

McNally Sayaji Engineering Limited

MECHANICAL FLOTATION CELL



MBE flotation cells are Operating in several mineral beneficiation plants in India & overseas. There are over 300 Cells installed catering to diverse applications like Graphite, Coal, Lime stone, Iron Ore, Lead, Zinc, Copper, Silimanite, Fluorspar, Barite, Chrome, etc. MBE cells are popular because of efficient performance, swift installation & easy operation.

FLOTATION PROCESS

Froth flotation is a process for separating minerals from gangue by taking advantage of differences in their hydrophobicity. To aid the separation, differences in hydrophobicity between valuable minerals and gangue are increased through the use of surfactants and wetting agents. The flotation process is used for the separation of a large range of sulphides, carbonates and oxides prior to obtaining a concentrate.



VARIOUS MB SERIES FLOTATION CELL

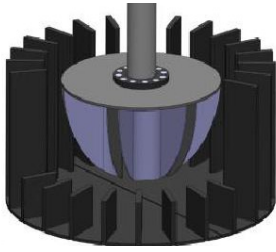
MB cells are specially designed with U shaped tank for superior mechanical & metallurgical performance. Cells are available in 40, 17, 8.5, 3, 1.5 & 0.5 m³.

Operational Data

Model	Effec Vol	For 2 Unit cell		Drive Type	Motor		Flotation Air Requirement	
		Tank weight	Total wt. with drive mech.		Installed	Consumed	Min. Pressure / Mech	Req. Air Vol/Mech
Unit	Cub. m	KG	KG		KW/Mech	KW/Mech	Bar (psi)	Cub. m/Min
MB 40	38	10300	23150	single	55/75	32-48	0.33(4.8)	10 to 20
MB 17	16	5600	13700	single	30/45	14-24	0.23 (3.3)	6 to 15
MB 8.5	8	3275	8180	Single	15/22	7-14	0.17 (2.5)	4 to 10
MB 3	3	1100	3880	Single/Dual	7.5/11	3-7	0.13 (1.9)	2 to 4
MB 1.5	1.5	700	1875	Dual	5.5/7.5	1.5-5	0.09 (1.3)	1 to 2
MB 0.5	0.5	210	685	Dual	2.75/3.75	0.5 - 1.5	0.07 (1.0)	1

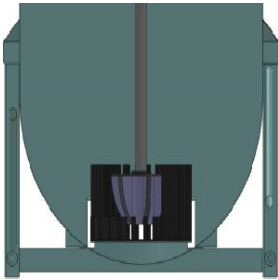
FEATURES OF FLOTATION CELL

UNIQUE ROTOR & STATOR DESIGN



The MBE Flotation cell's mechanism disperses the air in the slurry and also keeps the slurry in a complete suspension by its pumping action. The mechanism consists of a rotor coupled to a hollow shaft and a stator attached to the base of the tank. The shaft is connected to a bearing unit, which is driven by an electric motor & power transmission through a V-belt drive. Air is fed through the hollow shaft and exits through outlets in the rotor.

U-SHAPED TANK



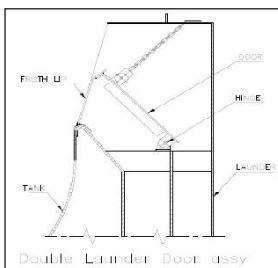
'U' Shaped Tank avoids sanding at the corners, maximizes utilization of the tank volume. It avoids dead zone & helps in smooth restart of the equipment after any sudden stoppage.

CONTROL OF FROTH DEPTH



It is very important to maintain the uniform froth depth during cell operation. We provide effective froth level control system to maintain this. The operation is completely automatic & the instrument has advantage of connecting with HART communicator which can be used to re calibrate / change settings at field based on process requirements.

FROTH LAUNDER

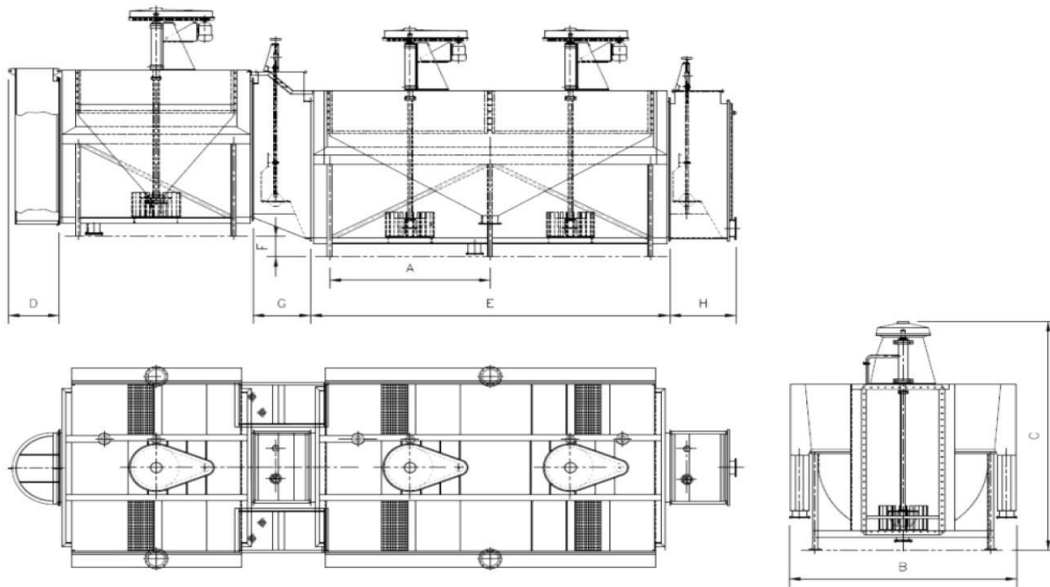


Option of Single & Double Launder to have flexibility in operation. Over the period there will be change in ore characteristic & this option helps in diverting the collected froth as per the process requirement.

SERVICES OFFERED

- LAB SCALE & PILOT SCALE TESTING
- ENGINEERING & SUPPLY OF FLOTATION CELLS & SYSTEMS
- DESIGN, MANUFACTURE & SUPPLY OF 10 to 50 TPH OF SKID MOUNTED FLOTATION SYSTEM

GENERAL DIMENSION OF FLOTATION CELL



Model	A	B	C	D	E	F	G	H
	MM	MM	MM	MM	MM	MM	MM	MM
MB 40	3490	4920	5825	1180	7800	500	1240	1410
MB 17	2870	3790	4540	1000	6350	400	1020	1170
MB 8.5	2200	3165	3610	770	4905	300	900	1050
MB 3	1500	2270	2825	590	3420	250	700	790
MB 1.5	1350	1580	2215	500	2775	200	500	500
MB 0.5	900	1170	1650	205	1900	200	50	265

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McNally Sayaji Engineering Limited

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