

Demand Moore Reliability

Remote I/O Solution for Boiler Temperature

A large and long established chemical plant in New South Whales, Australia had been monitoring boiler tube thermocouples from multiple process boilers for more than 20 years. Originally all Type K thermocouples were wired directly back to the DCS. Over time they started to see drifting, errors and even out of range measurements due to the degradation of their long thermocouple extension wire runs.

One proposal was to replace the T/C extension wire but this was an expensive proposition and would eventually result in the same problematic long-term measurement errors. Their solution was to use a localized NCS remote I/O solution at each boiler location and run a high level digital signal back to the DCS. The NCS directly accepts the thermocouples and resolves the drifting, extension wire oxidation, RFI/EMI noise issues and costly long wire runs. The NCS can be installed in Div 2/Zone 2 locations and has ambient operating temperatures ranges of $-40-85^{\circ}\text{C}$ ($-40-185^{\circ}\text{F}$).

