

## APPLICATION NOTE

# MONITORING EFFICIENCY OF WATER/STEAM QUALITY IN POWER PLANTS

The Polymetron 9523 sc dual channel conductivity transmitter offers non-linear temperature compensation and directly displays and outputs the difference between two conductivity probes

### Application Description

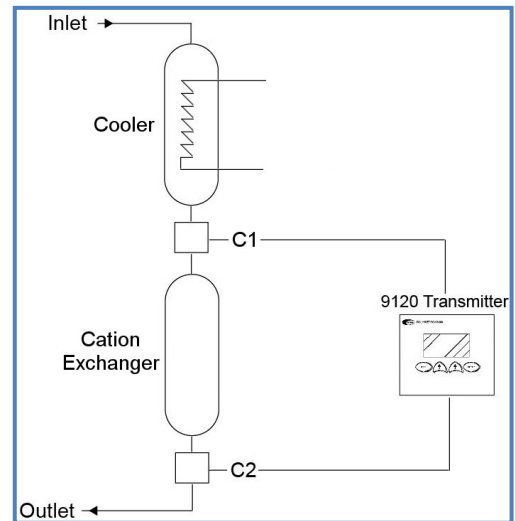
In all power plants, monitoring of conductivity is essential to minimize circuit contamination by soluble impurities in water and steam. In applications where water conditioning is completed using ammonia, the Polymetron 9523 sc dual channel conductivity transmitter can directly monitor the conductivity due to ammonia.

### Installation recommendations

The setup of cells is as follows:

C1 = Specific conductivity

C2 = Cation conductivity



Due to the high pressure and temperature of steam, a sampling system is required to reduce both the pressure and temperature.

- Direct measurement on C1 gives total conductivity, including impurities, ammonia and water (H<sub>2</sub>O).
- Direct measurement on C2 gives only conductivity of impurities, H<sub>2</sub>CO<sub>3</sub> and H<sub>2</sub>O.

The Polymetron 9523 sc conductivity transmitter with Command 1 Argument 2 selected, gives the conductivity difference (C1 – C2), which is equivalent to the conductivity due to ammonia (and also the difference between neutral salts and acids).

## Recommended system components

Model	Description
9523.99.09P2	Dual conductivity transmitter
8315=A=0000	2 electrodes conductivity sensor k=0.01, ¾ NPT Thread with test certificate (8310 can also be used)
9120=A=8010	10m cable and IP65 connector for conductivity probe and 9120/23 (5m and 20m also available)
8318=A=0001	Stainless Steel flow chamber with 1 x ¾ FNPT bore + 2 X ¼ FNPT bores

### FOR TECHNICAL ASSISTANCE, PRICE INFORMATION AND ORDERING:

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