

DRILLING ENGINEERING LABORATORY

This laboratory is equipped with latest equipment covering a wide range of Drilling Engineering experiments. Equipment details are given below:

DEAD WEIGHT HYDRAULIC FILTER PRESS

Dead weight hydraulic filter press is used to measure filtrate loss and mud cake thickness associated to a mud sample. It makes use of pressure generated by a dead weight to force the mud present in a cell through a filter paper and screen assembly.



Marsh Funnel

Funnel is used to measure, viscosity of drilling mud. Drilling mud viscosity plays a very important role in drilling, as far as lost circulation control and efficient cutting removal is concerned. Marsh funnel provides an easy and convenient way to keep a close check on drilling mud viscosity.



Mud balance

Mud balance is used to measure density (weight) of mud, cement and other liquids/suspensions/slurries. It consists of a graduated beam with a bubble level and a weight slider along its length and a cup with a lid on one end.



Resistivity Meter

Resistivity Meter is used to measure the resistivity of mud, mud filtrate and filter cakes/semisolids/mud solids. For measurement of sample resistivity, a known dc current is applied to sample through electrodes and potential drop is recorded. This in turn gives resistance/resistivity of the mud sample.



RETORT KIT (10ML/50ML)

The retort kit provides a means for separating and measuring the volumes of water, oil, and solids contained in a mud sample. Retort kit works on the principle of distillation.



RHEOMETER

Rheometer is used to measure the rheological properties of fluids, suspensions and slurries. It is particularly used for those fluids which cannot be defined by a single value of viscosity and therefore require more parameters to be set and measured than is the case for a viscometer. The measurements acquired through rheometer, include plastic viscosity, gel strength and yield point.



SAND CONTENT KIT

Sand content kit is used to measure sand contents in a mud sample. Drilling mud is prone to get contaminated by sand during drilling, this kit comes in handy to give a prompt and reliable sand volume percentage in mud.



VISCOMETER

Viscometer is used to measure rheological properties of fluids, suspensions and slurries. Viscometer measurement outputs include, plastic viscosity, gel strength and yield point.

