

Product Name :
Thickner

Product Code :
NLAB-TECHNICALAB31020



Description :

Thickner

Technical Specification :

Industrial sedimentation operations may be carried out batch wise and continuously in equipment called thickener. The equipment is a cylindrical tank with openings for a slurry feed and product draw off. The tank is filled with dilute slurry and slurry is permitted to settle. Continuous thickeners are large diameter, shallow depth tanks with slowly revolving rakes for removing the sludge. The slurry is fed at the center of the tank. Around the top edge of the tank is a clear liquid overflow. The rake serves to scrap the sludge towards the center of the bottom for discharge. The motion of the rake also stirs only the sludge layer. This gentle stirring aids in water removal from the sludge.

The set-up consists of several basic components: a tank to contain the slurry, feed piping and a feed well to allow the feed stream to enter the tank, a rotating rack mechanism to assist in moving the concentrated solids to the withdrawal points, an underflow solids-withdrawal system and an overflow launder. A feed tank, feed pump, and feed tank agitator is provided. A bin for collecting concentrated

material is also provided.

Experimentation:

To study the working of continuous type thickener.

Utilities Required :

Water Supply and Drain.

Electric Supply: Single phase, 220 V AC, 1.5 kW.

Floor Area 1 m x 1 m.

Slurry (Paper pulp or CaCo3)

Technical Details :

Thickner: Material Stainless Steel Dia 400 mm, Height 150 mm.

Thickner Agitator: SS impeller with SS Shaft coupled to FHP motor with reduction gearbox.

Slurry Tank: Material Stainless Steel, Capacity 100 Ltrs.

Slurry Tank Agitator: Stainless Steel Impeller with SS Shaft coupled to FHP Motor and Reduction Gear Box

Slurry Feed Pump: Gear Pump with FHP motor.

Piping system: GI and PVC.

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