

Automatic chemical control systems QUA, QUB, QUC, QUK

Automatic chemical control system (ACC) is delivered for on-line control chemical parameters of feed water (QUA), steam systems (QUB), condensate systems (QUC), blowdown water (QUK) to get operative information about steam generator feed water and blowdown water, condensate quality parameters and their accordance with the secondary circuit WCR demands.

The system includes sampling heatexchanger, sample preparation device, armature, pipelines. The ACC systems of the secondary circuit provides the same functions as the ACC systems of the primary circuit. QUA system is on constant duty at unit start-up and operational period on all capacity levels. The control parameters of QUA, QUB, QUC, QUK systems are showed in table 1.

Table 1 – The control parameters of QUA, QUB, QUC, QUK systems

| ACC system | Control parameters |
|------------|--|
| QUA | Oxygen concentration after deaerator, specific electrical conductivity H-cation exchange sample of feed water after high-pressure heater, hydrazine concentration after high-pressure heater, feed water pH value after high-pressure heater |
| QUB | specific electrical conductivity H-cation exchange sample of steam |
| QUC | Sulfate-ion concentration in output from standpipe; specific electrical conductivity H-cation exchange sample and dissolved oxygen concentration, sodium, sulfate-ion of condensate after condensate pump (CP) of the first stage; specific electrical conductivity H-cation exchange sample from LCM drain tank; sulfate-ion concentration after each MB of condensate purification plant |
| QUK | specific electrical conductivity H-cation exchange sample of blowdown water; sodium, chloride-, sulfate-ions in blowdown water from steam generator salt compartment; pH value of blowdown water from salt compartment |