.5	6.3	22	4.5
2.0	7.5	37	5.4
2.0	8.8	45	10

*NOTE: As improvements are made from time to time, specifications and other details are subject to change without notice.*



## McNally Sayaji Engineering Limited

**Corporate Office:** Ecospace Business Park, Campus-2B,11F/12, New Town, Rajarhat, Kolkata 700 156, India. P +91-33-3014 2345/6628 2345; F +91-33-3014 2393.

**Factories:** Kumardhubi P +91-6540-273010/11, +91-6540-272 235/197; F +91-6540-273024 | Baroda P +91-2667-263000/2661-2793650; F +91-2667-263051 | Bangalore P: +91-08151399964/67/58 | Asansol M +91-8016090116, +91-8016090128.

**Sales Office:** Kolkata P +91-33-40111300; F +91-33-40111317 | Bangalore P +91-80 41153781-83; F +91-80 41153784 | Chennai M +91-9500011660; F +91-044-22431309 | Delhi M 9910661861 | Mumbai P +91 022-26397641 | Hyderabad P +91-040-27204395; F +91-040-27205361 | Nagpur M +91-9422114059; F +91-712-2535089/2560097 | Vishakhapatnam P +91-891-2551534 | Kochi P +91-9846034939; F +91-484-2405914 | Vijaywada M +91-9440320529 | Coimbatore M +91-978 978 0318.

Crusher | Screen | Grinding Mill | Feeder | Conveyor | Wagon Tippler | Pulley & Idler | Port Crane | Stacker Reclaimer | Mobile/Skid Mounted Crushing & Screening Plant | Slurry Pump | Thickener | Flotation Cell | Pressure Vessel | Equipment for Iron Ore, Steel, Cement, Power, Coal & Other Non-Ferrous Metal Processing Plants