

Emerson's Smart Wireless Network Delivers Maintenance Savings, Prevents Unscheduled Shut Downs at Heavy Plate Steel Mill

BENEFITS

- Smart Wireless solution works reliably to protect assets despite harsh plant conditions
- More accurate and redundant data allows Usiminas to better maintain the roll bearings and avoid unscheduled shut downs



CHALLENGE

Usiminas (Usinas Siderúrgicas de Minas Gerais S.A.) in Brazil, one of the world's top steel producers, needed a solution to protect valuable plant assets and avoid unscheduled stoppages at its heavy plate mill in Ipatinga, Brazil. When roll bearings are damaged, it takes at least six hours to shut down the steel plate-making process and replace the set of backup rolls. Usiminas pays from \$40,000 to \$175,000 to repair each bearing. The company can also lose a minimum of 600 metric tons in production during such an event.

SOLUTION

Eight Rosemount® wireless temperature transmitters installed on the “backup” rolls that are part of the facility's process to produce steel plates measure the temperature of the roll bearing oil. A Smart Wireless gateway collects this critical information and transmits it to the company's distributed control system (DCS). Operators use this wireless data, along with the rolls' return oil temperatures collected by a hard wired network, to automatically monitor the state of bearing health and to keep the steel plate-making process running smoothly.

RESULTS

The self-organizing wireless network consistently provides Usiminas with data even though the temperature transmitters are subjected to extreme heat, water, oil and grease. Installation and commissioning of the new technology was quick and easy.

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Carlos Augusto Souza de Oliveira
Usiminas Instrumentation Supervisor