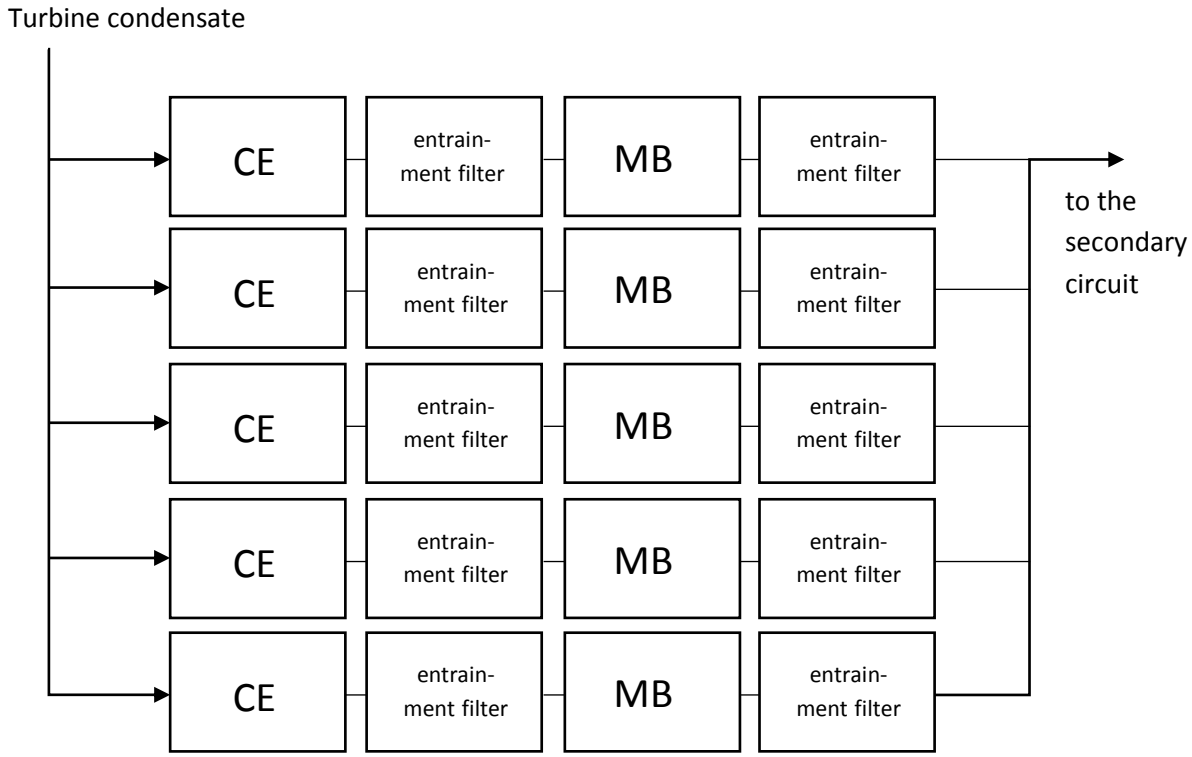
System of turbine condensate deironing and desalting LDF

System of turbine condensate deironing and desalting LDF is intended for condensate purification with purpose of the secondary circuit WCR maintenance.

The system consists of five H-cation deironing exchangers with strong-acid cation-exchange resin (condensate is purified from suspended and dissolved corrosion products).There is condensate partial desalting simultaneously. Rinsing cation-exchange resin by desalted water is provided at bringing H-cation deironing exchanger into operation.

After the cation deironing exchangers the condensate is introduced on MB with strong-acid cation-exchange resin and high-basic anion-exchange resin for full desalination. The entrainment filters are installed after all cation exchangers and MB for filter material catching in case of draining system damage.



Scheme 1. The principal technological scheme of LDF system
(CE – cation exchanger; MB – mixed bed)

If electrical conductivity of condensate after MB is more then control level, the filter is disconnected. Hydraulic discharge of filter material is provided in regeneration and cleansing system of condensate purification filters. Rinsing ion resin is provided by turbine condensate at bringing MB into operation.

Four filter lines are working at full purification, fifth line is reserve.