

# Rosemount™ X-well™ Technology saves significant operational costs, improves product quality

## RESULTS

- Reduced annual operational cost by more than \$57,000
- Improved process efficiencies
- Improved product quality and document contracted agreement for product delivery



## APPLICATION

A cogeneration power and heating plant using gas turbine, steam turbine, heat recovery steam generator and control systems.

## CUSTOMER

DS Power Company, Ltd is a highly efficient, eco-friendly cogeneration plant. The company produces a stable power supply for the growing city of Osan, South Korea, district heating and cooling for 42,000 households and process steam to eight nearby factories. The company prides itself on its ability to provide environmentally friendly products using clean burning LNG fuel.

## CHALLENGE

DS Power Operations and Maintenance Teams spent over 160 hours a month doing manual rounds to visually check temperature gauges installed around the plant to ensure efficient operation and proper water temperature. To optimize the plants operations, DS Power wanted to automate temperature measurement for their multi-functional plant to help reduce the manual labor hours required to fulfill their contract to provide hot water at 100 °C to their local utility.

With their existing temperature measurement system installed, their Instrument Technicians spend 5 hours a day making manual rounds to record temperature measurement data from temperature gauges. Additionally, the maintenance team spent 2 hours each week visually checking the gauges for proper operation. DS Power also wanted an automated system to ensure that water delivered to the local utility was at the proper temperature of 100 °C and that the system was optimized to efficiently deliver products without wasting energy.

## SOLUTION

Emerson recommended Rosemount 648 X-well Technology temperature transmitters. X-well Technology's non-intrusive temperature measurement was easy to install and commission

**“X-well Technology can be commissioned in less than one hour per temperature point.”**



*Rosemount X-well Technology can be configured to fit pipe sizes from half inch to four foot diameters.*

## Cogeneration Plant - Power and Heating

without the need for cutting and welding pipes or worrying about wake frequency calculations. Plus, simple bolt-on installation allowed DS Power Maintenance Engineers to install the temperature points without process shut down and without the additional costs of hiring outside contractors for piping work. Because the plant is scheduled for expansion, future needs for temperature measurement can be easily added to seamlessly integrate into the plant's infrastructure.

The plant's immediate benefit is the ability to collect accurate temperature measurement that can be monitored from the control room, eliminating manual rounds and saving an estimated \$57,000 (USD) annually in unnecessary operational costs.

The new X-well transmitters were connected wirelessly using DS Power's existing Ovation Distributed Control System (DCS). Ovation's embedded advanced applications and proven industry-specific control routines assures optimized operations to maximize plant reliability and profitability.

### RESOURCES

#### White Paper

Get a copy of our White Paper at <http://emr.sn/NM27>

#### Flyer

<https://www.emerson.com/documents/automation/flyer-temperature-measurement-assembly-rosemount-x-well-technology-accurately-measure-process-temperature-without-a-thermowell-process-penetration-en-80370.pdf>

#### Videos

[Rosemount X-well How it Works](#)

[Rosemount X-well Overview](#)

[Rosemount X-well Non-intrusive Temperature Measurement](#)

*X-well Technology is available in wired and wireless versions and can easily integrate into an existing process without shut down or production loss.*



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