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Analyzing sulfur levels in fuel



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Industrial™ solutions for enhanced terminal operations

6 Fuel knowledge: Analyze™ for low sulfur levels in fuel

Bill Johnson

The ABB PGC2007 on-line sulfur analyzer helps refiners comply with standards that dictate ever-lower levels of sulfur in fuel, especially gasoline.

11 Connected: solutions for enhanced terminal operations

Wilco Lengkeek

Almost as important as the oil flow in a petroleum terminal is the information flow. Managers depend on timely information to cope with rapid market changes and to help them ship safely and efficiently. But existing systems often become inadequate and are costly to replace. ABB's Industrial™ solutions for Enhanced Terminal Operations protect current assets and support future growth by automating information flow and integrating operations worldwide.

15 The right mix: Industrial™ improves gasoline blending at Preem refinery

Krish J. Arwika, Tomas Astrom, Eric Gildea

ABB's Industrial™ solutions for blending have enabled Preem's refinery in Gothenburg to automatically produce, optimize and analyze on-spec blends at the lowest possible cost. In addition to eliminating reblending, they have also reduced give-away and inventory.

21 Winning the battle with downtime

Tony Musgrave

In continuous manufacturing processes 90 percent of all potential failures are likely to be caused by just 10 percent of the installed equipment. The Risk Based Inspection (RBI) approach to preventive maintenance identifies and focuses on the areas of highest risk. The resulting time and cost savings are dramatic.



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Battling downtime – and winning!



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Verifying HVDC thyristor design



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MEMS relays – the start of something big

25 A synthetic test circuit for verifying HVDC thyristor design

Baoliang Sheng, Hans-Ola Bjarme

Correct reproduction of voltage and current stresses is fundamental when testing thyristor valves. To verify the design of a new valve, new testing methods are used which subject it to stresses equal to or higher than those encountered in service. This has resulted in more reliable valves and a huge saving in investment costs.

30 Optimize^{IT} model predictive control for boiler start-up (BoilerMax)

Manfred Rode, Rüdiger Franke, Klaus Krüger

Automation is indispensable for the operation of large steam generators. A new non-linear model-based predictive controller shortens start-up times while taking into account energy use and thermal stresses.

37 IEC 61850 meets Industrial^{IT}

Lars Andersson, Klaus-Peter Brand, Petra Reinhardt

IEC standards are important and mandatory for ABB. How do they interact with company-driven concepts in the domain of substation automation, where the new IEC 61850 standard meets the Industrial IT concept of ABB?

R&D digest

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