



**Press Release**

## **Nexans wins Energy Master Award 2010 for their Superconducting Current Limiter**

The system of the superconducting specialist from Hürth convinced the jury in the category "Use of innovative technology"

**Hürth, March 17, 2010** – Nexans SuperConductors GmbH from Hürth has won the Energy Master Award 2010 for their superconducting current limiter. The prize was awarded on March 15, on the eve of the three-day Energy Masters conference as part of a function held in the Berlin TV tower. The organiser, econique business masters GmbH & Co. KG, which had already made energy efficiency and active climate protection the main topics of the conference, awarded the prize for the first time this year. Prizes were awarded for projects in four categories: "Use of renewable energies", "Use of innovative technology", "Energy efficiency in small and medium-sized companies" and "Overall energy management concept". The current limiter won first prize in the "Use of innovative technology" category, in which its first worldwide use in the internal power supply of a power plant was presented. Since a few months ago, the system has been protecting the medium-voltage supply of coal crushers in a 900 MW unit at the Vattenfall power plant in Boxberg, Germany.

### **Verdict of the jurors: Important for smart grids and CO<sub>2</sub> separation**

The Nexans employees in Hürth were already delighted that their project had been nominated for the prize, especially since three expert jurors, namely Dr. Karlhorst Klotz (editor in chief of the "Energy 2.0" magazine), Franz Lamprecht (acting editor in chief of the "Energiewirtschaftliche Tagesfragen" magazine (Topical energy-efficiency questions)) and Rembert Liebsch (Technical Manager at Hüttenes-Albertus Chemische Werke GmbH) had made the preselection. Three projects were nominated per category. What spoke in favour of the current limiter, acc. to the jury, is that it is an important component for realising improvements in the smart grid and CO<sub>2</sub> separation innovation fields. The public then made the final decision: The nominated projects were described and could be voted for online. Dr. Joachim Bock, Managing Director of Nexans SuperConductors, said after the award ceremony "I am delighted that the use of our current limiter has generated so much interest and that so many people decided in favour of our product."

### **Usually an ideal conductor – and sometimes, where required, a limiting resistor**

While superconductors are used in many applications only due to their good electrical conductivity or the resulting size and weight advantages, the current limiter is also in

demand on account of its ability to instantaneously become a resistor: Up to the nominal power, the limiter offers virtually no resistance to the current. In the case of a power plant, for example, it even lets the high inrush currents of the coal crushers pass through. If the critical current level is, however, exceeded, the superconducting material suddenly acts as a resistor and thus limits the current - within milliseconds! The system automatically returns to standard operation after the elimination of the problem, without the need for any external intervention. This all happens fully wear-free.

### **Increased safety creates cost-saving potentials**

The limitation effect results in increased safety, which pays off in terms of cost savings: Without the current limiter, switchgear systems have, for example, to be designed so that no damage is incurred even in the case of high short-circuit currents. This typically means that many components must have an oversized design, which in some cases is already at the limit in terms of what is feasible. Effective limitation of the maximum currents thus offers a large saving potential while at the same time ensuring improved operator and system protection. Physics ensures the required reliability: The current limiter does not require a trigger or regulation; it limits the current on its own due to its material properties. Thanks to its modular design, it can be adapted to the respective requirements.



At its site in Boxberg, Vattenfall Europe Generation has commissioned the world's first superconducting short-circuit current limiter for use in power plants. The manufacturer Nexans SuperConductors won the Energy Master Award 2010 in the "Use of innovative technology" category for the project.

## **About Nexans Germany**

Nexans Germany is one of the leading cable manufacturers in Europe. The company is offering an extensive range of high performance cables, systems, and components for the telecommunications and energy sectors, rounded off by superconducting materials and components, Cryoflex transfer systems and special machinery for the cable industry. Producing at manufacturing plants with 6.240 employees in Germany and abroad, the sales in 2008 amounts to approx. 936 Mio Euro. The full integration into the Nexans Group Nexans Germany also benefits from excellent opportunities to use the available synergies in all corporate fields, which not only applies to worldwide projects but also to research and development, the exchange of know how, and to other areas. More information on [www.nexans.de](http://www.nexans.de)

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