

IN RAILWAY NETWORKS

YOUR PERFORMANCE
STARTS WITH CABLES



MATTERHORN GOTTHARD BAHN

SWITZERLAND



PROJECT DESCRIPTION

- Renewal and development of the Alpine line Brig-Disentis to offer more safety and comfort to its users. This line had to be modernized in order to support the recent tourism development in this area.

CUSTOMER CHALLENGES

- The timing was key to this project. As the tourism in this area is developing very quickly, our client, Matterhorn Gotthard Bahn, wanted to be able to increase the number of trains. Improving the safety on and around the line was also important.

NEXANS SOLUTIONS

- Responsible for cable supply and installation of the sections Andermatt-Oberalp and Mörel-Betten.
- Selected as the supplier for all cabling projects in the train stations on this line until 2020.
- 30 km of telecom cables (Optical Fiber and Copper twisted pairs).
- Telecom Components (junctions and distributors).
- Coordination with civil engineering and all the other teams involved in the project.

DOGUS CONSTRUCTION GROUP

ISTANBUL METROLINE



PROJECT DESCRIPTION

- Extension of Istanbul's Metro network, establishing an additional 20 km of rail to service the city's suburbs.
- The new line will include 16 additional stops, and will take 24 minutes to travel from the centre of Istanbul to the suburbs, carrying 65,000 passengers an hour in each direction.

NEXANS SOLUTIONS

- Tailor-made solution with enhanced mechanical protection for the cables, rodent proof outer sheathing and robust fire testing.
- LV and MV ALSECURE® cables.



NEW GENERATION TRAMWAY

BRAZIL



PROJECT DESCRIPTION

- Alstom chooses Nexans cable solutions to power the Porto Maravilha Tramway in Rio de Janeiro, Brazil.

CUSTOMER CHALLENGES

- The line will receive no power from overhead lines. Instead, power will be supplied by a combination of a third rail and recycled energy from braking stored in a supercapacitor.
- It will be the first tramway in the world to use this combination of systems.

NEXANS SOLUTIONS

- Nexans will manufacture power, data and control cables for 32 trams.
- Advanced supply chain management allowing delivery of the complete range of cables with short lead times.



HIGH SPEED LINE (HSL) ZUID SIEMENS PROJECT THE NETHERLANDS



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.

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

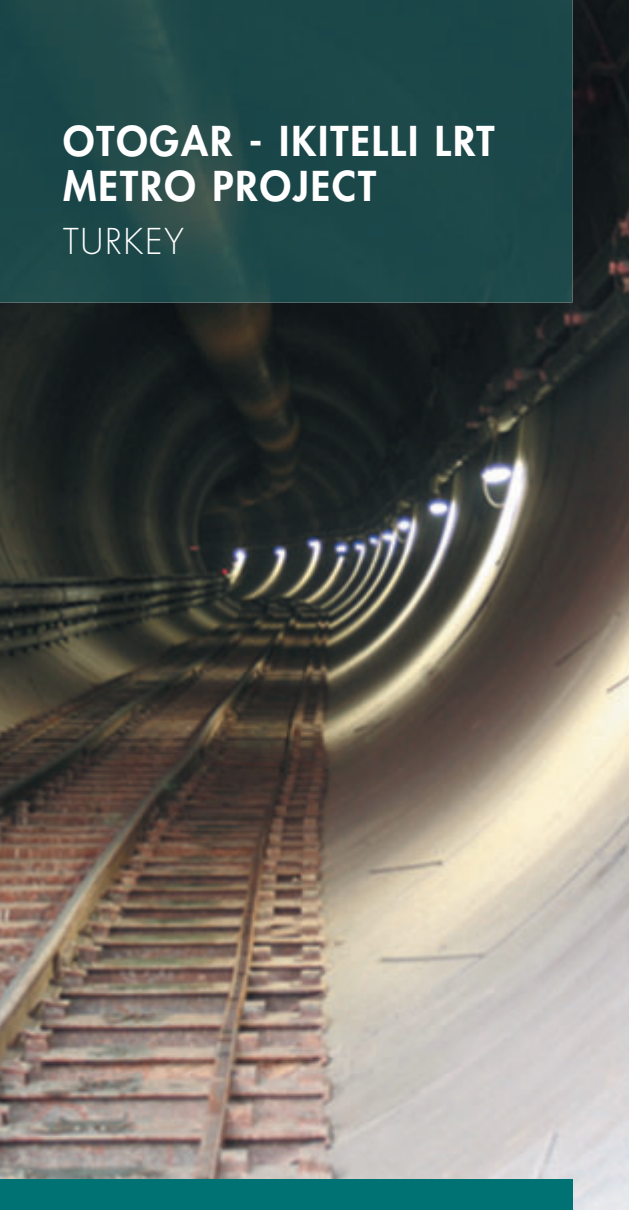
- Installation of a metro line in Istanbul between the main bus terminal of Ikitelli and the Olympic village & stadium.

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/s² according to EN50125-3.

For any further information, please contact:

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or visit www.nexans.com/railways



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