FLUID MECHANICS

FLUID STATICS AND PRESSURE MEASUREMENT

DL DKL291

The system is designed for the study of static fluid and measurement of pressure with different types of piezometric tubes. It also features level measuring elements such as gauge scales and level meter. (Limnimeter)

It has a transparent container to distribute water through valves and pipes and it is passed into the various columns. One water column has a tilting system, so that it is possible to clearly see the effect on different possible inclinations.

Both in water columns and in the tank there is a graduated scale to display the water height.
A level meter (Limnimeter) is also provided to accurately measuring the water level.

TRAINING OBJECTIVES

- Study and checking the hydrostatic paradox.
- Comparison between absolute and relative pressure gauges.
- Utilization of the piezometer tube
- Measurement of pressure with the following types of gauges:
    - U type
    - Inverted U type
    - Inclined type
    - Differential type
- Using Limnimeter for measuring the water level.
- Using graduated scales for determining the level of water.
- Study of the influence of the air inside the pressure gauges.
- Study of the load losses

TECHNICAL DATA

Water tank:

- Storage capacity: 4 liters
- Max. height: 560mm
- Inner diameter: 94mm

Manometer:

- U shape manometer: scale 460mm
- Piezometric tubes: scale 460mm
    - Two parallel type
    - Two with variable section
- Inclined manometer: scale 460mm, four positions.
    - 5°
    - 30°
    - 60°
    - 90°

Other elements:

- Limnimeter: Maximum capacity reading of 150mm
- Check valve