

OEM for Power Generation Equipment Reduces Maintenance Costs with Flexible Sensor Tip Design

RESULTS

- Decreased maintenance costs
- Reduced risk of plant downtime
- Decreased risk of damage to equipment

APPLICATION

Thrust and journal bearing metal temperatures

CUSTOMER

Leading turbine and compressor OEM in India

CHALLENGE

This OEM had a problem with measuring thrust and journal bearing temperatures for newly manufactured turbines and compressors. These temperature measurements must be closely monitored so that the bearings do not overheat and break.

The temperature sensors had to be inserted into the bearing housings with tight space restrictions. The rigid design of the sensor had an insufficient bending radius that led to sensor tip failure during installation, and vibration of equipment during load testing.

The rigid temperature sensor design resulted in increased maintenance costs due to frequent temperature sensor replacement. Unreliable bearing temperature measurements also risked damage to equipment, resulting in downtime for their customers.

SOLUTION

The rigid temperature sensors were replaced with customized Rosemount Application and Industry Solution (AIS) Sensors, which incorporated more flexible probes and sensor tips. The 5mm bending radius at the sensor tip allowed the OEM to monitor the temperatures within the tighter space confines around compressors and turbines.

The technology and implementation of the Rosemount AIS Sensors eliminated the problems experienced with the previous temperature sensors. This reduced maintenance costs, risk of damage to equipment, and downtime for this OEM's customers.



The Rosemount AIS Sensor allowed the OEM to monitor the temperatures within the tighter space confines around compressors and turbines.



Flexible Thermocouple Sensors 5mm, K Type Triplex (for Steam Turbines)

Flexible Pt100 Thin Film RTD Sensors 3.2mm Duplex (for Compressors)

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RESOURCES

Rosemount Application and Industry Solution (AIS) Sensors

<http://www.emersonprocess.com/rosemount/products/temperature/accessories.html>

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Emerson Process Management

Rosemount Division
8200 Market Boulevard
Chanhassen, MN 55317 USA
T (U.S.) 1-800-999-9307
T (International) (952) 906-8888
F (952) 949-7001

www.rosemount.com

Emerson Process Management

Blegistrasse 23
P.O. Box 1046
CH 6341 Baar
Switzerland
Tel +41 (0) 41 768 6111
Fax +41 (0) 41 768 6300

Emerson FZE

P.O. Box 17033
Jebel Ali Free Zone
Dubai UAE
Tel +971 4 811 8100
Fax +971 4 886 5465

Emerson Process Management

Emerson Process Management Asia Pacific
Private Limited
1 Pandan Crescent
Singapore 128461
T (65) 6777 8211
F (65) 6777 0947
Enquiries@AP.EmersonProcess.com

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For more information:
www.rosemount.com

