

Innovation



Claes Ryttoft

Dear Reader,

2014 is a very special year for *ABB Review*: We mark 100 years since the first publication of our direct predecessor journal, *BBC Review*. A century is a long time, especially on the scale of technological developments, and the changes that the journal bears witness provide a fascinating documentation of 100 years of ongoing innovation. Throughout our anniversary year we hope to share with you insights from the past, along with (and sometimes through the eyes of) modern developments.

Opening its centenary year with an innovation issue, *ABB Review* is looking both to the future and to its past. It is thus fitting that one of the main articles discusses a novel way of measuring current using a very old discovery. In 1845, Michael Faraday observed that magnetic fields affect the polarity of light – an observation that for many years was considered a phenomenon of little applicable value. Today ABB is commercializing it as a means to provide accurate yet contactless current measurements.

ABB understands that to be able to operate successfully, our customers not only seek the most advanced technologies, but also need to be able to operate them reliably, economically and for a long time to come. An article on asset health management explains why this is a field of growing importance and how ABB delivers added value in this area.

Last year, *ABB Review* ran several articles on simulations, spotlighting how ABB's researchers use cutting edge technologies to deliver ever more sophisticated products. Continuing in this vein, four further articles on simulations

are presented, covering topics ranging from breaker analysis to turbochargers. In a related approach, an article on the design and testing of a wind turbine generator provides a case study of unfolding innovation.

USB devices have become ubiquitous in our personal and work lives, yet their power chargers often clutter up our luggage and take up useful space around us. Have you ever wished for a more ready means to recharge them? We present an elegant solution: electrical outlets that integrate a USB connector.

This edition is rounded off with a look at history. In issue 2/2013, *ABB Review* revisited the company's 100 year involvement in power electronics. That article was strongly focused on the switching devices used, be they mercury valves or semiconductors. In the present edition, we tour the same history but from the rectifier perspective.

Finally, I would like to use this opportunity to remind readers that besides the print edition, *ABB Review* is available in electronic formats, both as pdfs and in more interactive versions for tablets. You can learn more about this on www.abb.com/abbreview.

Enjoy your reading.



Claes Ryttoft
Chief Technology Officer and
Group Senior Vice President
ABB Group



