

Product Name :
Fluid Mixer Apparatus

Product Code :
NLAB-TECHNICALAB31007



Description :

Fluid Mixer Apparatus

Technical Specification :

For a processing vessel to be effective the volume of fluid circulated by the impellers must be sufficient to sweep out the entire vessel in a reasonable time. The velocity of the stream leaving the impeller must be sufficient to carry the current to the remotest parts of the tank. Liquids are most often mixed in some kind of tanks or vessels, usually cylindrical in form and with a vertical axis. Tank bottom is rounded to

eliminate regions into which the fluid currents would not penetrate. In the present set-up mixing is done with the help of stirrer. The stirrer is complete with SS Impeller with SS Shaft coupled to FHP DC motor. The speed of agitator can be varied with the help of Thyristor controlled DC Drive and power consumption is measured by Digital Voltmeter & Digital Ammeter. Four replaceable baffles are provided to prevent swirling. One 4-bladed propeller and one 6-bladed turbine are provided which are interchangeable. Drain valve is also provided at the bottom. Effectiveness of power consumption in fluid mixing can be performed with and without baffles hence increasing the range of experimentation. The whole set-up is mounted on a rigid MS frame structure.

Experimentation:

To plot Power number Vs Reynolds number for the given set of impeller with baffled/ unbaffled mixing.

To study the mixing characteristics of give solid/liquid mixture.

Utilities Required :

Electric Supply : Single Phase, 220 V AC, 0.5 kW

Water Supply.

Drain

Technical Details :

Tank: Material Stainless Steel. Dia. 300mm, Depth 400mm (approx.)

Stirrer: SS Impeller with SS Shaft coupled to Standard make FHP Variable Speed Motor and Drive.

Agitator: Stainless Steel shaft & impellers (i.e. one propeller & one turbine)

Baffles: Material Stainless Steel, 4 Nos. 2" width. (detachable).

Sampling point: 4 Nos. at random locations.

Control Panel Comprises of:

RPM Measurement: Digital RPM Indicator, Non Contact type with Proximity sensor.

Digital Voltmeter: 0-300 Volts

Ammeter: 0-5 Amps.

Naugralabequipments

Website: www.naugralabequipments.com, **Email:** sales@naugralabequipments.com

Address: 6148/6, Guru Nanak Marg, Ambala Cantt, Haryana, India. **Phone:** +91-9896600003