

ABB unveils innovative traction transformer reducing energy losses by up to 50 percent

Zurich, Switzerland, September 20, 2016 - Breakthrough technology delivers significant weight reduction and energy savings in rail transportation

ABB unveiled its next-generation traction transformer designed to reduce the weight of on-board components and ensure more energy-efficient rail networks, two of the rail industry's priority objectives. Named Effilight®, the product was unveiled as a 'world premiere' at InnoTrans, the leading global rail industry symposium, being held in Berlin, Germany, from Sept 20 to 23, 2016.

Effilight can potentially reduce the total weight of a train's traction component by up to 20 percent, equivalent to the weight of around 20 passengers. This weight optimization can help train carriages attain the maximum load per wheel set and reduces wear.

Traction transformers feed power at safe voltages to essential train functions like traction, lighting, heating and ventilation, passenger information, brakes, signaling and communication. They are a critical element in the traction chain, affecting train performance and operator services. Traditionally made of iron and copper, these transformers are among the heavier components on a train. They use oil for insulation and cooling, for its excellent electrical insulating properties and high reliability, but this also contributes to a significant proportion of the transformer's total weight.

ABB's Effilight transformer uses a unique and patented high-technology cell design that reduces the amount of oil needed by up to 70 percent, without compromising functionality. The technology enables significant weight reduction and energy savings for train manufacturers and rail operators.

With the weight savings achieved through the innovative design, higher quantities of energy-efficient materials like copper can be used in the transformer, resulting in reduced energy losses by up to 50 percent, compared with standard solutions of similar weight. This helps optimize energy consumption and total cost of ownership.

"ABB's new modular traction transformer provides a competitive edge for customers in the key areas of weight and energy efficiency," said Claudio Facchin, President of ABB's Power Grids division. "Effilight presents new opportunities in line with our Next Level strategy focus on technology and innovation and supports ABB's vision of sustainable mobility for a better world."

ABB has been a pioneer in traction transformer technology since the early 1900s and has a long and proven track record across a broad range of state-of-the-art solutions. ABB has an estimated installed base of over 40,000 traction transformers.

ABB (www.abb.com) is a leading global technology company in power and automation that enables utility, industry, and transport & infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 135,000 people.



Power and productivity
for a better world™



125
YEARS IN
SWITZERLAND
www.abb.com

For more information please contact:

Technology Media Relations
Reiner Schoenrock
Tel: +41 43 317 65 68
media.relations@ch.abb.com

ABB Ltd
Affolternstrasse 44
8050 Zurich
Switzerland