

Emerson's Smart Wireless Products Prevent Breakdowns and Lost Production on Rotating Reactor at Coogee Chemicals

BENEFITS

- Smart Wireless transmitters replaced wired instruments on plant's rotating chemical reactor that failed frequently
- Control of the process and product quality are greatly improved
- Productivity has increased substantially



CHALLENGE

Coogee Chemicals in Australia produces a wide range of industrial, agricultural and mineral processing chemicals. Obtaining accurate pressure and temperature data from inside the plant's rotating reactor is very important to maintaining process control, but wired instruments were not dependable in this environment. The failure of seals on the slip-rings connecting wires to the rotating equipment allowed the entry of moisture into the instruments. Unreliable temperature and pressure measurements resulted in poor control of the reactor, which had to be shut down two or three times a week.

SOLUTION

The installation at Coogee Chemicals consists of two wireless instruments mounted on one end of a rotating chemical reactor and transmitting pressure and temperature data continuously to a nearby Smart Wireless Gateway. The data is passed from the gateway via Modbus communications to the programmable logic controller (PLC) controlling the process. More reliable inputs enable the PLC to improve both process control and product quality.

RESULTS

Emerson Process Management's Smart Wireless instruments mounted on a rotating reactor are credited with delivering reliable pressure and temperature measurements to prevent frequent reactor breakdowns and lost production time. Control of the process and product quality are greatly improved as a result, and productivity has increased substantially since the wireless instruments were installed in late 2007.

"The Smart Wireless solution provides a means of obtaining accurate pressure and temperature measurements from the moving vessel without having to connect wires to the measurement devices. Wireless delivers reliability where it wasn't available before."

Noel Shrubsall
Electrical Project Officer