Press Release

Nexans' supplies two superconducting fault current limiters for permanent use on Birmingham's distribution network

Birmingham's innovative fault current limiters will improve network short-circuit strength and enable increased power generation with low CO_2 footprint

Paris, March 31, 2014 – Western Power Distribution (WPD), the network operator, is future-proofing the power distribution network in Birmingham, the UK's 'Second City', by installing two Nexans superconducting fault current limiters. The order covers the design, fabrication, and permanent installation of the innovative devices, including the associated switchgear, and has a total value of approximately EUR 2.6 million. This is Nexans' third UK order for superconducting fault current limiters and the largest to date.

Installation of the pioneering technology in Birmingham's network is part of the FlexDGrid project, which aims at future proofing existing networks to accept more electricity generated from sustainable resources. The new equipment helps achieve this objective by enabling higher power feed-in from distributed or renewable electricity sources. In many places this will remove the need for network expansion with new substations. The FlexDGrid project is financed by EUR 20 million from the Low Carbon Networks Fund, a national initiative for reducing carbon dioxide emissions.

The project objective is to mitigate faults, improve understanding of their causes, and reduce fault current levels. Measuring systems to monitor fault current levels are being installed in 10 substations, and five stations will additionally be equipped with current limiting technology. The Nexans fault current limiter is the only superconductor device that will be used and will be deployed in two of the five substations. WPD chose the novel superconductor technology because it allows a very effective limitation of high short circuit current levels.

Western Power Distribution opts for trendsetting technology

The superconducting fault current limiters, which have already proved their reliability in several distribution networks and power station auxiliary supply systems, provide especially effective protection against fault currents for downstream components in the network. They are inherently safe and highly effective, and their operating costs are low. WPD intends to use the new equipment on a continuous basis.

Operation of a superconducting fault current limiter

The heart of the fault current limiters consists of superconductor tapes cooled to a working temperature of approximately -195°C by liquid nitrogen. Under normal conditions these tapes allow current to flow unhindered and with virtually zero resistance. If the current rises above a critical level, then within a few milliseconds the superconductor tape changes into a normal conductor with extremely high electrical resistance. In this state only a small residual current flows through the limiter. The two Nexans limiters - for the Chester Street and Bournville substations in Birmingham - are designed to operate at a voltage of 11 kV with a nominal current of 1,600 A (Chester Street) and 1,050 A (Bournville). Current limiting is initiated immediately when the current rises above the nominal value. Unlike standard fuses, circuit breakers, or pyrotechnical limiters, the current limiters do not fully cut off the current, so the existing electrical protection can be maintained. They also do not open the circuit permanently. When the grid fault has been cleared and the limiter has cooled back down to its working temperature, normal operation resumes automatically.

"We are delighted to be working with Western Power Distribution to deploy our innovative superconductor fault current limiters in this high-profile, permanent installation in Birmingham, where they will play a significant role in ensuring the long term reliability of the power network serving one of the UK's most important cities", says Jean-Maxime Saugrain, Nexans Corporate Vice President Technical. *"This is further confirmation that superconductors are now emerging fast from the laboratory and trial installations to take their place in real-world, commercial applications."*

About Nexans

Nexans brings energy to life through an extensive range of cables and cabling solutions that deliver increased performance for our customers worldwide. Nexans' teams are committed to a partnership approach that supports customers in four main business areas: Power transmission and distribution (submarine and land), Energy resources (Oil & Gas, Mining and Renewables), Transportation (Road, Rail, Air, Sea) and Building (Commercial, Residential and Data Centers). Nexans' strategy is founded on continuous innovation in products, solutions and services, employee development, customer training and the introduction of safe, low -environmental- impact industrial processes.
In 2013, Nexans became the first cable player to create a Foundation to introduce sustained initiatives for access to energy for disadvantaged communities worldwide.
We have an industrial presence in 40 countries and commercial activities worldwide, employing close to 26,000 people and generating sales in 2013 of nearly 6.7 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.
For more information, please consult: www.nexans.com

Contacts:

Press

Angéline Afanoukoe	Tel. : +33 (0)1 73 23 84 12	Angeline.afanoukoe@nexans.com

Investor relations

Michel Gédéon	Tel.: +33 (0)1 73 23 85 31	Michel.gedeon@nexans.com