

The steam generator blowdown system LCQ-1

The steam generator blowdown system LCQ-1 is intended for water removing from steam generator for purification with purpose of the secondary circuit WCR parameters of corrosion products and dissolved impurities. The system LCQ-1 provides steam generator draining and drawdown in steam generator if it's necessary.

The LCQ-1 system consists of two individual for each steam generator blowdown pipelines that are intended for carrying out constant and periodic blowdown. Water extraction for constant blowdown is carried out from steam generator salt compartment. There are six extraction points from steam generator vessel and pipe manifold for periodic blowdown. Then water goes to blowdown expansion tank. After that flashed vapour is supplied to the secondary circuit LAA deaerator. Blowdown water is supplied to blowdown water purification filters of LCQ-2 system through cooler-regenerator and final cooler.

After purification blowdown water is supplied by pump to cooler-regenerator, where it is heated and then it to the secondary circuit LAA deaerator.

The draining of steam generator is carried out at shutdown reactor. In depend on boiler water quality the draining of steam generator is carried out to:

- the drain tank of the drain water collection and return system (LCM);
- the control tank of the control system of condensate purification filters wastewater (LDL) at the steam generator chemical washing on the secondary circuit;
- the LDT system tank at the steam generator chemical washing on the secondary circuit;
- the floor drain treatment system (KPF) tank if purification is necessary and if boiler water activity exceed control activity level.