

Cabling solutions at the core of Power Transmission Networks



Europe: Tessenderlo Chemie – new power substation in Belgium

Project description:

 Construction for Tessenderlo Chemie of a new 150 kV power station, linked to an existing high voltage station. Execution of the works by T-Power, an association of Fabricom, Siemens and Pauwels.

Customer challenges:

• Tessenderlo Chemie takes the occasion of this project to transform the existing

open air station into a Gas Insulated Substation (GIS).

- High level of professional installation services.
- Manufacture and installation of 8 km 150 kV cable and installation of 42 terminations.







Overhead lines

Europe: RTE – high temperature resistent network in France

Project description:

• RTE will install 3500 km of very high capacity cables to reinforce and replace overhead lines in the French energy transport network.

Customer challenges:

• The cables must resist very high temperatures in emergency situations.

Nexans solutions:

 Nexans' ACSS/TW overhead conductors can function safely up to 220°C in emergencies, with a normal operating range up to 80°C.



Europe: Fenno-Skan 2 interconnector between Finland and Sweden

Project description:

 Manufacture and installation of a HVDC submarine power cable for Fenno-Skan 2, the new power interconnector between Finland and Sweden.

Customer challenges:

- Provide a 40% increase in power transmission capacity.
- Reduction of losses in the Nordic transmission grids.

- Nexans will provide 200 km of specialised solid, oil-impregnated cable.
- With a copper section of 2,000 mm², this will be the largest capacity HVDC cables manufactured by Nexans to date.
- The construction of 2 continuous portions of 100 km will require only one subsea joint.
- Installation will be performed in 2011 by the CS Nexans Skagerrak, our cable laying vessel.

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Overhead lines		

South America: Mato Grosso – optimised power infrastructure in Brazil

Project description:

 Five new 300 MW transmission lines to reinforce the power infrastructure in the state of Mato Grosso in Midwest Brazil. EBTE will install a total length of 775 km.

Customer challenges:

- Provide additional transmission capacity to handle the output of new power generation projects.
- Increase Brazil's national power generation capacity.

• Procurement of the ideal cost-effective solution to meet technical needs and installation schedules.

- AAAC (All Aluminium Alloy Reinforced) overhead conductors replace the steel core and pure aluminum outer layers of conventional ACSR conductors.
- It is lighter and stronger: ideal for long spans and more resistant to corrosion
- Total number of pylons will be reduced by 8%.







Africa: Aero-Z HV power links between Nigeria and Niger

Project description:

 Upgrade of a vital power link between Birnin-Kebbi (Nigeria) and Niamey (Niger), totalling some 264 km.
Securing the power supply is vital for Niger and essential to the country's development.

Customer challenges:

- The cable needs to be installed in record time in winter, when demand is low.
- Increase power transmission capacity by 75% between Nigeria and Niger.

- Aero-Z 132 kV high voltage conductors are chosen because they increase the power transmission capacity to 70 MW in summer and 80 MW in winter.
- The solution will reduce the need for costly local generation alternatives (gas or diesel powered generators).
- Record installation time of 29 business days.







Asia: Tata Power – reinforced power infrastructure in Mumbai, India

Project description:

• A Tata Power Company project to design, manufacture and supply high voltage underground cable to reinforce the power infrastructure in Mumbai.

Customer challenges:

- Tata required a total supply and service contract over 2 years
- Linking various Extra High Voltage substations across Mumbai, the second most populous city in the world.

- Total supply and service partnership, supporting every step from concept design to final implementation.
- New generation of HV environmentally friendly XLPE cable.
- Five complete circuits of 220 kV cable and associated accessories to provide an extra 300 MVA of power carrying capacity.





Mexans

With energy as the basis of its development, Nexans, the worldwide leader in the cable industry, offers an extensive range of cables and cabling systems. The Group is a global player in the infrastructure, industry, building and Local Area Network markets. Nexans addresses a series of market segments from energy, transport and telecom networks to shipbuilding, oil and gas, nuclear power, automotive, electronics, aeronautics, handling and automation. With an industrial presence in 39 countries and commercial activities worldwide, Nexans employs 22,400 people and had sales in 2008 of 6.8 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.

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