OPERATIONAL MANUAL

PERMEABILITY METER

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1 Application

- To measure the permeability number of green moulding sand, co2 sand & no bake sand.

2 Description

- The equipment consists of water drum fixed on the base, calibrated & balanced air drum, 3 ways manually operated valve (OPD valve), sealing boss with rubber seal & water manometer.
- Large orifice which is to be fixed on sealing boss (small orifice used to measure permeability below 50 : on customer demand)
- Permeability standard chart to read the Permeability reading.

3 Pre-Setting

- Keep the equipment on plane platform, remove the air drum, close the opening of the pipe inside the water drum by thumb & fill the DISTILLED WATER in the water drum up to the W marked level. Insert air drum slowly in the water drum.
- Ensure that the water should not go in the pipe of water drum.
- To fill the water in manometer, loose the water inlet screw provided at left side of manometer, fill the water just above the 0 mark of manometer scale, tight the water inlet screw.
- Maintain the water level to 0 by slowly removing the excess water from water outlet screw at front side of the manometer. Tight the screw as water level matches to 0.

4 Operation

- Prepare the standard (50 x 50) sand specimen on sand rammer, along with the specimen properly seal the tube in inverted condition on rubber of sealing boss.
- Keeping 3-way valve on **D** position lift the air drum, holding the air drum in lifted condition take the valve to **O** position & leave the air drum, it will float in the water.
- Take the valve to **P** position & see the water level reading on manometer scale. Find out the corresponding Permeability reading by using standard permeability chart fixed on the water drum.

5 Precautions

- Keep the equipment in clean area.
- Always lift the water drum keeping 3-way valve on **D** position.
- Before removing the water from water drum, remove the water from manometer by means of water outlet screw to prevent water entrance in air passage of manometer.
- Do not hold manometer while lifting/shifting the equipment as it may damages the glass tube.