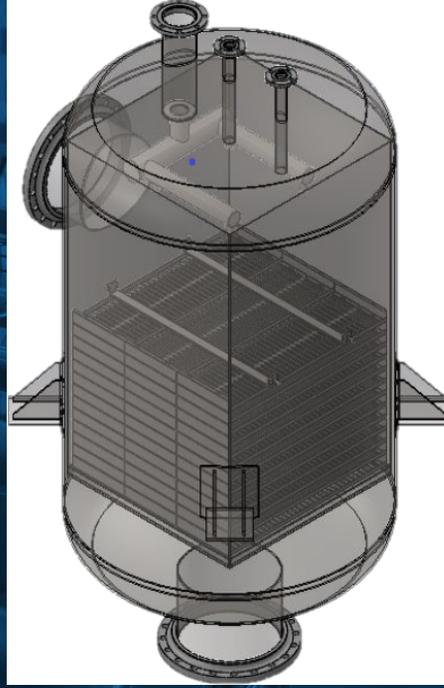




# eneva

Energy Engineering

# FEED WATER DEAERATORS



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# FEED WATER DEAERATORS

- Thermal deaeration is the process of removing non-condensable gases (O<sub>2</sub>, CO<sub>2</sub>, .. etc) from the boiler feed water by heating it to a predefined temperature. Removal of these gases is important in boiler feed water as these gases promote corrosion in the boiler or steam/condensate system.
- An additional benefit of a deaerator is the high water feeding temperature to boiler, so risk of low temperature corrosion on the smoke side is decreased and thermal shocks are eliminated in the boiler.
- In thermal type deaerators, make up water is heated and deaerated in head tray section and then collected in lower storage section. Pressure is maintained on the whole deaerator system by restricting the escape of steam outlet through the atmospheric vent to allow a build-up of pressure within the vessels. By maintaining this back pressure, water temperature can be carried as high as possible, thus securing complete deaeration of the water.
- To increase deaeration efficiency, special internal spray nozzles and removable trays could be used as required. Corrosive steam-air flow is just in contact with the stainless steel tray housing.
- Vessels could be hydrotested in accordance with EN 13445 or ASME code also accompanied by third party. Prior to delivery, exterior surfaces of the water storage section and outer head will be cleaned and prime painted with inorganic zinc.

## PRODUCT SPECIFICATION

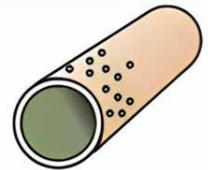
- Design and manufacturing from 1 up to 200 tph deaerating capacity
- Design pressure from vacuum up to 6 barg
- Sprey + cascade tray combination
- Guaranteed oxygen removal up to 7 ppb (0,005 cc/L)
- Perfect design for optimal mass & heat transfer + O<sub>2</sub> removal
- All tray internals and tray housing is stainless steel
- All trays and internals are accessible and removable from manhole
- Design acc. to EN 13445

## DELIVERY OPTIONS

- Storage tank up to customer need
- Vent condenser up to request for heat recovery
- Completely stainless steel head option
- Armature and instruments
- Control panel and PLC
- Thermal insulation or insulation clips
- Design acc. to ASME Sec. VIII Div. 1
- PED 2014/68 EU CE Certification

### OXYGEN CORROSION

Small hollows at water side of boiler tubes are typical sign of O<sub>2</sub> corrosion.



### CARBONDIOXIDE CORROSION

Longitudinal slits inside condensate pipes are typical sign of CO<sub>2</sub> corrosion.

