

LOSSES DUE TO PIPE FITTINGS, SUDDEN ENLARGEMENT & CONTRACTION (EE-1526)

The set up consists of a ½” bend and elbow, a sudden expansion & sudden contraction fitting from 15mm to 25 mm, ball valve and gate valve, Pressure tapings are provided at inlet and outlet of these fitting under test. A differential manometer fitted in the line gives pressure loss of individual fitting.

Present set-up is self-contained water re-circulating unit, provided with a sump tank and a centrifugal pump etc. Flow control valve and by-pass valve are fitted in water line to conduct the experiment on different flow rates. Flow rate of water is measured with the help of measurement tank and stop watch.

SCOPE OF EXPERIMENTATIONS:

- To determine loss of head in the fittings at various water flow rates.
- To measure the loss coefficient for the pipe fittings.

UTILITIES REQUIRED:

- Water Supply.
- Drain
- Electricity 0.5 kw, 220 V AC, Single Phase.
- Floor Area 1.5 x 0.75 m.



TECHNICAL DETAILS:

- Sudden Enlargement : From 15mm to 25mm
- Sudden Contraction : From 25mm to 15 mm.
- Bend : ½”
- Elbow : ½”
- Ball Valve : ½”
- Gate Valve : ½”
- Water Circulation : FHP Pump, Crompton/Standard make.
- Flow Measurement : Using Measurement Tank with Piezometer, Capacity 25 Ltrs.
- Sump Tank : Capacity 50 Ltrs.
- Stop Watch : Electronic
- Control Panel Comprises of standard make On/Off Switch, Mains Indicator etc.
- Tank will be made of Stainless Steel.
- The whole set-up is well designed and arranged in a good quality painted structure.