

Rosemount X-well Technology solves high viscous challenges

Results

- Reduce design complexity
- 40% reduction in total cost for instruments, installation and labor versus conventional temperature points.
- Reduce labor for routine inspection and ensure safe production at each oil field



Application

Heavy oil and steam assisted gravity drainage operation at the largest heavy oil field in China.

Customer

CNPC Fengcheng, the largest heavy oil field in China, with hundreds of wells in oilfields, extracting heavy and super heavy oil and bitumen.

Challenge

Temperature measurements were taken using handheld infrared temperature scanner and manually recorded which resulted in significant errors. With so many wells spread across the oil field, real-time tracking of temperature anomalies was a real challenge. This created a significant delay in communicating anomalous temperature readings and prevented teams from addressing problems in a timely manner. The traditional path to gather real time data and monitor temperature anomalies requires installation of intrusive temperature measurements. This requires the shut down of each production lines individually, cutting into the process, and installing traditional thermowells with temperature sensors.

Solution

Emerson recommended Rosemount™ 3144P HART temperature transmitter with X-well™ technology. The technology advances allowed Fengcheng oil field to install 5 new temperature measurements without the need for thermowell design, cutting into the process, creating new leak points, or shutting down production from any of the well sites. The new non-intrusive process temperature measurements allowed Fengcheng Oil Field to monitor the temperature excursions in real time. The solution was expanded to an additional hundreds of temperature points throughout Fengcheng's oil wells.

A flexible solution to design, install and maintain wellheads with real-time data to the control room.



No pipe cutting, wake frequency calculations or process shutdowns. X-well Technology is available in a durable enamel finish or stainless steel for extreme applications.

Resources

Emerson Automation Solutions Industries

Emerson.com/Oilandgas

Rosemount X-well Technology

Emerson.com/Rosemount-Xwell

White Paper

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

Flyer

[Temperature Measurement Assembly with Rosemount X-well Technology](#)

Videos

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

[Rosemount X-well Overview](#)

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

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00830-1100-4648 Rev AA

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