

Product Name :
Froth Flotation Cell

Product Code :
NLAB-TECHNICALAB31008



Description :

Froth Flotation Cell

Technical Specification :

Mixed liberated particles can be separated from each other by flotation if there is sufficient difference in their attainability. The flotation process operates by preparing a water suspension of a mixture of relatively finely sized solids. This is usually done in an agitated chamber open at the top. Fine bubbles of air are then dispersed through the agitated suspension to form a froth that rises to the top of the chamber. Particles that are radially whetted by water (hydrophilic) tend to remain in the water suspension. Those particles that are not easily whetted (hydrophobic) tend to be collected at the air bubble-water interface and rise to the surface attached to air bubbles. Thus differences in the surface chemical properties of the solids are the basis for separation.

The set up consists of a agitated chamber open at the top. In the chamber, an impeller coupled to a shaft is fixed in a stationary diffuser. Low-pressure air is allowed to enter in the stationary diffuser through the air passage provided with the agitator. The collector coated mineral particles adhere to the rising bubbles and are carried to the top of the cell to be removed in the froth product

Experimentation:

To study the performance of Froth Flotation Cell.

To find % recovery of mineral in froth from a standard mixture.

Utilities Required :

Material for Feed, Frothing agents and collectors.

Water Supply and Drain.

Compressed Air Supply 1 CMH at 2kg/cm2.

Electric Supply: Single phase, 220 V AC, 0.5 kW.

Floor Area 1.5 m x 1 m.

Technical Details :

Flotation Chamber: Material Stainless Steel, Compatible capacity.

Agitator: Stainless Steel Impeller with Stainless Steel shaft coupled to FHP motor.

Diffuses: Material Stainless Steel holding the impeller.

Froth Collecting Tank: Material Stainless Steel, Capacity 20 Ltrs.

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