

Thermal Power Plant Reduces Maintenance Costs and Risk of Unplanned Shutdown

RESULTS

- Reduced maintenance costs
- Reduced risk of unplanned plant shutdown
- Greatly reduces opportunity for undetected failure
- Common solution eliminates sizing errors



Conductivity probes were found to greatly reduce the risk of mechanical failure.

APPLICATION

High and low level alarms for supercritical steam.

CUSTOMER

A coal fired power station in Hunan Province, China

CHALLENGE

A coal fired power station in Hunan Province, China produces 1320MW of electrical power from two units. The power plant had been using mechanical float switches for high and low level alarms on high pressure heaters and at other key points within the plant. The process conditions are typically very high temperature and pressure for which safety and reliability are critical.

The Hunan power plant was dissatisfied with the mechanical switches that were being used. They found that the switches, which relied on moving parts, would quickly wear and fail under the demanding high process temperatures. This increased the risk of unplanned plant shutdowns and maintenance costs because they routinely needed to replace parts after only two years of operation.

The power plant wanted to find an alternative technology to replace the mechanical float switches. They needed a solution that would withstand the high temperatures and pressures and, above all, would be highly reliable. Furthermore, they wanted a common solution that would be independent of the process conditions and would not be sensitive to differing fluid densities.

SOLUTION

The Hunan power plant chose to install Mobrey Hydratect 2462 Steam and Water detection systems. The Mobrey Hydratect is designed and built for this application. The electrodes can withstand the elevated temperatures and pressures typical of superheated steam. The electronics features patented phase detection to indicate any internal faults combined with component redundancy to achieve a highly reliable alternative to mechanical float switches.

The plant ordered 50 Mobrey Hydratect controllers with electrodes and cables to replace mechanical float switches throughout the power station.



Mobrey Hydratect's are installed on the steam lines.



Mobrey Hydratect 2462 Water and Steam Detection System

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