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| 01 cooling water connection, | 06 condenser, |
| 02 evaporator pipe, | 07 hot water expansion vessel, |
| 03 shut off valve, | 08 Thermometer for hot water feed, |
| 04 water jet vacuum pump, | 09 Switch for heater and pump, |
| 05 collector with manometer, excess pressure valve and bleeding, | 10 Circulating pump, |
| | 11 Electrical heater with thermostat |

Description

The process of evaporation in heated pipes that occurs in water-tube boilers can be demonstrated. The different phases that appear during evaporation in the pipe can be clearly seen. The double-wall glass evaporation pipe allows the evaporation process to be observed closely. Hot water flows through the outer pipe and evaporates the medium in the inner pipe. The non-toxic liquid used starts to evaporate at 40 to 50°C. Low system pressures can be generated with the built-in water jet pump.

The pipe systems are clearly laid out on a metal panel. The hot water circuit consists of an expansion vessel, a circulating pump and heater. An evaporation pipe, vapour collector, watercooled condenser and return pipe form the evaporation circuit.

Features

- Compact, sturdy, Model
- Full glass design for observation of water/vapour flow.
- Simple design.

Experiments

Note: Specifications are subject to change.

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Evaporation Flow:

- Single phase liquid flow
- Bubbly flow
- Slug flow
- Annular flow
- Film boiling
- Drop flow (mist)
- Single phase vapour flow

Effect on the evaporation process:

- Flow rate
- Temperature
- Pressure

System Components

- Cooling water connection,
- Evaporator pipe,
- Shut off valve,
- Water jet vacuum pump,
- Collector with manometer, excess pressure valve and bleeding,
- Condenser,
- Hot water expansion vessel,
- Thermometer for hot water feed,
- Switch for heater and pump,
- Circulating pump,
- Electrical heater with thermostat

Operation & Maintenance Manual

Self-explanatory operating & maintenance manual will be provided. This will include Theory, operating procedure, standard results, and maintenance procedures.

Service Required at Site

- Electric supply 230V AC, 50 Hz
- Water line