

## CASE STUDY

# STABLE AND RELIABLE STEAM/WATER INTERFACE LEVEL MEASUREMENT ACHIEVED WITH HYDRASTEPEP

### INDUSTRY

Power

### PRODUCTS

2468 Hydrastep



### RESULTS

- No more leaking electrodes causing false trips
- Improved reliability over previous system
- Reduced maintenance requirements and associated risks to personnel

### CHALLENGE

The customer had been using a locally sourced electronic gauging system for both level indication and level alarms on their plant's steam drums. The system was configured to give Hi and Hi-Hi alarms and to shut down the boiler in case of emergency. However, within two years of operation they had experienced leaking electrodes, and some of these leaks had then caused false alarms and nuisance trips which were proving very costly.

Examination found that the electrodes had leaked either through the seal between the electrode and the column, or through the electrode itself. These electrodes had to be replaced which then led to further wear on the threads, subsequently increasing the rate at which they leaked. This also caused unnecessarily high maintenance costs, and an increased risk to personnel due to additional maintenance on a high pressure and temperature system. More importantly, the false alarms meant they were unable to trust the system to trip the boiler on an alarm condition.

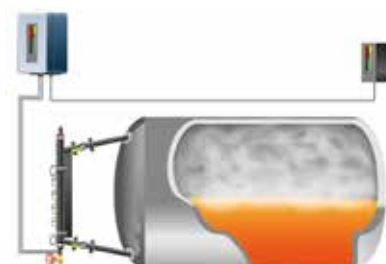


*Hydrastep during installation*

### SOLUTION

The power plant replaced their existing systems with Mobrey Hydrastep 2468 Electronic Gauging Systems for steam drum level measurement. They installed two Hydrastep systems on each drum and used the outputs for Hi and Hi-Hi alarms to trip the boiler, and remote displays in the control room for continuous level indication.

The Hydrastep uses similar principles to the customer's previous system by measuring the resistance at a series of electrodes within a column attached to the drum. This determines the water/steam interface level within the drum. However, the Hydrastep system has many years of proven use from thousands of systems installed globally and has proven itself to be highly reliable. The system's electrodes comprise exotic metals and high quality ceramics brazed under very specific conditions.



*Illustration showing the Hydrastep system*



In over a year since installing the Mobrey Hydrastep 2468 the plant had not reported any leaks, false trips, or false boiler shut downs. As the electrodes were no longer leaking, the need for maintenance was greatly reduced, subsequently reducing costs and unnecessary risk to personnel.

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