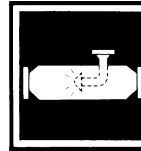


Instructions for Installation and Maintenance

GESTRA® Desuperheater KD 13 (Water-Bath Desuperheater)



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General

GESTRA water-bath desuperheaters are used in plants where only superheated steam is available, but saturated steam required, e. g. for heating systems in all branches of industry, for drying calenders in the paper industry, moistening plants in the textile industry etc.

Operation

Superheated steam is injected into the water contained in the desuperheater. In passing through the water the superheat energy of the steam is given up to the water. Simultaneously part of the water evaporates which is replenished with feed water. Before leaving the desuperheater the steam passes through several devices which separate the water from the steam so that the steam content is more than 98%.

An on-off control is provided to keep the water level in the desuperheater within the determined limits. Cold water is added by a feed pump or through a solenoid valve when the available feed water pressure is sufficient.

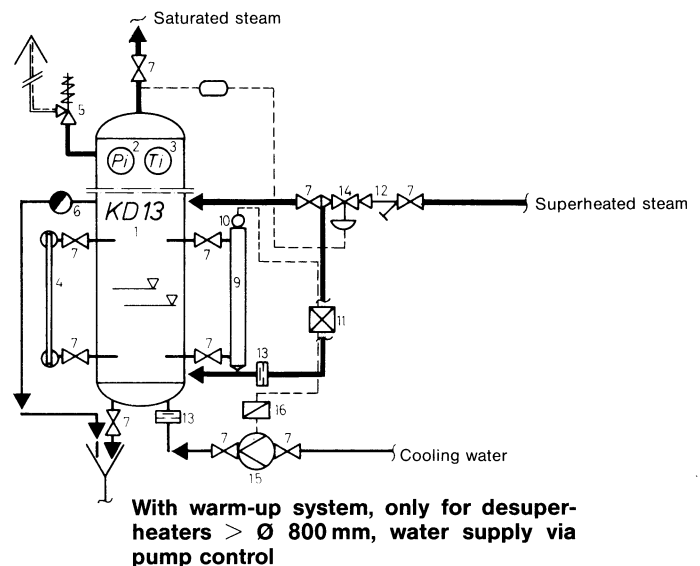
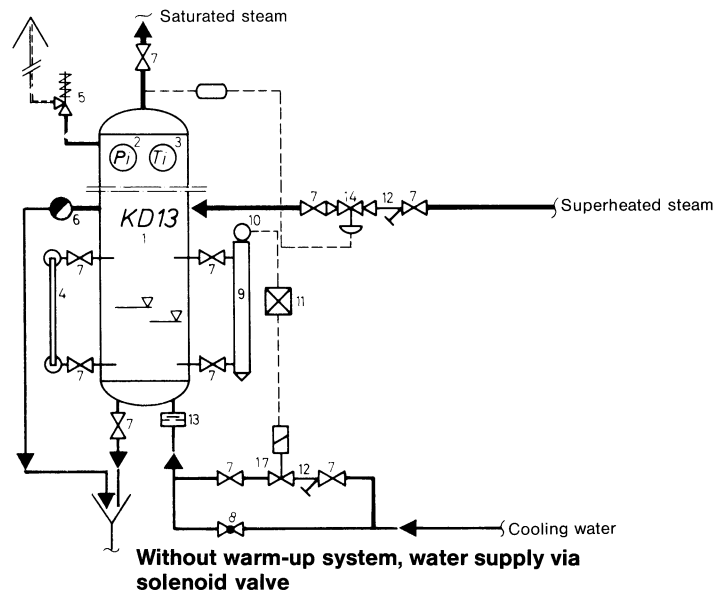
Installation and Commissioning

1. Consider installation instructions supplied for valves and pumps fitted to desuperheater.
2. Before start-up check all pipeline connections and wiring.
3. Remove protection for transport from safety valve.
4. Close manual stop valves in superheated and saturated steam lines.
5. Open valves for level control and level indicator.
6. Switch on level control. Fill desuperheater until the water level reaches the high level determined by the shortest tip of the level-control electrode. (The electrode tips are supplied in the length required.)
7. Warm up desuperheater, if it is provided with a corresponding system:
Slowly open stop valve in warm-up line taking care that the noise produced by the condensing steam will not become too loud. As soon as the water in the desuperheater has reached boiling state, the desuperheater is ready for operation.
8. Fill water-seal pot of pressure-reducing valve with water. Adjust reduced pressure to the desired value in accordance with instructions for installation. Slowly open stop valves upstream and downstream of pressure-reducing valve.
9. The complete plant is now ready for operation. Slowly open stop valve in saturated steam line.

10. During first start-up of desuperheater check all handhole covers, connecting flanges and valves for tightness. If necessary, retighten bolts and fixing studs while warm.

11. The desuperheater should be purged from time to time. The intervals depend on the quality of the water.

Examples of Installation



Items:

- 1 = Desuperheater
- 2 = Pressure gauge
- 3 = Thermometer
- 4 = Water-level indicator
- 5 = Safety valve
- 6 = Float trap
- 7 = Stop valves
- 8 = Stop valve for bypass

- 9 = Measuring pot
- 10 = Level-control electrode
- 11 = Amplifier
- 12 = Pipeline strainer
- 13 = Non-return valve
- 14 = Pressure-reducing valve
- 15 = Feed pump
- 16 = Three-phase, air-type contactor
- 17 = Solenoid valve



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