



ONE CLEAR SOLUTION FOR BOTH ROUGH ENVIRONMENTS AND TOUGH SPECS.

Insist on TE CONNECTIVITY (TE)'s Raychem cable accessories and components for all your shipbuilding and offshore power installations.

Tried and trusted for over 60 years, TE Connectivity's Raychem range of connection solutions has been proven to withstand environmental extremes and high pollution levels over long operating lifetimes. Engineered to maintain service reliability under high electrical, thermal and environmental stress, TE's Raychem connection solutions are manufactured with specially formulated insulation materials that resist tracking and degradation caused by erosion, ultraviolet light and other environmental stresses.

With a broad industry portfolio, and applications across several industry sectors, the ruggedness and reliability of the TE's Raychem range is particularly suited to the requirements of the shipbuilding and offshore industry; the reliability of the range is further supported by a global network of dedicated TE Connectivity professionals who will do whatever it takes to maintain your operational efficiency regardless of the conditions.

That's why TE's Raychem is the first choice of renowned shipbuilding and offshore companies around the globe. If you're looking for high-quality, reliable connection solutions that conform to stringent environmental and performance specs, TE's Raychem will exceed all your expectations.

Capabilities

Born from several decades of meticulous R&D in advanced materials as well as ceaseless refinement, TE's Raychem range answers all the diverse demands of modern power systems:

- Fewer components and simplified cable preparation
- Fast installation and installer safety
- Consistency across cable types and voltage classes
- High reliability and meet exacting international specifications

Best of all, most TE's Raychem products come with DNV (or equivalent) certificates. Whatever the extremes in climate and operating conditions, wherever the installation, TE's Raychem has the perfect answers for all your demanding specs.



With a broad industry portfolio, and applications across several industry sectors, the ruggedness and reliability of the TE's Raychem range is particularly suited to the requirements of the shipbuilding and offshore industry; the reliability of the range is further supported by a global network of dedicated TE Connectivity professionals who will do whatever it takes to maintain your operational efficiency regardless of the conditions.







ENERGY /// SHIPBUILDING AND OFFSHORE APPLICATIONS
PAGE 3

- Low Voltage Cable Accessories

1112

- Mechanical Connectors
- Switchgear Connector



- 13 14 15
- Mechanical Connectors 16
- Switchgear Connector

ENERGY /// SHIPBUILDING AND OFFSHORE APPLICATIONS PAGE 5

MEDIUM VOLTAGE CABLE ACCESSORIES



Terminations for polymeric and MIND paper insulated cables from 7.2 kV up to 36 kV DNV certified, fully type-tested, and conforming to IEC, CENELEC and VDE specs, they have more than 30 years of proven reliability under all types of operating conditions, and are widely used in shipyards and offshore installations all over the world

· DNV G/



IXSU-F/OXSU-F

Heat-shrinkable termination system with nonlinear, zinc oxide stress control for polymeric cables up to 24 kV

With certificates from DNV GL, BV, LR, RMR. RIN and more, it features an integrated stress control mastic for a compact one-piece design plus a moisture seal, eliminating the need for separate, discrete seals, thereby greatly simplifying installation.

- DNV GL Lloyds Register of Shipping
- Regitro Italiano Navale Bureau Veritas
- Russian Marine Register of Shipping



MXSU/MXST/MXSW

Jointing system up to 36 kV complete with mechanical connectors

DNV-certified, fully type-tested and conforming to IEC, CENELEC and VDE specs, this polymeric/ elastomeric triple-extruded solution features a conducting/insulating joint body that ensures higher recovery force and fewer components, improving reliability and simplifying installation. Mechanical connectors with pre-set torque shear bolts, ensure consistent contact pressure, and eliminate the need for a crimping tool as well.



CSTI/CSTO

Silicone Cold-shrink termination with integrated stress control for XLPE cables up to 24 kV in various industries, such as Utility, Shipbuilding & Offshore, Oil & Gas, Wind Generation

One-piece, pre-expanded integrated stress cone termination on a spiral holdout for easy installation and excellent electrical stress control. Has excellent electrical properties with superior track resistance and outstanding weathering and UV resistance for a long service life weathering and UV resistance for a long service life.

· DNV GI



SXSU/SXST/SXSW

Joints for polymeric insulated cables from 12 kV up to 36 kV

DNV-certified, fully type-tested and conforming to IEC, CENELEC and VDE specs, this polymeric/elastomeric triple-extruded solution features a conducting/insulating joint body that ensures higher recovery force and fewer components, improving reliability and simplifying installation.

MECHANICAL CONNECTORS



Aluminium ShearBolt terminal lugs and connectors

Designed for easy installation with a standard socket spanner and featuring chamfered edges, they are suitable for up to 42 kV voltage and can be adapted to existing termination designs.

SWITCHGEAR CONNECTOR



Screened separable connection system 800 A up to 24 kV

Designed for cable connection to medium-

voltage gas insulated switchgear and other equipment using CENELEC bushings type "C". The insulation of the connector is made of a highly modified silicone rubber, fully screened, characterised by high tracking resistance, elongation at break and nonflammability. Perfectly water/weather proof in moist environments, its performance exceeds CENELEC HD 629.1 S2 requirements, including BS, VDE and other international specifications.

LOW VOLTAGE CABLE ACCESSORIES



MWTM/WCSM

Heat-shrinkable medium-wall insulation tubing

UV stable and pollution resistant. Available with an inner sealant wall that makes it suitable for either cable oversheath replacement or sealing, or uncoated as an insulating tubing for common usage.



Heat-shrink, halogen-free, flame-retardant insulating tubing for low hazard areas Built with high-performance materials with to withstand weathering and be UV-resistant, this tubing is ideal for oil and gas production. and ships.

• DNV GL



Heat-shrink, thin-wall, general purpose insulating and sealing tubing

This semi-flexible, general purpose adhesive lined, moisture proof heat-shrinkable tubing provides excellent environmental sealing of electrical components including wire splices and harness breakouts, and for sealing cable ends against moisture ingress.

Lloyds Register of Shipping



Heat-shrink, flame-retardant, heavy-wall flexible insulating tubing

Built with tough electrical insulating material that combines flame-retarded properties with flexibility, abrasion resistance and a rapid installation technique. Its high-performance, cross-linked polyolefin construction provides better sealing, or uncoated as an insulating tubing for common usage.

· DNV GI



Heat-shrink, medium-wall, general purpose insulating and sealing tubing

Comes with UV-stabilised material suitable for outdoor applications. Internally coated with hot melt adhesive or mastic to provide high corrosion and mechanical performance.



Heat-shrinkable, wraparound system for plastic or metal sheathed cable repair A fast and permanent cable repair and sealing system with rail and channel closure for quick fitting in place. One-step heating enables moisture-proof, insulating and tight

-fitting repair.

• DNV GL



Heat-shrink flexible cable jacket repair sleeve Enables one-step installation for a tight. moisture-proof and insulating seal that's reliable and repeatable. Its tough modified

polyolefin material offers high abrasion resistance, flexibility and insulating properties.

· Lloyds Register of Shipping



EPKE

Heat-shrink live end seal

Rapidly and reliably achieved moisture seal that has been proven in thousands of installations thanks to its heat-shrinkable design and special precoated adhesives. It's also impact-resistant, eliminates topping-up and curing delays, and can therefore be immediately placed and taken into use.

· DNV GI



102L End Cap

Heat-shrink cable end cap

Heat-shrinkable, inside coated with hot-melt adhesive, these end caps can be used on plastic, paper and rubber insulated cables to seal and protect their ends during storage, transport and cable laying. They are also resistant to UV-light and weathering.



302K, 402W, 502K Breakout

Heat-shrink cable breakouts

Made from semi-rigid cross-linked polyolefin, with resistance to abrasion, UV-light, weathering, and atmospheric pollution. Their precoated adhesive melts and reliably seals the cable crutch against moisture and the environment.

Lloyds Register of Shipping

ENERGY /// SHIPBUILDING AND OFFSHORE APPLICATIONS

With the development of shipbuilding and offshore manufacturing technology, more and more large-scale and complex power systems will be required on ship and offshore platforms. Reliability in harsh environments is the biggest challenge and weakness of these power systems - making customers very concerned about power connections and long operating life. They will insist on stable solutions that optimise the power system design.

Our mission is to support you in answering your biggest challenges: more reliable connections, easier installation and operation, better environmental tolerance, environment and operator safety, and stronger support and service capability.

You can count on TE Connectivity to be an indispensable partner who provides consistent, high-quality products - all driven by proven innovation and backed by extraordinary customer support.



KEY BENEFITS

- High reliability in harsh environments
- Long operating lifetimes
- Easy installation
- Comprehensive product portfolio
- Total power connection solution



Put 7,000 engineers to work for you

TE Connectivity has approximately 7,000 engineers and worldwide sales and customer service capabilities. TE leads the industry in innovation by bringing together expertise in materials, processes, physics and manufacturing. TE engineers design solutions and rigorously tests products. The TE commitment is to provide you with advantages in high performance and greater efficiencies in new and existing shipbuilding and offshore systems. TE engineers thoroughly understand industry standards and regulations, from adherence to stringent specifications or calls for rugged solutions built for harsh applications.

In addition, the TE Field Service Team provides the best support system in the industry. Our team supports customers seeking guidance on everything from design integration to onsite training to field supervision.

Working together, we can help you reach a better power connectivity solution.

For more information on our high-performance connection solutions or to connect with a TE expert, visit te.com/energy

ENERGY /// SHIPBUILDING AND OFFSHORE APPLICATIONS

TE Connectivity (NYSE: TEL) is a \$12 billion global technology leader. Our commitment to innovation enables advancements in transportation, industrial applications, medical technology, energy, data communications, and the home. TE's unmatched breadth of connectivity and sensor solutions, proven in the harshest of environments, helps build a safer, greener, smarter and more connected world. With 75,000 people – including more than 7,000 engineers – working alongside customers in nearly 150 countries, we help ensure that EVERY CONNECTION COUNTS – www.TE.com.

Generation

- Conventional Power
- Nuclear Power
- Wind/Solar
- Hydro-electric

Transmission & Distribution

- Substation
- Underground
- Overhead
- Street Lighting

Industry

- Mining
- · Petrochemical
- Railway
- · Shipbuilding

WHEREVER ELECTRICITY FLOWS, YOU'LL FIND TE ENERGY



te.com/energy

FOR MORE INFORMATION:

EMAIL: energyasia@te.com

TE Technical Support Centers

AMERICAS

USA/Canada: +1 (800) 327-6996 Mexico: +52 0-55-1106-0800 Brazil: +55 11-2103-6023 South America: +57 1-319-8962

ASIA-PACIFIC

Australia: +61 29-554-2695 New Zealand: +64 9-634-4580 China: +86 (0) 400-820-6015

EUROPE-MIDDLE EAST-AFRICA

+33 (0) 38-058-3200 Germany/Switzerland: +49 (0) 89-608-9903 +44 08708-707-500 Spain/Portugal: +34 912-681-885 Italy: +39 335-834-3453 Benelux: +32 16-508-695 +7 495-790 790 2-200 Russia: Poland/Baltics: +48 224-576-753 +42 (0) 272-011-105 Czech Republic: Sweden/Norway: +46 850 725 000 Middle East: +971 4-211-7020

te.com/energy

© 2017 TE Connectivity Ltd. family of companies. All Rights Reserved. EPP-2905-6/17

Raychem, TE Connectivity and the TE connectivity (logo) are trademarks of the TE Connectivity Ltd. family of companies. Other logos, product and Company names mentioned herein may be trademarks of their respective owners. While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this brochure are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.

