



# THERMAL DEAERATION

To avoid corrosion in steam generation the deaeration of the feed water in the boiler house becomes necessary. Both the additional feed water and the returned condensate are thermally deaerated. The systems are categorized according to capacity, requested residual oxygen content and load fluctuations.

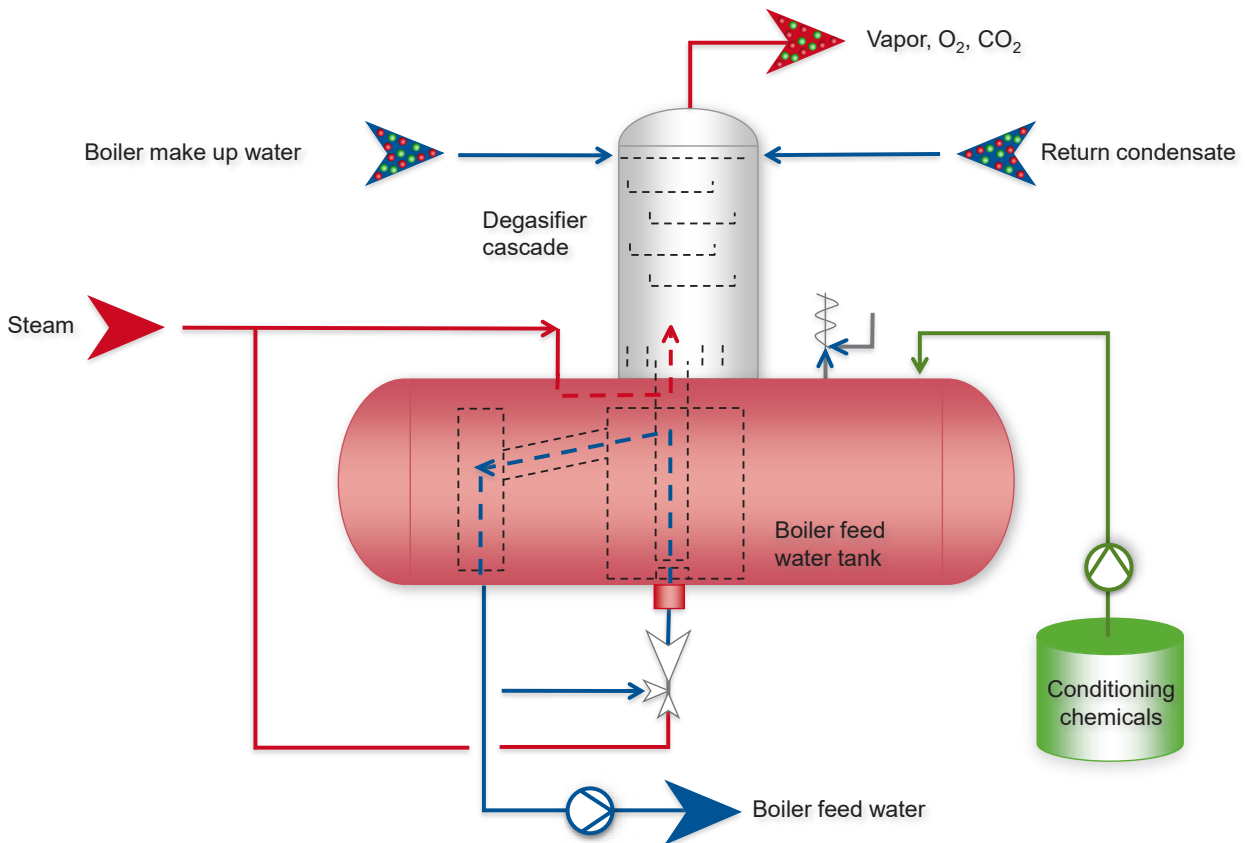
Small deaeration systems are equipped with filling material which is passed by the steam. Load fluctuations between 50 and 100% are possible with a residual oxygen content of 0.1 ppm. The one-stage deaeration system contains a degasser dome with trickler plates.

Their size and number depends on the flow and energy capacity required. Through the intensive contact of water and steam a residual oxygen content of 0.03 ppm will be achieved.

It is allowed to have load fluctuations between 30-100% of the nominal capacity. The water from the degasser of the two-stage deaeration systems is heated again with fresh steam in the second stage, the so-called post deaeration and leading directly to the feed of the boiler.



## 2-Stage Thermal Deaerator



The fresh steam is injected via a steam ejector. The water is sucked from the edge of the storage tank by the ejector and reheated. When starting up the system a heated and well deaerated water will be available after a very short time. The achievable residual oxygen content is < 0.02 ppm.

The system is capable of working over a load range of 0-100%. This process is also best suitable when applying closed condensate systems operated under high pressure.



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