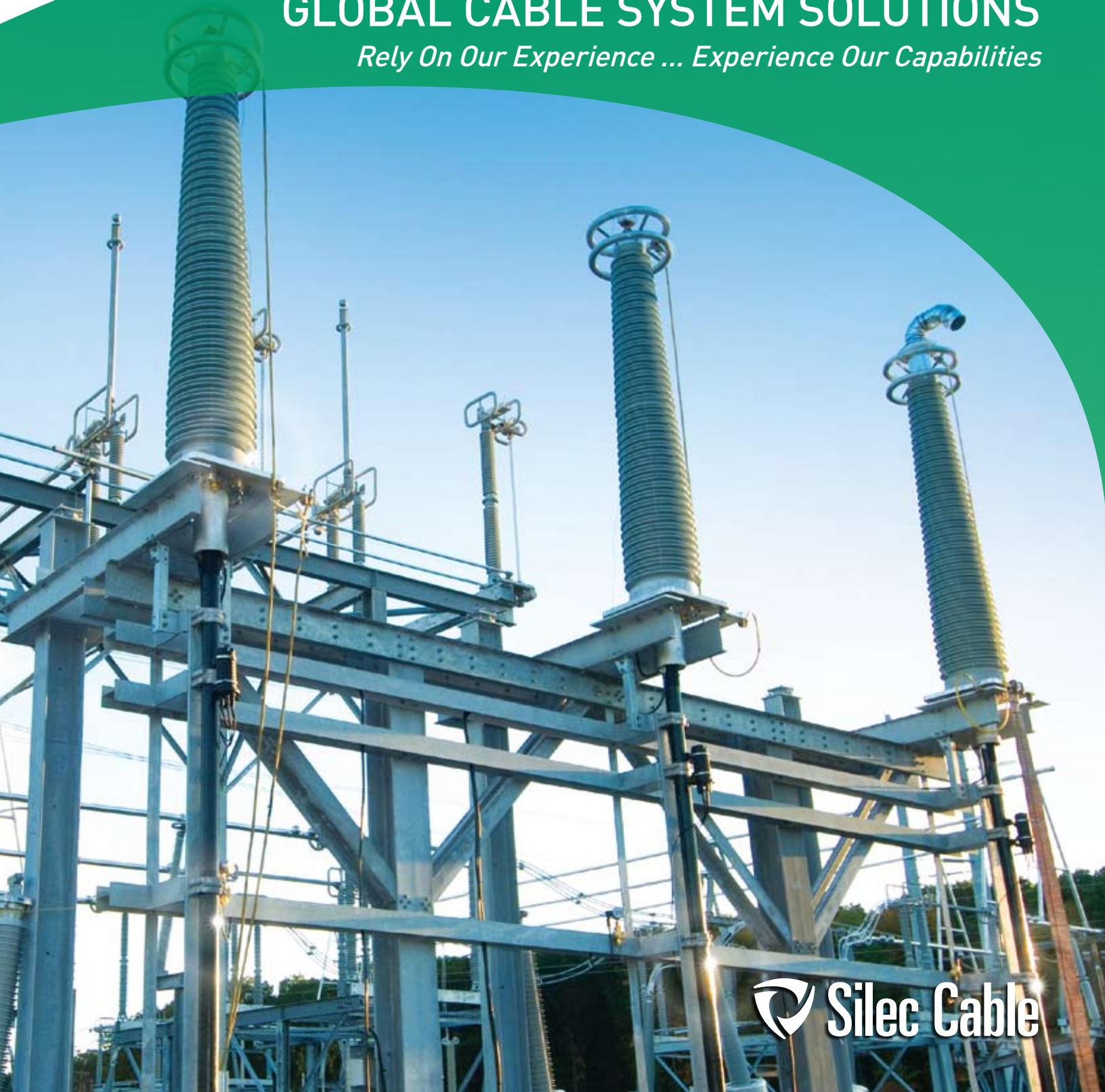


HIGH- AND EXTRA-HIGH-VOLTAGE GLOBAL CABLE SYSTEM SOLUTIONS

Rely On Our Experience ... Experience Our Capabilities



RELY ON OUR EXPERIENCE... EXPERIENCE OUR CAPABILITIES



For close to half a century, Silec Cable has been a recognized leader in the global electric utility market. With unrivaled expertise and turnkey project management, Silec Cable provides the innovation, quality and service to reliably and cost-effectively bring power from the grid into major urban areas. **Having pioneered the development of solid-dielectric extruded High- and Extra-High-Voltage (HV/EHV) cable systems for nearly fifty years**, Silec Cable provides its global customers with superior cable system solutions that offer maximum flexibility and service life.

When it comes to upgrading North America's aging utility grid with underground solid-dielectric cable systems, Silec North America understands the challenges that these significant and complex projects present, from system planning, engineering and project management to final testing and post-project maintenance. Underground transmission systems represent a considerable investment, requiring a long-term partner that has in-depth knowledge of the cables, accessories and installation methods — Silec North America is that partner.

- **Decades of experience in underground solid-dielectric cable systems**
- **Comprehensive line of High- and Extra-High-Voltage cable and accessories**
- **Total turnkey project planning, installation, management and testing**
- **Optimized economics to keep projects on time and on budget**
- **Extremely reliable, low-maintenance and long-term performance**
- **Complete post-project maintenance and support**

With the best experience, the best product and the best service, Silec North America is the best partner to meet your expectations.

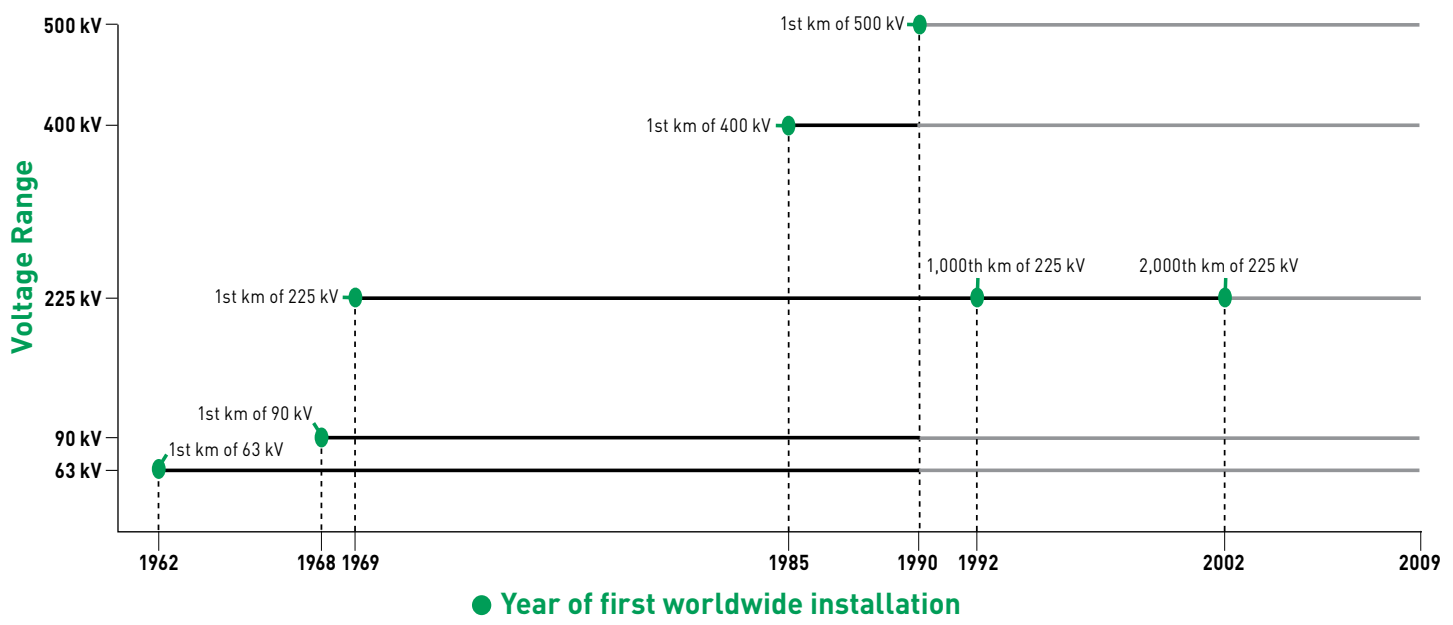
THE WORLD LEADER FOR HV/EHV UNDERGROUND TRANSMISSION CABLE SYSTEMS UP TO 500 KV



- 63-110 kV
- 132-160 kV
- 230 kV
- 345-500 kV

Voltage level [kV]	63-161	220-230	>330-500
Cable	>9,300 km	> 3,700 km	>360 km
Terminations	>25,000	> 7,300	>760
Joints	>12,500	> 6,250	>450

40 Years of Worldwide High- & Extra-High-Voltage Firsts

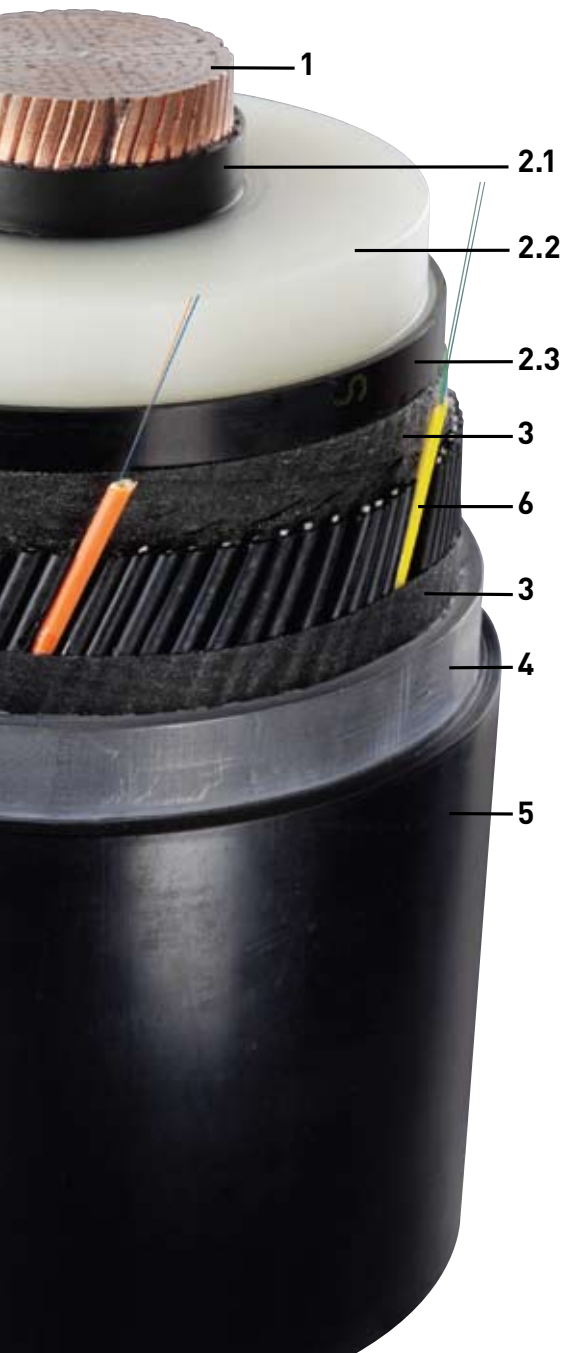


HIGH- & EXTRA-HIGH-VOLTAGE GLOBAL CABLE SOLUTIONS

The Silec name has been synonymous with solid-dielectric extruded cable solutions for nearly fifty years. Silec North America offers a fully integrated approach to providing a comprehensive range of quality High- and Extra-High-Voltage cable solutions that are designed, engineered and manufactured to ensure maximum service life and best-in-class performance while maintaining cost effectiveness.

Silec North America's HV/EHV underground transmission cables are reliable and environmentally sound to meet the needs of current and future utility transmission systems. They exceed the requirements of our customers' technical specifications while meeting international standards like ICEA S-108-720, AEIC CS9, IEC 60840, IEC 60287 and IEC 62067. Significant in-house testing includes:

- Qualification testing for cables up to 500 kV
- Testing capabilities for voltages up to 700 kV
- PD testing to <1 pC



The Most Comprehensive HV/EHV Solid-Dielectric Underground Transmission Cable Options in the Industry — Voltage Ratings up to 500 kV

- | | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Conductor | <p>Manufacturing up to 5,000 kcmil (2,500 mm²) conductor.</p> <ul style="list-style-type: none"> • Copper or aluminum stranded wires – watertight or non-watertight • Compact round • Segmental for Milliken conductor (recommended at 2,000 kcmil [1,013 mm²] and above) to achieve high ampacities |
| 2 Insulation | <p>Triple-head extrusion processed on the only-one-of-its-kind 100 m deep vertical line shaft to achieve optimum insulation concentricity. The use of super-clean Cross-Linked Polyethylene (XLPE) provides high dielectric performance.</p> <p>2.1 Inner semi-conductive layer
 2.2 Insulation
 2.3 Outer semi-conductive layer</p> |
| 3 Water Tightness | Swelling semi-conductive tape (under and over fiber tubes). |
| 4 Metallic Sheath | <p>Sheathing options for short circuit requirements and water barrier.</p> <ul style="list-style-type: none"> • Concentric neutral wires: copper or aluminum • Laminated sheath: copper or aluminum • Welded or TIG welded • Lead sheath • Metallic sheath designed to meet high short circuit applications |
| 5 Jacket | <p>Jacketing options for mechanical protection.</p> <ul style="list-style-type: none"> • Polyvinyl Chloride (PVC) • Polyethylene (PE) • High-Density Polyethylene (HDPE) or Low-Density Polyethylene (LDPE) |
| 6 Additional Components | <p>µCable (up to 2 FO) integrated into the High- or Extra-High-Voltage power cable for temperature monitoring via DTS system, PD detection and other diagnostic capabilities.</p> <ul style="list-style-type: none"> • Proprietary µCable (single- or multimode fiber) within a Polyethylene (PE) tube for flexibility and smaller overall diameter |

HIGH- & EXTRA-HIGH-VOLTAGE CABLE ACCESSORIES



As part of a fully integrated approach and commitment to providing complete system performance, Silec North America offers a wide range of HV/EHV cable accessories. Vital components of an overall cable system, these accessories are designed, precision-controlled and manufactured to ensure best-in-class performance and long-term service reliability.

Thousands of accessories in service

Voltage level (kV)	63-161	220-230	330-500
Terminations	>25,000	> 7,300	>760
Joints	>12,500	> 6,250	>450



A COMPLETE RANGE OF High- and Extra-High-Voltage Cable Accessories

From 72.5 kV to 550 kV to connect cables up to 5,000 kcmil (2,500 mm²)

Silec Cable's advanced technology in compounding and molding of silicone, EPDM and resins translates into a complete range of high-performance accessories from 72.5 kV to 550 kV to connect cables up to 5,000 kcmil (2,500 mm²) per IEEE 48 and IEEE 404.

Engineering and Testing

Silec North America's HV/EHV cable accessories are 100% tested through a range of calculation, modeling and testing techniques that enable Silec to continuously adapt and optimize performance to meet the demands of our customers. Silec North America's kitting options and superior logistics and distribution also ensure that our customers get the accessories they need in days, not weeks or months.



Silec offers an engineered short joint that is more space-efficient and affordable and utilizes ester oil terminations, which improve on-site safety conditions and lessen termination time.

High- and Extra-High-Voltage Cable Accessories	Maximum Voltage			
	72.5 kV	123 kV to 170 kV	245 kV	>362 kV
Joints: with or without grounding system with shield interruption with solutions for water tightness (Cu casing, etc.)	Wrapped or EPDM Pre-Molded	EPDM Pre-Molded	Short Joint	Pre-Molded EPDM
Outdoor Composite or Porcelain Terminations	Pre-Molded Stress Cone	Ester Oil Termination	Pre-Molded Stress Cone	Pre-Molded EPDM
Synthetic Terminations	Pre-Molded Shed Pre-Molded Stress Cone		–	–
GIS and Transformer (SF6 and/or Oil)	Silicon Pre-Molded – Epoxy Insulator			Pre-Molded EPDM – Epoxy Insulator
Transition Joints	Back-to-Back Joint with 2 GIS Terminations Back-to-Back Joint with One Insulator			Back-to-Back Joint with 2 GIS Terminations Side-by-Side Joint with 2 GIS Terminations
Link Boxes	Available according to the designed grounding system			
Additional Installation Materials	Designed, recommended and supplied by Silec North America Clamps, Support for Joints, Racking System, etc.			

HIGH- & EXTRA-HIGH-VOLTAGE TURNKEY SERVICES



With more than 13,000 km of cables, 33,000 terminations and 19,200 joints of HV/EHV cables installed and commissioned since 1962, Silec Cable is your best partner for the life of the entire cable system. From system engineering and installation to final testing and post-project services, Silec North America specializes in providing turnkey service management for new cable projects or the upgrading of existing cable circuits.

With decades of experience, Silec's HV/EHV North American specialists design, install and manage cable systems according to customer specifications, budgets and timelines. We then provide the comprehensive assessment, monitoring, training and service programs needed to **extend the lifetime of the system** while **reducing maintenance** and **optimizing operating costs**.

Silec North American Turnkey Services

Engineering: System and Installation Engineering

- Cable system design
- Civil design
- Complete construction specification

Management: Project Management Safety Management Environmental Management

Installation: Cable Pulling Accessory Installation and Termination Services

- Experienced and skilled technicians
- On-site coordination

Testing: On-Site Testing and Commissioning

- Visual inspection of cable system
- Testing of sheath bonding system
- AC commissioning test per IEC Standard 62067
- High-voltage resonant tests and partial discharge (PD) measurement
- Assessment of in-service systems
- Investigation of cable system faults and failures

Emergency: After-Sales Service

- Experienced and skilled technicians
- North American inventory of limited shelf life-type materials
- Expedited maintenance and replacement of any circuit part up to 500 kV
- Emergency failure repair

Technical Assessments

- Comprehensive site investigations and technical assessments
- Advanced North American laboratories for testing materials and components

Stand-By Links

- For voltages up to 275 kV
- Used in substations to bypass OHL
- Maintain power transmission in the case of unusual failures
- Substation repairs and spare product support

Other: Training

- Customized training programs for maintenance crews



ONE COMPANY — YOUR SOURCE FOR GLOBAL HIGH-PERFORMANCE QUALITY CABLE, ACCESSORIES AND SERVICES

A Worldwide Partnership

As a 100% subsidiary of General Cable, Silec Cable's experience and innovation are backed by one of the most geographically diversified wire and cable companies in the world. General Cable's legacy of leadership, innovation and service spans more than 100 years, and the company is solely dedicated to the development and manufacturing of the most reliable and technologically advanced cable solutions, as well as first-rate distribution and customer service. General Cable serves customers through a global network of 45 manufacturing facilities in 22 countries and sales representatives and distribution centers worldwide.



Safety — Our First Priority

General Cable has one worldwide safety vision and goal – **ZERO AND BEYOND**. We measure safety performance globally, share best practices and implement sound health and safety management systems. Many of our facilities worldwide are OHSAS 18001 (safety management system) certified. All North American facilities have implemented an equivalent health and safety management system.

General Cable was a pioneer in obtaining the OHSAS 18001 Certificate for Occupational Health and Safety Management Systems in Europe and North Africa.



Environmental — Foundation of Our Actions

As a global leader in the wire and cable industry, General Cable recognizes our role and responsibility in promoting sustainability. Our strongest business value is continuous improvement in all areas of our company. Across our many businesses, the quest to introduce new and better products through continuous improvement in environmental designs reflects our commitment to achieving industry-leading standards and responding proactively to global environmental issues.

General Cable was the first cable manufacturer to obtain certification for its environmental management system, in accordance with the ISO 14001 and EMAS Standards.



Research and Development — Our Competitive Advantage

General Cable uses the latest technology and systems to ensure superior engineering and manufacturing, as well as industry-leading logistics. Our global resources deliver maximum value to customers through a powerful combination of product and service innovations. General Cable backs all operations with an unwavering dedication to responsive customer service and knowledgeable technical support.



Quality Assurance Guaranteed — Our Path to Excellence

Through ongoing quality assurance initiatives, General Cable ensures the quality of product design, manufacture, installation and expected service life, as well as respect for the environment through sustainable products, processes and policies. Continuous research and development, combined with process control, quality audits and stringent testing, provide an ever-growing range of materials and designs that meet the global approvals and standards of the electric utility industry.

GLOBAL REACH

General Cable serves customers through a global network of 45 manufacturing facilities in 22 countries and sales representatives and distribution centers worldwide. The Company is solely dedicated to the production of high quality energy, industrial, specialty and communications wire and cable products. In addition to its breadth of product line and strong brand recognition, the Company offers competitive strengths in such areas as technology, manufacturing, distribution and logistics, and sales and customer service. This combination enables General Cable to better serve its customers as they expand into new geographic markets.



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