Honeywell Wireless Technology Helps SCA Ortviken Paper Mill Minimize Corrosion in White Water Stream

“Using online, real-time corrosion monitoring from Honeywell, we were able to view and minimize localized corrosion processes in white water stream.”

- SCA Ortviken Paper Mill

Benefits
By implementing Honeywell’s wireless corrosion monitoring solution, SCA was able to assess and minimize corrosion at its Ortviken paper mill. Honeywell’s wireless corrosion transmitters provided several benefits to SCA including:

- Inside view on processes leading to pitting corrosion and potential damages
- Ability to monitor several different corrosion monitoring points with only a few transmitters
- Wireless system offers high level of flexibility in reaching different corrosion monitoring points.

Background
Svenska Cellulosa Aktiebolaget (SCA) is a global consumer goods and paper company that develops, produces and markets personal care products, tissue, packaging solutions, publication papers and solid-wood products. Sales are conducted in some 90 countries. Sales in 2008 amounted to SEK 110 billion (EUR 11.5 billion). SCA had approximately 52,000 employees at the beginning of 2009. Located in Sweden, the Ortviken paper mill is SCA’s largest mill with a production capacity of 850,000 tons of paper on four paper machines. The Ortviken mill produces high-quality, light weight coated (LWC) and newsprint papers that are certified in accordance with the standards of the Forest Stewardship Council (FSC).

Challenge
Circulation and reuse of water reach in fiber and filler material, called “white water,” is of critical interest in the paper industry. Environmental regulations require paper mills to perform much more efficient water management than in the past.

Maximized reuse of every water stream in the paper mill (especially white water) led to serious corrosion problems in some of the paper manufacturing equipment at the Ortviken mill.

Several decades of research helped to achieve very high levels of corrosion protection, mainly due to new construction materials.

Solution
Honeywell and SCA worked together to determine the best way to assess corrosivity in white water stream which is considered one of the main corrosion hazards in the paper mill.

In order to detect real-time corrosion incidents, Honeywell proposed using its OneWireless SmartCET® corrosion monitoring transmitter. The corrosion probe was installed on a clear white water stream. With Honeywell’s OneWireless technology all issues related to cabling within the paper machine were eliminated and every 30 seconds corrosion parameters (general corrosion rate, pitting factor, Stern-Geary parameter, Corrosion Mechanism Indicator) were downloaded into mill’s DCS.”
Due to proper neutralization procedure and maintenance of constant pH level, decreasing in overall tendency for localized corrosion could be achieved.

Further examinations showed the key role of white water neutralizer in determining its potential for localized corrosion. Example of usage of different neutralizers (Figure 4) clearly shows importance of properly selected dosage rate and type of neutralizer. With new neutralizer (marked as B) strong decrease in pitting factor has been achieved. Moreover the base level of pitting factor fluctuations has also diminished.

Changes in pitting factor in white water stream

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For More Information
Learn more about Honeywell’s Smart CET Corrosion Transmitter visit our website www.honeywellprocess.com/Software or contact your Honeywell account manager.

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