

SUPERCONDUCTOR COILS FOR GENERATORS

THEVA attracts high international interest

Ismaning, October 13, 2017 – THEVA series-manufactures superconductors out of robust materials and in different sizes for many applications, including coils. There is great interest in these products, as evidenced at the 25th International Conference on Magnet Technology 2017 (MT25) in Amsterdam and the European Conference On Applied Superconductivity (EUCAS) 2017 in Geneva. Sales Director Dr. Markus Bauer: “Our ‘coil follows design’ approach was very well received by generator developers.”

MT25 in August and EUCAS in September each attracted about 1000 attendees who came to the conferences to exchange opinions and insights on current trends. Of particular interest were coils with superconductor technology offered by THEVA.

40 percent smaller or 40 percent higher power? This is the question, or the choice, that presents itself to generator manufacturers looking at THEVA superconductor coils. “Basically, anything is possible,” said Bauer. The numbers given refer to the 3.6 MW wind turbine for on- and offshore use currently under construction in the EU EcoSwing project. It is intended to be 40 percent lighter than existing turbines, with the same power rating. “With our materials, generator manufacturers can develop coils in all sorts of geometries and power classes,” noted Bauer. He added that the primary interest lies in the reduction of size and weight to an extent not possible without superconductors. This results in great savings in the costs for foundation, supporting structures, and transportation. THEVA offers a portfolio of superconductors in various thicknesses and coatings (for example, copper laminated or plated).

Standardization of conductivity and tensile strength

The growing interest in superconductors in many different industries is leading to standardization efforts. Parallel to EUCAS, there was a meeting of the Superconductor Standardization Committee of the International Electrotechnical Commission (IEC).

“THEVA is the only active German representative in this standardization committee,” reported Dr. Markus Bauer. “The goal is to set international standards for the second generation of superconductor wire, especially in terms of conductivity and the tensile strength of the material.”

THEVA has worked in coating technology for 20 years, and since 2012 has focused on the series production of superconductors. THEVA CEO Dr. Werner Prusseit: “We are firmly convinced that the future belongs to superconductors, whether in underground cables, in generators, or in bus bars. Their ability to conduct 200 times higher current than copper of the same cross-section speaks for itself.”

About THEVA Dünnschichttechnik GmbH:

With 20 years' experience in coating technology and equipment engineering, and patented production technology, THEVA manufactures high-temperature superconductors (HTS) for the loss-free transmission of extremely high electric current. Today the company stands for a unique approach in superconductor production.

THEVA has invested over fifteen years in development to build Germany's first commercial HTS production plant. Thanks to its very high energy density, THEVA Pro-Line superconductor cable can replace conventional copper cable in high-performance applications. It opens entirely new scope for the design of electrical components. Manufactures of cables, power switches, large electric drives and power rails can rely on the high quality and performance of the material. THEVA stands for high-end solutions in coating technology and equipment engineering.

THEVA Dünnschichttechnik GmbH was founded in 1996 and today has around 50 employees. Headquartered in Germany and with representatives in Asia, the USA and Russia, the company has a global presence for its customers.

In 2012, with Target Partners and BayBG two powerful VC partners came on board. Since 2016 eCapital and Bayern Kapital have been supporting the growth of the company as well. As of the third financing round in 2017 EnBW New Ventures is also among the investors.

Press contact:

Adriana Olivotti
Raum für Technik GmbH & Co. KG

Schlagintweitstraße 11
80638 Munich

+49 160 903 30 512
ao@raumfuertechnik.com
www.raumfuertechnik.com