Nexans

Cabling solutions
at the core of Railway Networks

High Speed Line (HSL) Zuid The Netherlands - Siemens project

Project description:

- Dedicated 100 km high speed rail line between Antwerp (Belgium) and Amsterdam (The Netherlands), allowing the Thalys network to link Paris – Brussels – Cologne – Amsterdam.

Customer challenges:

- A new 7.2 km submerged tunnel under the Netherlands' Green Heart Pasture Reserve.
- All cables must be halogen-free, armoured and had to be delivered immediately.

Nexans solutions:

- Siemens wanted one single contact within Nexans.
- Deliveries from plants in Germany, Lebanon, Turkey and Belgium, all through one single quote.
- Fast reaction times.

Transrapid - Shanghai

Project description:

- Supply of the longstator motor winding for the 30 km Transrapid track, based on magnetic levitation technology

Customer challenges:

- The motor winding over the total length of the track is a key component.
- First time use in a large scale project. communications package.

Nexans solutions:

- A rubber-insulated 20 kV cable for stator winding with a total length of approx. 1.000 km was delivered.
- Support the system installation by the Chinese customer in cooperation with ThyssenKrupp.

BLS Alptransit - Switzerland

Project description:

- New base tunnel through the Alps on the main axis Basel – Bern – Simplon for 250 km/h trains.

Customer challenges:

- Deliver a global solution and turnkey project for power, signalling and telecom cabling, including supply, laying and splicing.

Nexans solutions:

- Responsible for all cable network supplies and installation in parallel with the railway track and catenary build-up.
- 63 km of 132 kV High Voltage cable lines.
- 512 km of Medium Voltage cable networks.
- 692 km of cables for 5 fiber optic networks.
- All telecom and power components.
- Turnkey project within a general contracting team of companies including Implenia, Rhomberg, Alstom, Siemens and Alcatel.
- Whole planning and engineering works of the cable networks.

SRS13 Project - RATP - France

Project description:

- Modernisation of the Regional Express Network (RER).
- Connection of stations and control centers and the installation of a signalling network in typical railway conditions.

Customer challenges:

- Provide safe travel conditions and service continuity to its travellers.
- Installation along the tracks of regional and tramway networks, in cable ducts, or directly buried.

Nexans solutions:

- Development of the SRS13 cable (comparable to K23 cable).
- Transport or distribution cable.
- Fully water resistant (NF EN 50289-4-2).
- Flame retardant (NF EN 60332-1-2).
- No toxic or corrosive gases in case of fire.
- Acid and oil resistant.
- The SRS13 offers the same transmission characteristics as K23/K13 signalling cable and has the same diameter.

Otogar - Ikitelli LRT Metro project - Turkey

Project description:

- Installation of a metro line in Istanbul between the main bus terminal of Ikitelli and the Olympic village & stadium.

Customer challenges:

- Create the capacity to carry 70,000 people/one direction to the Olympic Stadium in 20 minutes, and decrease the city's traffic problem.

Nexans solutions:

- Supply of the complete range of cables: Low Voltage, Medium Voltage cables and DC cables.

High Speed Lines - Italy

Project description:

- High Speed Rail Line realization: more than 630 km between Milan – Turin, Milan – Bologna, Bologna – Florence, Rome – Naples.

Customer challenges:

- MV cables HEPR insulated, according to RFI specs. For the tunnel installations, all cables must be halogen-free, fire retardant, flame retardant (NF EN 60332-1-2), no toxic or corrosive gases in case of fire according to EN 50266 – 50267 – 50268 standard, IMQ certified.
- Deliver a global solution for power, signalling and telecom cabling infrastructures.

Nexans' solutions:

- Orders from Saturno Consortium (Alstom, Ansaldo, Balfour Beatty, Sirti) for cable supplies.
- 4,3 km of 132 kV High Voltage HEPR cable.
- 270 km of Medium Voltage HEPR cable, 50% HFFR and FR.
- 140 km of Medium Voltage XLPE cable.
- More than 3.200 km of Signalling cables, various type, 2.500 km rubber type.
- 454 km of cables for 8/16 SM fiber optic networks.
- 425 km of telecom copper cables (different pair and quads count).

Odenwaldbahn project - Germany Deutsche Bahn

Project description:

- A Deutsche Bahn project: modernization of the Odenwaldbahn infrastructure with electronic interlock and GSM-R.

Customer challenges:

- Time and cost-efficient installation of a fiber optic and copper cable infrastructure
- Pilot application of Nexans' innovative DuoTrack® system for Deutsche Bahn.
- Cable deployment in the difficult topography of a regional railway line.

Nexans solutions:

- Nexans provided a turnkey solution with 60 km 8 quads and 40 km 16 quads DuoTrack® cable, 12 km fiber optic cable, 130 WTC2-HC hybrid closures and a matched laying technology with 150.000 clamps and 1.000 cable branches.
- Cables manufactured in Germany, Norway, Spain and Belgium. Closures and optical fiber accessories from Nexans in France. Laying technology was provided from the partner company, Contec Transportation Systems.
- High dynamic strength up to 420 m/s^2 according to EN50125-3.

A track record for safety and security

• Broad range
Nexans produces high-quality energy, power, control and telecommunications cables and components fully adapted to your evolving infrastructure and rolling stock needs.

• Fire protection
Not only onboard, but in public areas and tunnels, all cables are zero-halogen producing low smoke and corrosive gases to enhance survival and emergency operations, while protecting railway equipment.

• Conformity to standards
Nexans fully complies with specifications and standards worldwide, and is certified by Deutsche Bahn AG, SNCF and RATP, London Underground and many other rail operators.

• Advanced train control
For voice, telecommunications and train control, Nexans provides you with complete networks, including fiber backbones for upcoming ERTMS/ETCS radio transmission.

Nexans

With energy at the basis of its development, Nexans, worldwide expert in the cable industry, offers an extensive range of cables and cabling solutions. The Group is a global player in the energy transmission and distribution, industry and building markets. Nexans addresses a wide series of market segments: from energy and telecom networks to energy resources (wind turbines, photovoltaic, oil and gas, and mining) to transportation (shipbuilding, aerospace, automotive and automation, and railways). Nexans is a responsible industrial company that regards sustainable development as integral to its global and operational strategy. Continuous innovation in products, solutions and services, employee development and commitment, customer orientation and the introduction of safe industrial processes with limited environmental impact are among the key initiatives that place Nexans at the core of a sustainable future. With an industrial presence in 40 countries and commercial activities worldwide, Nexans employs 25,000 people and had sales in 2012 of nearly 7.2 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.

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