Optical caliper sensor uses ground-breaking technology

More accurate measurement of caliper on-line, even on the most demanding of papers is provided by a non-contact optical caliper sensor launched by ABB QCS.

Described as ground-breaking, the optical caliper sensor is said to be based on revolutionary optical technology to provide more stability in the measurement process.

Accurate caliper measurement and control are critical for defining paper quality and achieving customer satisfaction, says ABB. Traditionally this has been achieved through the use of dual-sided contacting caliper sensors, but some paper applications pose severe challenges for contacting caliper measurement technology.

The device measures caliper without two-sided contact of the sheet, and without laser triangulation and the inherent inaccuracies that arise from penetration of the laser light into the sheet surface.

A different optical approach — confocal displacement measurement — is used that provides greatly improved measurement accuracy and stability.


Identify machinery performance and deterioration

Analysis of equipment performance in real time, enabling plant managers to identify the deterioration of critical machinery is possible with AMS Suite: Global Performance Advisor, which extends Emerson’s Online Machinery Monitoring solution.

It combines protection, prediction, and performance monitoring with process control, leading to improved availability and performance. A key component of PlantWeb digital plant architecture, the complete solution includes hardware, software and services and is targeted for key equipment, such as compressors, gas turbines, steam turbines, boilers, heat recovery steam generators, heat exchangers and pumps.

AMS Performance Advisor complements the Equipment Performance Monitor, a service-based application that provides expert analysis of equipment performance.

Identifying performance degradation of equipment can deliver significant cost savings, says Emerson. For example, if fouling causes a loss in heat rate, more energy will be required to drive the process. By identifying and preventing just one percent of actual energy loss, a plant can save approximately €90,000 annually for every 50 MW of energy. The real-time information available with AMS Performance Advisor helps users pinpoint opportunities for performance improvement that would otherwise go unnoticed.

“Monitoring the performance efficiency of turbo-machinery identifies ways to drastically reduce energy consumption and improve performance,” said Craig Llewellyn, president of Emerson’s Asset Optimization division. “Emerson continues to add capabilities that enhance asset performance and availability of critical plant assets to deliver improved financial results.”

For more information go to www.EmersonProcess.com/videos

For the interactive version of this magazine please visit: www.pmdmagazine.com

May/June 2009