



**Press release**

## **Superconductivity: Nexans signs a contract with the DGA**

**Paris, July 17, 2003** - Nexans has signed a contract with the DGA (Délégation Générale pour l'Armement) for the supply of a superconducting coil that can store magnetic energy and convert it into electricity in the space of about one second. Such Superconducting Magnetic Energy Storage (SMES) system can be used to stabilize a power distribution network or to energize electrical devices.

This superconducting coil will combine the technology of energy storage by magnetic induction - which allows an energy density of several million joules per cubic meter to be attained - with the use of superconducting materials which, thanks to their zero electrical resistance at the service temperature of  $-250^{\circ}\text{C}$ , will make it possible to store this energy over long periods of time. The coil will be manufactured from high temperature superconducting tapes developed by Nexans at its Jeumont site in France. Its storage capacity will be 500,000 joules.

The required service temperature of  $-250^{\circ}\text{C}$  will be obtained through a cryogenic refrigerator, eliminating the need to use liquified gases.

The coil and the cryogenic part will be designed in collaboration with the CRTBT\* of the CNRS\*\* of Grenoble.

System testing and entry into service are scheduled for 2006.

\* CRTBT : Centre de Recherche sur les Très Basses Températures, (very low temperature research center)

\*\* CNRS : Centre National de la Recherche Scientifique, (French National Scientific Research Center)

### **Note**

Nexans' superconducting tapes comprise about one hundred micrometric superconducting ceramic filaments embedded in a silver alloy matrix. The ceramic is produced by Nexans in its plant in Hürth, Germany. It is made up of oxides of copper, bismuth, calcium and strontium. The tapes, developed in Nexans' Jeumont plant in France, are designed to optimize the performance of superconducting coils at temperatures of between  $-250^{\circ}\text{C}$  and  $-230^{\circ}\text{C}$ .

**About Nexans**

Nexans is the worldwide leader in the cable industry. The Group brings an extensive range of advanced copper and optical fiber cable solutions to the infrastructure, industry and building markets. Nexans cables and cabling systems can be found in every area of people's lives, from telecommunications and energy networks, to aeronautics, aerospace, automobile, railways, building, petrochemical, medical applications, etc. With an industrial presence in 28 countries and commercial activities in 65 countries, Nexans employs 17,150 people and had sales in 2002 of euros 4.3 billion. Nexans is listed on the Paris stock exchange. More information on <http://www.nexans.com/>

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