

THEORY

1. The theory of the present experiment is based on the following assumptions:

- (i) The system is in a steady state.
- (ii) The flow is laminar.
- (iii) The velocity profile is parabolic.
- (iv) The temperature is uniform across the cross-section.
- (v) The pressure is constant across the cross-section.
- (vi) The fluid is incompressible.
- (vii) The fluid is Newtonian.
- (viii) The fluid is isotropic.
- (ix) The fluid is homogeneous.
- (x) The fluid is continuous.

APPARATUS

1. A glass tube of diameter 10 mm and length 100 cm.
2. A reservoir of water.
3. A manometer.
4. A stopwatch.
5. A thermometer.
6. A balance.
7. A scale.
8. A ruler.
9. A vernier caliper.
10. A micrometer screw gauge.

EXPERIMENT

