



Intelligent solutions. Perfect systems.

SPITZKE 
ELECTRICAL ENGINEERING



High standards.
Top performance.




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- ▶ TRACK
 - ▶ TECHNOLOGY
 - ▶ ELECTRICAL ENGINEERING
 - ▶ STRUCTURAL ENGINEERING
 - ▶ LOGISTICS
-

SPITZKE GROUP

Since the beginning of the 1990s, the SPITZKE Group has developed into one of the most efficient and competitive infrastructure companies for rail systems in Germany. As a complete service provider, we build and renew railway facilities with optimum time and cost efficiency. We are explicitly committed to Germany. We are dynamically growing in the whole European economic region.

Modern visions, fresh intellect and innovative concepts are coupled with our wide-ranging experience. New and unusual tasks are for us challenges which we accept with a great deal of passion.



Efficient systems.
Reliable energy.

SPITZKE AG Electrical Engineering Division

Within the SPITZKE Group's service portfolio the electrical engineering division is the specialised, reliable and efficient partner for the diverse electrical engineering tasks of the railways.

We have more than 150 qualified employees working on planning & design, contact line systems and traction current in several locations. We develop and supply the optimum energy structure for each project – from the planning & design through to construction, from mast foundations through to

contact wire installation and from the contact rail through to the turnkey rectifier substation.

We naturally use state of the art sub-assemblies, modules, materials and methods. With our special technology we satisfy the latest requirements and can flexibly respond to all kinds of different initial situations. Whether within the scope of complex construction projects or as an individual work package – we are the professional partner for every project.

We are ready to meet the market's current and future demands. We trust in our know-how, our creativity and our efficiency.



Planning and design

The design office realises all internal and external planning & design tasks for railway overhead line projects. All planning and design tasks are carried out at the highest technical level with the help of state of the art design tools. Our design engineers and draughtspersons have extensive experience and specific know-how concerning the planning & design of Deutsche Bahn AG overhead line systems.

- Planning & design of overhead line systems for railways in the project stages: Preliminary design, detailed design, construction phase design for new build and renewal, tender documentation, inspection planning
- Preparing layout plans with switching service instructions
- Design of local control equipment for overhead line systems
- Preparation and update of as-built documents
- Structural calculations for masts and foundations
- Development of special solutions for overhead line systems
- Soil investigations for tunnelling period penetration tests with the help of an internal combustion hammer
- Preparation of bills of quantities according to railway overhead line conditions

We use the Microstation CAD program, ProAssist user software and programs for structural calculations of overhead line masts and foundations.



Special knowledge.
Precise implementation.



Innovative concepts.
Complete results.



Contact line and traction current

Mainline and regional railways

Tramways and urban railways

Conductor rail systems

Traction current systems

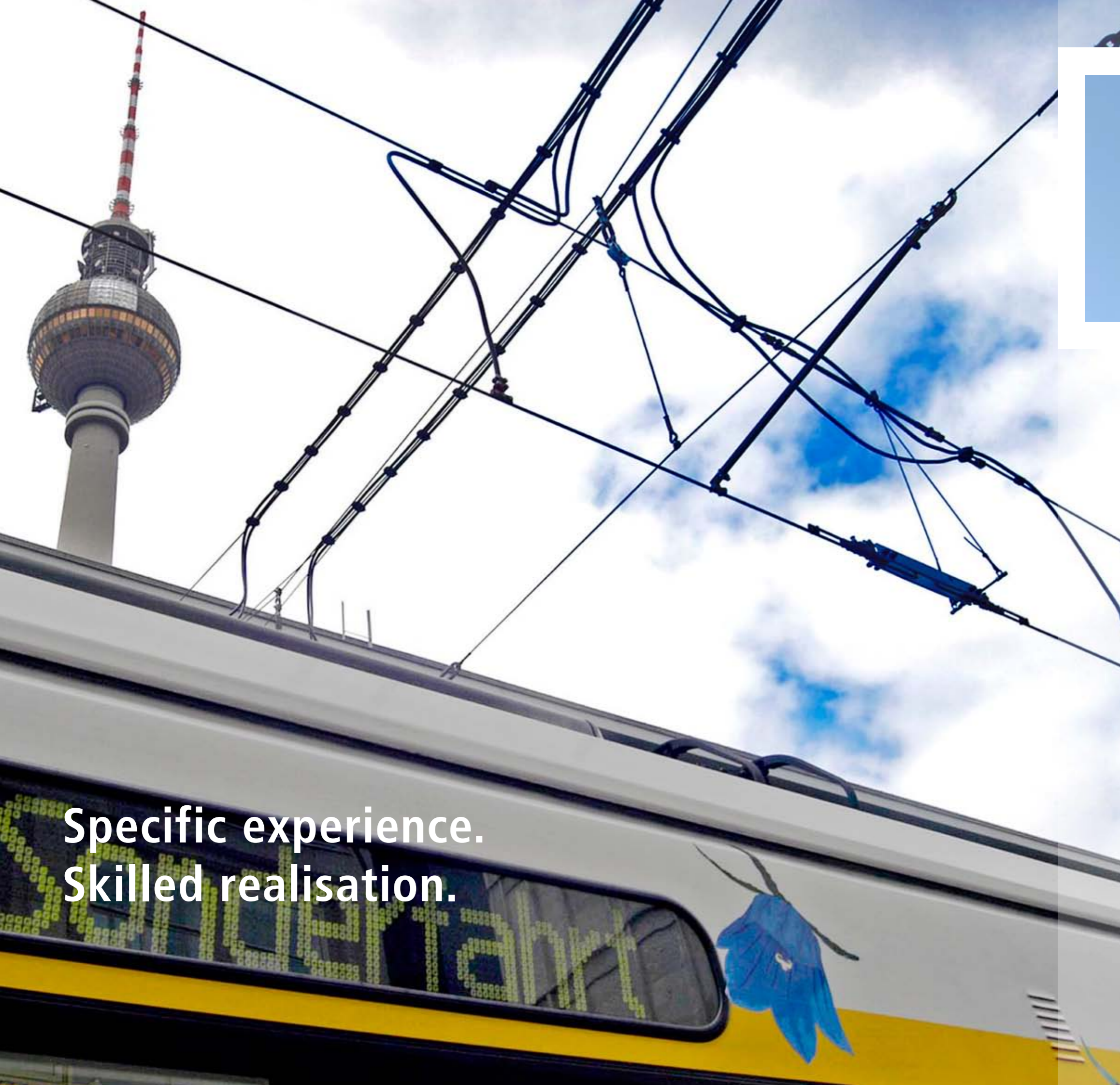
Mainline and regional railways

We are qualified and efficient partners for the realisation of overhead line projects for mainline and regional railways. The knowledge of our employees and our technical base allow us to successfully operate in all disciplines – from planning & design through to turnkey handover. Foundations and mast erection work is just as much a part of our services as contact wire installation and logistics. We have Deutsche Bahn AG qualification for project planning, design, foundation and mast erection work, installation of fittings and traction cable of 16.7 Hz overhead lines and for the installation of railway electrical power supply systems.

- Planning of overhead line systems
- Foundations and mast erection work
- Installation of new and renewal of overhead lines
- Railway power installations
- Railway earthing and carrier current return
- Installation of switch-disconnectors and 30 kV cables for 16.7 Hz
- Switch installation work in DB AG's 16.7 Hz network

Versatile technology.
Maximum reliability.





Specific experience.
Skilled realisation.



Tramways and urban railways

We offer transport companies the complete range of services for local public transport projects – from mast foundations through to contact wire installation. Through precise processes corresponding to planning and adaptation to local circumstances as the situation requires we ensure maximum efficiency with minimum negative effect on tramway traffic. We work with special technology from our own fleet of vehicles. Thanks to the interaction of technical knowledge and state of the art technology, we are able to reliably keep to the specified track possession times.

- Foundations and mast erection work
- Installation of catenary-type and simple contact lines
- New build and renewal work with on-going rail operations
- Installation of sectioning and power supplies
- Maintenance and inspection work on overhead line systems
- Points control and points heating systems
- Rectifier substations
- Stop lighting and information systems

State of the art technologies.
Effective drive.



Conductor rail systems

We are specialised in the installation of conductor rail systems for urban and underground railways and have mastered the construction methods associated with the different types. An impressive number of successfully completed projects for the urban railways in Berlin and Hamburg as well as the underground railways in Berlin, Munich and Nuremberg substantiate this. Our particular strength is in the development and use

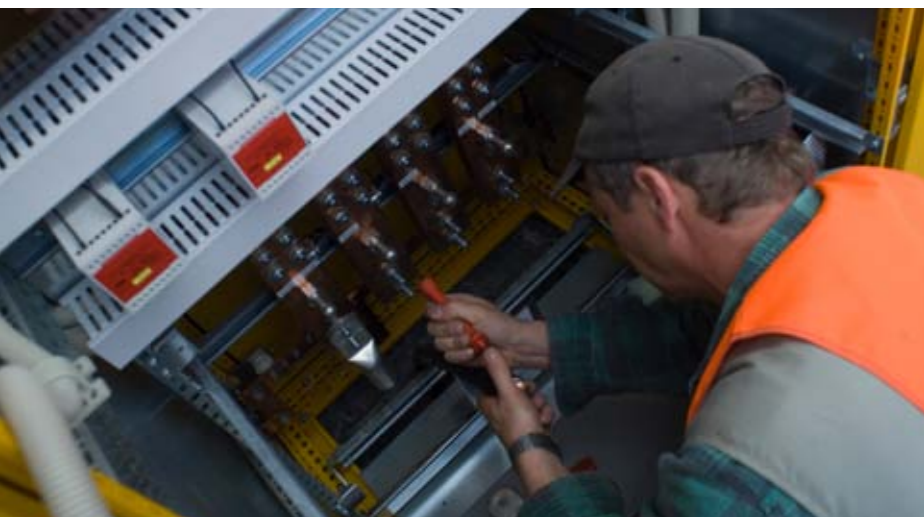
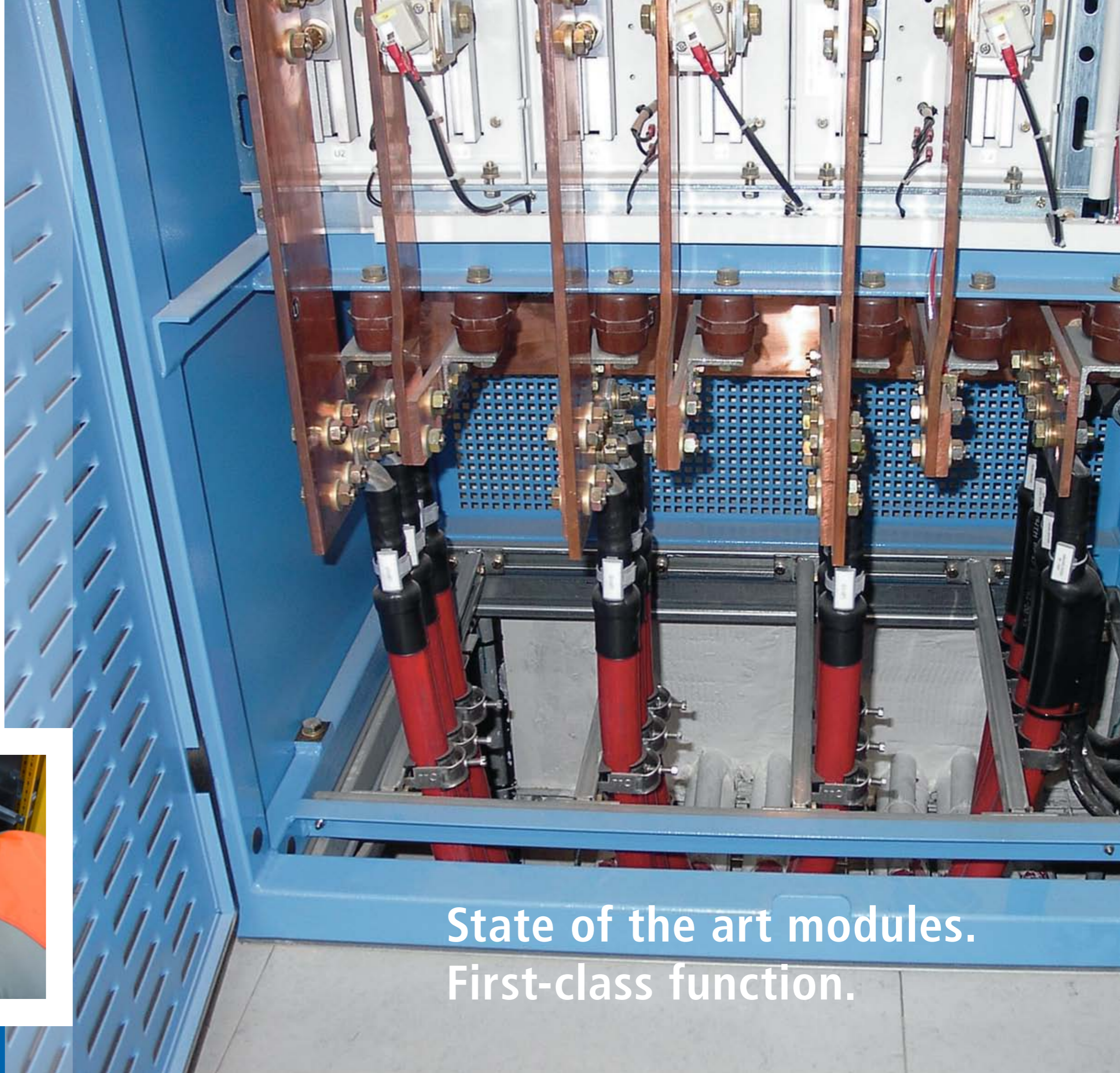
of the latest sub-assemblies and materials, as, for example, in the installation of different types of the new aluminium contact rail in Berlin.

- New build and renewal of complete conductor rail systems for urban and underground railways
- Cable installations up to 30 kV voltage
- Installation as third rail and as ceiling conductor rail

Traction current systems

We offer the whole range of services associated with the installation and putting into service of low and medium-voltage electrical engineering systems, including all building and civil engineering work. Our qualified, experienced project managers together with their specialised teams realise complex systems quickly, reliably and professionally. Using our own modern technology and the latest materials we develop the most efficient solution for every contract.

- Cable installation up to 30 kV
- Cable installation/cable civil engineering work
- Points heating systems/local control equipment
- Switching installations and 50 Hz systems
- Optical fibre and telecommunication installations/data communication
- Rectifier substations and switching stations
- Measuring tasks



**State of the art modules.
First-class function.**



SPITZKE GROUP

The SPITZKE Group consists of SPITZKE AG with its network of centres of excellence, subsidiaries and holdings in Germany, the Netherlands, Scandinavia and Turkey.

A total of 1,400 people work for the SPITZKE Group. Our quality management system is certified according to DIN EN ISO 9001:2008 and SCC as well as the environmental protec-

tion standards DIN EN ISO 14001:2004. We work to a railway safety management system, Directive 49/2004/EG.

Our aim is to further develop our fields of business in Germany and in Europe. With modern visions, in modern ways.

www.spitzke.com

SPITZKE AG – AN INFRASTRUCTURE COMPANY FOR RAIL SYSTEMS

Centres of Excellence:

Nord, Ost, West, Mitte, Süd

German subsidiaries:

SPITZKE LONGO GmbH
 SPITZKE RIEBEL GmbH & Co. KG
 SLG SPITZKE LOGISTIK GmbH
 SPITZKE SCHWEISSTECHNIK GmbH
 SPITZKE SCHOMBURG SPEZIALTIEFBAU GmbH
 SCHIENENFAHRZEUGBAU GROSSBEEREN GmbH

Subsidiaries and holdings abroad:

SPITZKE SPOORBOUW BV (NL)
 SPITZKE SCANDINAVIA A/S (DK)
 NJD SPITZKE AS (N)
 SPITZKE YALCO Ltd. Sti. (TR)

SPITZKE AG Electrical Engineering Division

- Quality management to DIN EN ISO 9001:2008 and SCC for health, safety and environmental management
- Environmental management according to DIN EN ISO 14001:2004
- Deutsche Bahn AG qualification for project planning/design, foundations, mast erection work, assembly of fittings and traction cable of 16.7 Hz overhead lines and electrical rail power supply systems
- Deutsche Bahn AG permit for the construction of conductor rails and cable installations up to 30 kV for Berlin and Hamburg urban railways
- Contact rail/cable permit for the underground railways in Berlin, Munich, Nuremberg

Clients: Deutsche Bahn AG, DB ProjektBau GmbH, DB Regio Münster, Wanne Herner Eisenbahn (WHE), S-Bahn Berlin GmbH, S-Bahn Hamburg GmbH, Hamburger Hochbahn AG, Berliner Verkehrsbetriebe (BVG) AöR, Dresdner Verkehrsbetriebe AG (DVB), Hallesche Verkehrs-AG (HAVAG), Stadtwerke München GmbH, Essener Verkehrs-AG (EVAG), BASF SE, Deutsche Steinkohle AG, RAG Aktiengesellschaft, ABELLIO GmbH

SPITZKE AG

Unternehmensbereich Elektrotechnik
 Güterverkehrszentrum Berlin Süd
 Märkische Allee 39/41
 14979 Großbeeren
 Germany
 Phone: +49 33701 901-300
 Fax: +49 33701 901-310
 Email: elektrotechnik@spitzke.com

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 Hans-Peter Strauß, Christoph Wojtyczka

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