HIGH-TEMPERATURE STEAM TENSION
Mod. F-TV-1/EV

45-A

DESCRIPTION

Water is heated inside a closed chamber under pressure; water will vaporize when the pressure inside the chamber corresponds to the steam pressure at that temperature.
Heat of vaporization is determined at various temperatures from the measure of steam tension versus temperature.

TRAINING PROGRAM

- In-depth concepts related to:
  - Boiling point
  - Heat of vaporization
  - Clausius-Clapeyron equation
  - Van't Hoff's law
  - Carnot cycle
- Measuring the steam tension versus temperature
- Calculating the heat of vaporization at different temperature starting from measured values
- Determining the boiling point at normal pressure by extrapolation

TECHNICAL SPECIFICATIONS

- Metal structure including a cylinder equipped with a pressure gauge and hole for thermometer
- Heating unit, 500 W; maximum temperature 500°C, 230 V
- Pipette with rubber bulb
- Laboratory thermometer -10°C - +250°C
- Pressure gauge 0 - 60 bar
- Pressure transducer for connecting the data acquisition system

SUPPLIED WITH

THEORETICAL - EXPERIMENTAL HANDBOOK

OPTIONAL

- **EVLAB DATALOGGER mod. EVS-EXP/EV** including **SOFTWARE EVLAB WORKSPACE mod. SW-F-TV-1/EV** for a total control of interactive experiments
- 1 Thermocouple **mod. EVS-06/EV**
- **PERSONAL COMPUTER**