



Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



Solutions

Levelflex M FMP45 on Feed Water Heaters- Power

Levelflex M FMP45 high pressure/temperature units measure condensate water levels for steam production



Typical power plant



Levelflex M FMP45



Power lines

Levelflex M FMP45 on feed water heaters in a coal fired power plant prevents overflowing tanks.

Company profile

Coal fired power plant located in Essexville, Michigan is one of the nation's largest combination utilities. They provide electric and natural gas to more than 6 million of Michigan's 9.5 million residents in all 68 counties of Michigan's Lower Peninsula.

The customer is also a principal subsidiary of an international corporation that is a leader in energy infrastructure businesses worldwide.

Previous instrument

The customer was using float and sight glasses. With this measuring method, the floats would set an alarm and the sight glass had to be watched. These methods only helped the customer when it was already too late and the tanks would overflow. The customer wanted more of a preventative method.

Solution

Endress+Hauser recommended the Levelflex M FMP45.

Application description

An instrument is needed to measure the condensate level in the heater so the customer knows when to open the valves in order to maintain condensate level. The customer needs to control the process and monitor levels through a DCS system.

Instrument description

The Levelflex FMP45 is a top mounted compact level transmitter that transmits micro impulse radar signals on a rod or cable. The pulses are reflected by the product surface, received by the electronics, evaluated and converted into level information. Fluctuations in density, temperature, and foam do not effect the measurement.

Measuring principle

The Levelflex is a "downward-looking" measuring system that functions according to the ToF method (ToF = Time of Flight). The distance from the reference point to the product surface is measured. High-frequency pulses are launched and guided down a metal cable/rod, which acts as a surface wave transmission line. The pulses are reflected by the product surface, received by the electronic evaluation unit and converted into level information. This method is also known as TDR (Time Domain Reflectometry).

Result

The plant no longer has overflows and is now able to receive level readings in their DCS system and control the process.

The customer is now installing a series of Levelflexes and is very pleased with its' results!

For more information, contact
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Levelflex M FMP45 installations on feed water heaters

ISO 9001:2000 Certified

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