

THEVA TO DEVELOP HIGH-TEMPERATURE SUPERCONDUCTOR FOR THE MUNICH GRID

Industry consortium working with Munich public works to build a 12-kilometer high-tension line

Ismaning, June 3rd 2019 – A consortium of five partners, including THEVA, intends to build a high-temperature superconducting (HTS) transmission line in Munich. It will be the longest in the world by far. A declaration of intent has been signed, resulting in a development application to the German Federal Ministry of Economy. THEVA in Ismaning near Munich produces superconductors in series. As part of this project it will expand its product portfolio to include a conductor designed specifically for the cable application. HTS cables for electrical power distribution in cities are projected to be one of the most important and highest-revenue market segments for superconductors.

This project, called SuperLink, features extreme compactness combined with environmental neutrality, especially compared to conventional cables and overhead lines. The new HTS cable will make the Munich electrical grid ready for the future. Following successful completion of the subsidized development project, plans call for the construction of a 12-kilometer high-voltage line between the main transformer station in Menzing and the Munich South load centre using high-temperature superconductor (HTS).

THEVA's main objective is to reach a wide market with superconductors by producing them in series, thereby making this forward-looking technology competitive in pricing with copper conductors. Accordingly, CEO Dr. Werner Prusseit is very happy about this joint project. "For years there have been successful grid demonstrations of HTS cables all over the world. But now, right here in our front yard in Munich, we have a situation that is predestined for superconductors – the transmission of high power with minimal losses and minimal disturbance to the public. This is a landmark project that will be a major step towards the commercial implementation of superconductor technology in the grid."

Dr. Ing. Jörg Ochs, CEO of SWM Infrastruktur: "We want to make Munich's energy grid ready for the future. To do that while minimizing the need for construction of transformer stations and additional cable routes in built-up areas, we need solutions that are easily integrated. With its ecological aspects HTS technology is an innovative, economical and readily acceptable alternative to existing systems. Energy transmission is higher and losses are lower, despite smaller cable diameters, which also helps us reach our CO₂ savings goals for the grid."

The project consortium partners are THEVA, Munich public works company SWM Infrastruktur, Linde AG, cable manufacturer NKT, Südwestfalen technical university and the Karlsruhe Institute of Technology (KIT).

About THEVA Dünnschichttechnik GmbH:

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

The company 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 conductors in high-performance applications and opens up entirely new possibilities for the construction of electrical components. Manufacturers 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 and the US, the company maintains 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 also been supporting the growth of the company. As of the third financing round in 2017 EnBW New Ventures is also among the investors.

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