

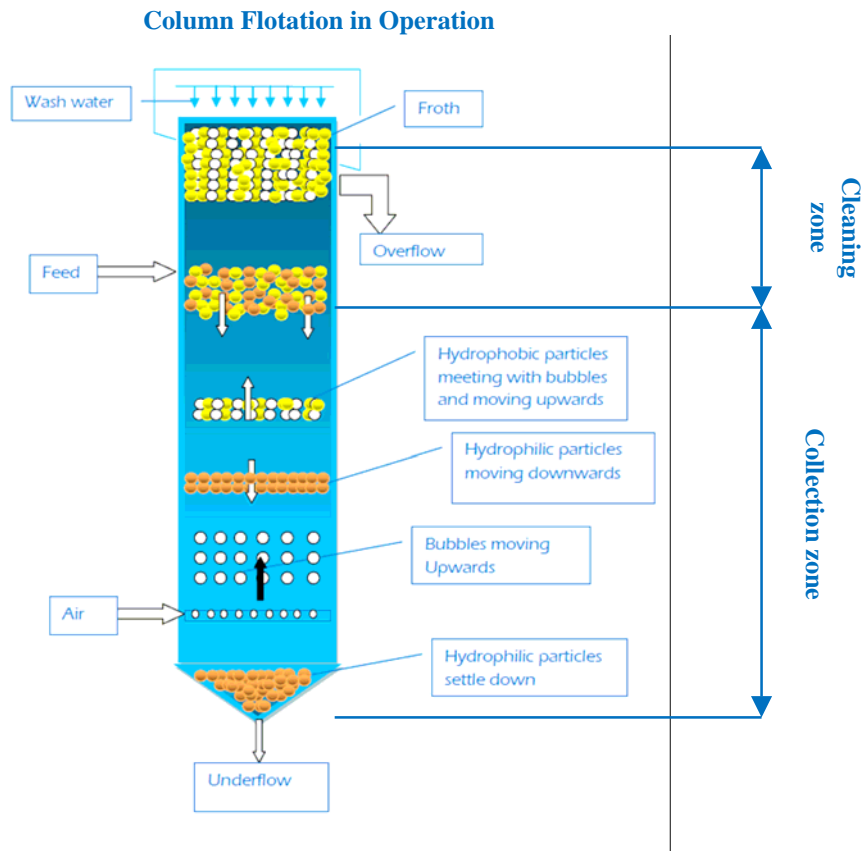
MBE-NML Column Flotation Cell



MBE-NML COLUMN FLOTATION

National Metallurgical laboratory is one of the renowned laboratories in India dedicated for continuous research and development in the field of Metallurgy and Mineral beneficiation. We are proud to be their partners in the Journey of building column Flotation cell. After successful lab, pilot scale testing and various commercial scale installations, we introduce MBE-NML column Flotation cells to the world of processing industries.

McNally Bharat Engineering Company Ltd. (MBE) is one of the leading Engineering Companies in India engaged in providing turnkey solutions in the areas of Power, Steel, Aluminium, Material Handling, Mineral Beneficiation, coal washing, port cranes, civic and industrial water supply etc. Over 300 plants have been constructed on turnkey basis by MBE till date.



The basic Success of any Flotation cell lies in the fact that the bubbles meet hydrophobic particles of the feed and carry them to overflow. For this to happen it is always better to create more no of bubbles and also of finer size and that's what column Flotation does.

The conditioned feed enters the column at about two thirds height. The unique sparger system specially designed by NML, installed at the bottom generates bubbles with sufficient kinetic energy & of finer size so as to trap all the hydrophobic particles. The design of column Flotation ensures that there is enough time for the particles to come in contact with the bubbles and carry them to the overflow. The hydrophilic particles settle down at the bottom which is discharged.

The mineralized bubbles reach the upper portion of the column, i.e. cleaning zone, they encounter a blanket of wash water which sweeps away gangue and slurry water entrapped in the froth.

Factor	Mechanical Flotation	Column Flotation
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Grade & Recovery	↓	↑
Moving Parts	↑	↓
Power Consumption	↑	↓
Recovery of finer Particles	↓	↑
Throughput	↑	↓
Floor Space Required	↑	↓
Capital cost Involved	↑	↓
Operation & Maintenance cost involved	↑	↓

Salient Features of MBE-NML Column cells

- Unique sparging System designed by NML ensures proper size and distribution of bubbles
- The complete Equipment requires very less maintenance because of less moving parts
- The sparging system is made of inert material which is sturdy & ensures resistant to abrasion and PH.
- The operation is completely automated with Superior control over operating variables

MBE-NML Column cells installed

Company & place	Scale	Specs	Application	Results
Bharath Gold Mines Ltd, KGF	Semi-commercial	0.5Mdia	Gold concentrate	60-70ppm of gold concentrate achieved Vs 10ppm achieved by conventional
Gujarat Mineral Development Corporation Ltd, Ahmedabad	Semi-commercial	0.5Mdia	Fluorspar Beneficiation	Better Grades and Recoveries achieved
Indian Rare Earths Ltd., OSCOM, Chatarpur	Semi-commercial	0.5Mdia	Sillimanite Flotation	Concentrates above 98% purity and recovery of 90% were achieved
Fomento, Goa	Semi-commercial	0.5Mdia	Iron ore concentrate	Recovery of 85-90%
Indian Rare Earths Limited, Chatarpur	Commercial	1.3Mdia, 10M Height, designed to treat 7t/h	Sillimanite Flotation	Column Produced excellent Metallurgical Results
Calpro Mineral Technologies India Pvt Ltd.	Commercial	1.2Mdia,6t/h, reverse Flotation	Calcium Beneficiation (poultry industry)	Good recovery and grade with less impurities

Services offered by MBE for Column Flotation Cells

- **Slurry sample testing to study the Feasibility of Column Flotation cell**
- **Pilot scale Column Flotation cell tests**
- **Design, Fabrication, supply and Erection and Commissioning of Commercial Scale Column Flotation Cells circuit on turnkey basis**
- **After sales service which involves supply of spares as OEM**

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