

ABB Review 1/2005

Pioneering spirits

Cover Stories

6

A revolution in high dc current measurement

ABB's state-of-the art fiber-optic current sensor, based on the Faraday effect, is a quantum leap in the area of high dc current measurements.

11

Form and Function

Embedding vacuum interrupters in epoxy resin helps ABB meet customers' requirements of making devices tough enough to withstand extreme environmental conditions.

14

The perfect cast

Discover how sophisticated and powerful simulation tools were used in the development and manufacture of ABB's new generation of outdoor reclosers.

17

DryQ – Dry and silent

Instead of using oil, a new generation of ingenious and compact AC capacitors is made entirely of dry components and is therefore safer and more environmentally friendly than ever before.

22

PSGuard contributes to UCTE grid reconnection

Integrating the electrical grid of South Eastern Europe into the EU internal electricity market has been a matter of highest priority following the war in the former Yugoslavia.

26

Team-mates

Working together as a team is all about synchronization. But what if this team is composed entirely of robots! ABB's modular IRC5 robot controller software now permits robot groups to handle more complex tasks.

30

Instant comfort

"This is the life" or so ABB Busch-Jaeger likes to think with its innovative control system which centralizes and permits programming of many household devices.

33

Satisfaction guaranteed

The launch of ABB's Extended Automation System 800xA was a major event in 2004. One important part is the I/O system that connects process instruments and actuators to the System 800xA and it is suitable for all plant environments.

37

Panoramic projection

The new System 800xA Extended Operator Workplace gives an operator a unique view of his process. The advanced display technology mimics the wall displays of the past

40

Digging into the archives

Expeditions in the harsh Artic Ocean are a team effort. ABB technology was used to help scientists gather sediment cores 450 meters deep in the Artic Ocean seabed.



6

Best innovations 2004

43

We invite our readers to savor some of the best ABB innovations of 2004 which include fast curing epoxy, power semiconductors, a new UniGear switchgear platform and new ABB drives.



17

R&D Digest

52

Don't touch: ABB's new passive voltage indicator

54

Wireless Ad-Hoc networks

55

Autonomic computing



22



33