

Thermosiphon reboiler with inserts

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Experimental Setup

- Investigation of thermosiphon reboiler with inserts
- Natural and forced circulation possible
- Reboiler with three evaporator tubes
- Evaporator tube geometry: $d_a \times s \times L = 20 \times 2 \times 1500 \text{ mm}^3$
- Heat transfer surface: $A_a = 0.283 \text{ m}^2$
- Heating side: saturated steam
- Product side: water, water-glycerol (other media are possible)

Operating Range

- Aqueous solution
- Operation Pressure: 0.1 ... 1 bar abs
- Steam Temperature: 65 ... 180 °C
- Heat duty: 0 ... 6 kW
- Static liquid head: 75 ... 130 %

Measured parameter

- Level measurement in vapor-liquid separator
- Temperature and pressure
- Density of circulation flow
- Mass flow rates of circulation flow
- Weight of steam condensate
- Weight of top product condensate

Piping and instrumentation diagram

