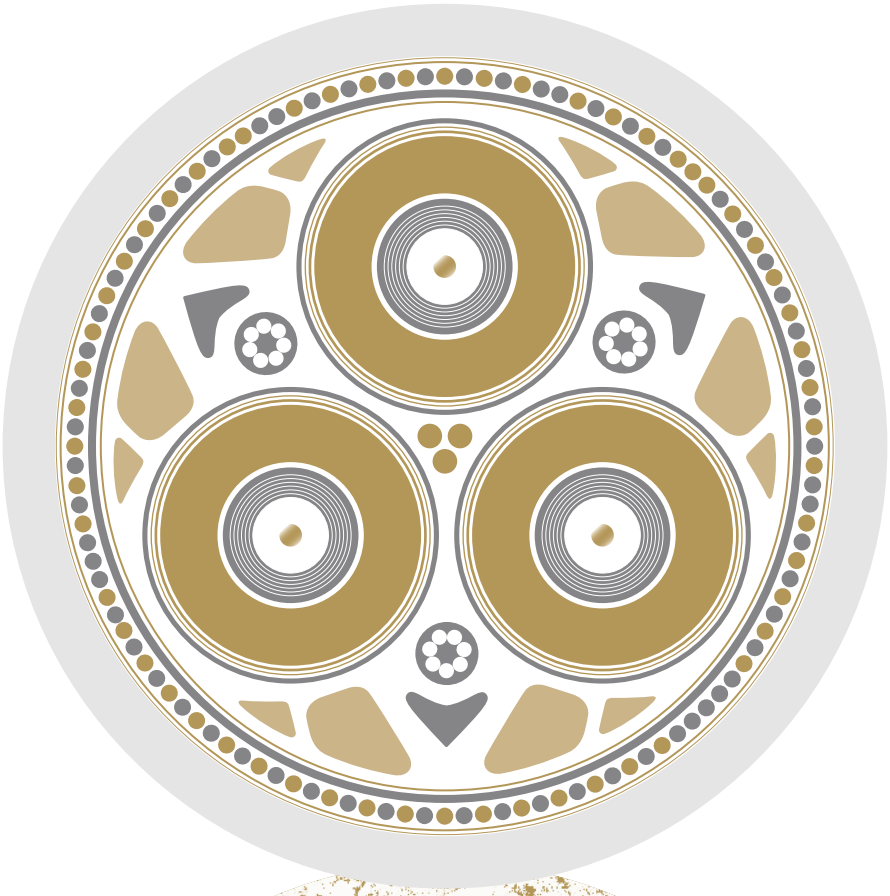
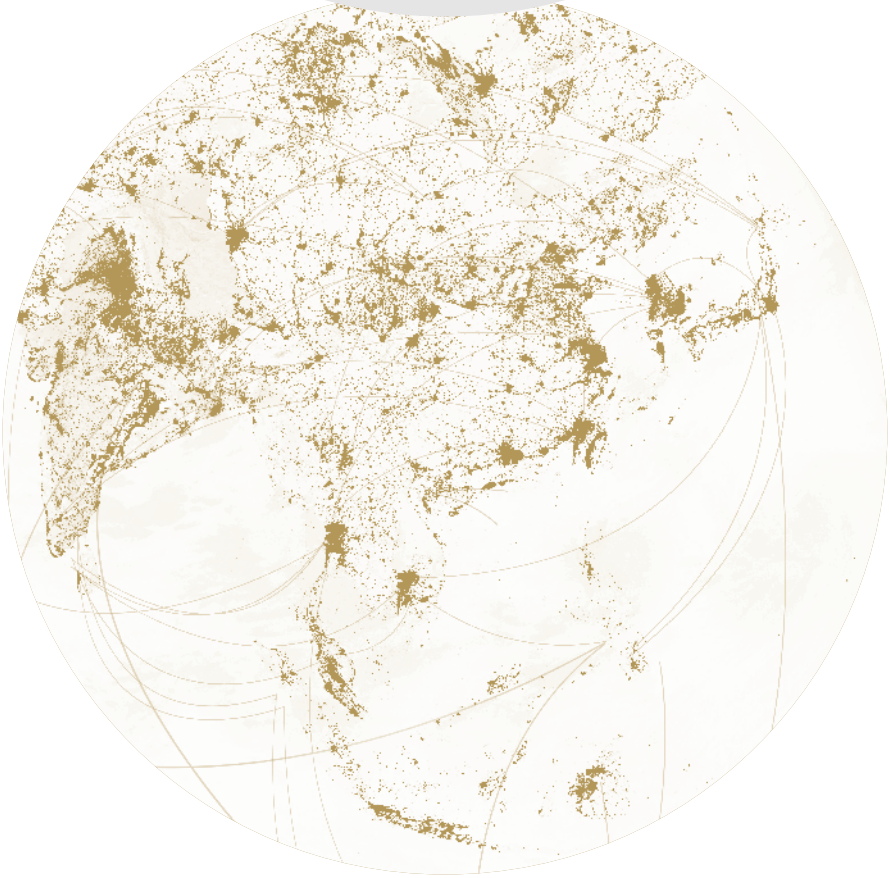
Enable the Cabled World

LS Cable & System





CONTENTS

GLOBAL LEADING ENERGY COMPANY

LS CABLE & SYSTEM

First in the world to develop a circular wire for solar panels

Developed a high-durability cable for factory automation

Developed a new copper alloy for high-speed trains

Developed easy-to-install connectors

Developed a new world-class corrosion-resistant aluminum material

DEVELOPED A WORLD-CLASS AC 500kV UNDERGROUND CABLE SYSTEM • DEVELOPED THE WORLD'S BEST SUPERCONDUCTING CABLE SYSTEMS • ACQUIRED INTERNATIONAL CERTIFICATION FOR HVDC 500kV MI AND 320kV XLPE CABLES • CABLES • LS CABLE & SYSTEM IS LEADING THE ENERGY AND ICT INDUSTRY THAT WILL DRIVE FUTURE GROWTH BASED ON ITS WORLD-BEST TECHNOLOGY

Developed a highly flexible wind cable

Developed a fire-resistant optical cable

Developed an environment-friendly polypropylene insulating cable

Developed a 500kV reduced-insulation extra high voltage cable system

Won the contract for the extra high voltage underground cable project from Singapore Power Grid, the largest such contract in Singapore

Supplied 400kV extra high voltage underground cables to the Qatar general Electricity & Water

Supplied a new flame retardant water resistance and fire-resistant cable to Samsung Electronics

Supplied bus ducts to the national hospital of the Ministry of Health of Singapore

Built submarine power grid to Deepwater Wind for the first offshore wind farm in the US

Supplied submarine cables to Energinet to connect the power grids of Denmark and Sweden

Supplied AC 225kV submarine cables to Van Oord for a Belgian offshore wind farm

Built Ras Laffan Industrial Complex submarine power grid for Qatar Petroleum

Built Jindo-Jeju submarine power grid for KEPCO

Supplied high speed communication network optical cables to CANTV of Venezuela

Supplied high speed communication network optical cables to Open Fiber of Italy

A FUTURE CONNECTED WITH TECHNOLOGY

Supplied structured cabling system products to the largest R&D center of LG Group in Korea

Supplied 4G infrastructure coaxial cables to Vodafone of Australia

Supplied the world's largest FLNG power, telecommunication and industrial specialty cables to Samsung Heavy Industries

Supplied wind power cables and connectors to VESTAS and GAMESA

Supplied cables for rolling stock to the Turkish State Railways Administration

Developed the world's first circular wires for solar panels and supplied them to LG Electronics

Supplied high voltage harnesses for electric vehicles to Dongfeng Motor, Guangzhou Automobile Group Motor, BDNT and Beijing Auto

Supplied automotive cables to Yazaki

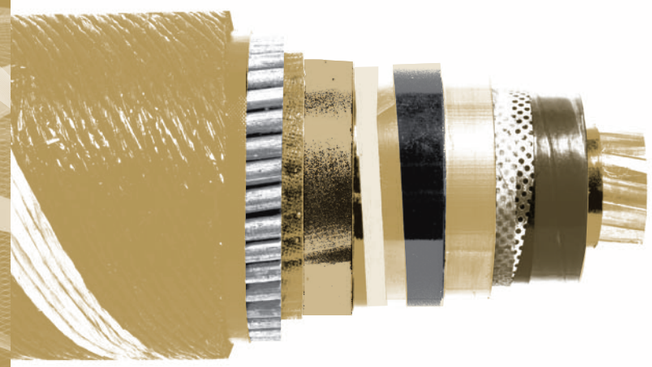
Supplied electric components for electric vehicle batteries to LG Chem, BMW and Volvo

Developed a new high strength copper alloy and supplied it to Korail and Hyundai/KIA

Supplied high output flat wire for GM electric vehicle motors

Supplied flat wire for domestic automotive motors, M/S 100%

Supplied high corrosion resistant materials for heat exchangers and automotive PA coating tubes to LG Electronics and Hyundai/KIA



LS Cable & System makes them all

“We will take the lead in connecting values with the future of humankind.”

LS Cable & System has been a trustworthy foundation for industries and the broader economy by contributing to energy and telecommunication network implementation in countries around the world. We have grown to become a global cable maker due to our excellent quality and technological expertise that is recognized by the world.

Dramatic changes are occurring across industrial sectors. LS Cable & System is focusing on sustainable qualitative growth for a better future in the energy and telecommunication industries to lead the next generation. Rather than settling for the status quo, we will take the lead in connecting values with the future of humankind by discovering innovative business models and creating synergies with future industries.

Our professionalism and technological expertise, which we have accumulated around the world over the last half century through utmost dedication, will shine at the center of future industries.

As long as human civilization lasts, LS Cable & System’s efforts to improve the quality of life will make the future brighter and richer and “Enable the Cabled World.”

Chairman, Cha-Yub Koo

“We will be with our global partners on their way to success.”

LS Cable & System is growing with global partners in more than one hundred countries around the world. We have won recognition for being a top-level technological power in the energy and telecommunication industries with our power transmission and distribution cables and submarine cables that lead the next-generation energy market, our cables for communication infrastructure development, industrial cables used in all areas of industrial sites, and materials that are the basis of industrial products.

Having correctly predicted changes in the energy market, LS Cable & System is now preparing for the future by developing new growth engines that include superconducting cables, HVDC and eco-friendly automobile parts. In addition, we stay one step ahead of our competitors by investing in key countries including the U.S. and those of Europe and Southeast Asia with innovative strategies.

We pledge to provide our customers with reliable products and solutions, and thus superior values through continuous R&D and quality control.

President & CEO, Roe-Hyun Myung

ENERGY CABLES

LS CABLE & SYSTEM

CREATES A WORLD

OF ABUNDANT ENERGY

More, farther and more stably LS Cable & System progresses toward the future of the global energy industry

LS Cable & System is working to promote the development of more stable, reliable transmission of increasingly large quantities of electric power. Now that electric energy is becoming more important, we are prepared to meet the challenge by developing extra high voltage and superconducting cables that respond to a growing need to increase transmission capacity, and develop HVDC cables that can connect power grids that span countries, borders, and bodies of water. LS Cable & System is capitalizing on its diverse experience and know-how of design and construction, e.g. connection and installation, as well as cable manufacturing to export cable systems to more than 100 countries around the world, making the company recognized on the global stage.

Extra high voltage Cable

500kV XLPE

The use of extra high voltage XLPE cables is increasing due to their excellent insulation capabilities and low installation costs. Currently, cables up to 500kV XLPE are available in the market.

HVDC Cable

DC ± 500kV MI

HVDC cable, capable of large-capacity and long-distance transmission with minimal power loss, requires state-of-the-art design and production technology. Two HVDC cables can transmit more electricity than three AC cables.

Super conducting Cable

DC 154kV

Superconducting cable, the next generation, environmentally-friendly transmission system, can replace antiquated multi-line underground transmission lines with a single line. 154kV superconducting lines can also be used to substitute underground 345kV lines.

LS Cable & System provides the best electric power solutions in various environments

LS Cable & System is introducing numerous transmission and distribution products to provide electric power solutions that suit customer needs in various vertical markets, such as for ships and plants as well as for hospitals, airports and industrial complexes.

Overhead cables include cables with double the transmission capacity of general overhead cables, and optical ground wire incorporating sophisticated technology. As for distribution cables, LS Cable & System has an exceptional product offering that is highly functional and environmentally friendly. We supply polypropylene (PP) insulated cables that can be recycled and HFIX+ with improved construction capacity, flame retardant water resistance cables that can withstand extreme temperatures and maintain performance even when exposed to fire or moisture.

As for bus ducts, there are various product groups ranging from low-voltage (under 1,000V) to high voltage of 24,000V, and from a small capacity of 16A to a large capacity of 7,500A. In particular, as low-voltage bus ducts have increased the technical efficiency of enclosures, and as cast-resin bus ducts have excellent quality and durability in extreme environments, they are attracting attention in global markets.

Flame Retardant Water Resistance Cable

FW-CV

Flame retardant water resistance cables maintain performance and have a low failure rate, even when exposed to moisture. They are much safer because they minimize the induced voltage loss of the sheath and prevent contact voltage.

High Capacity Conductor

STACIR / AW / TW

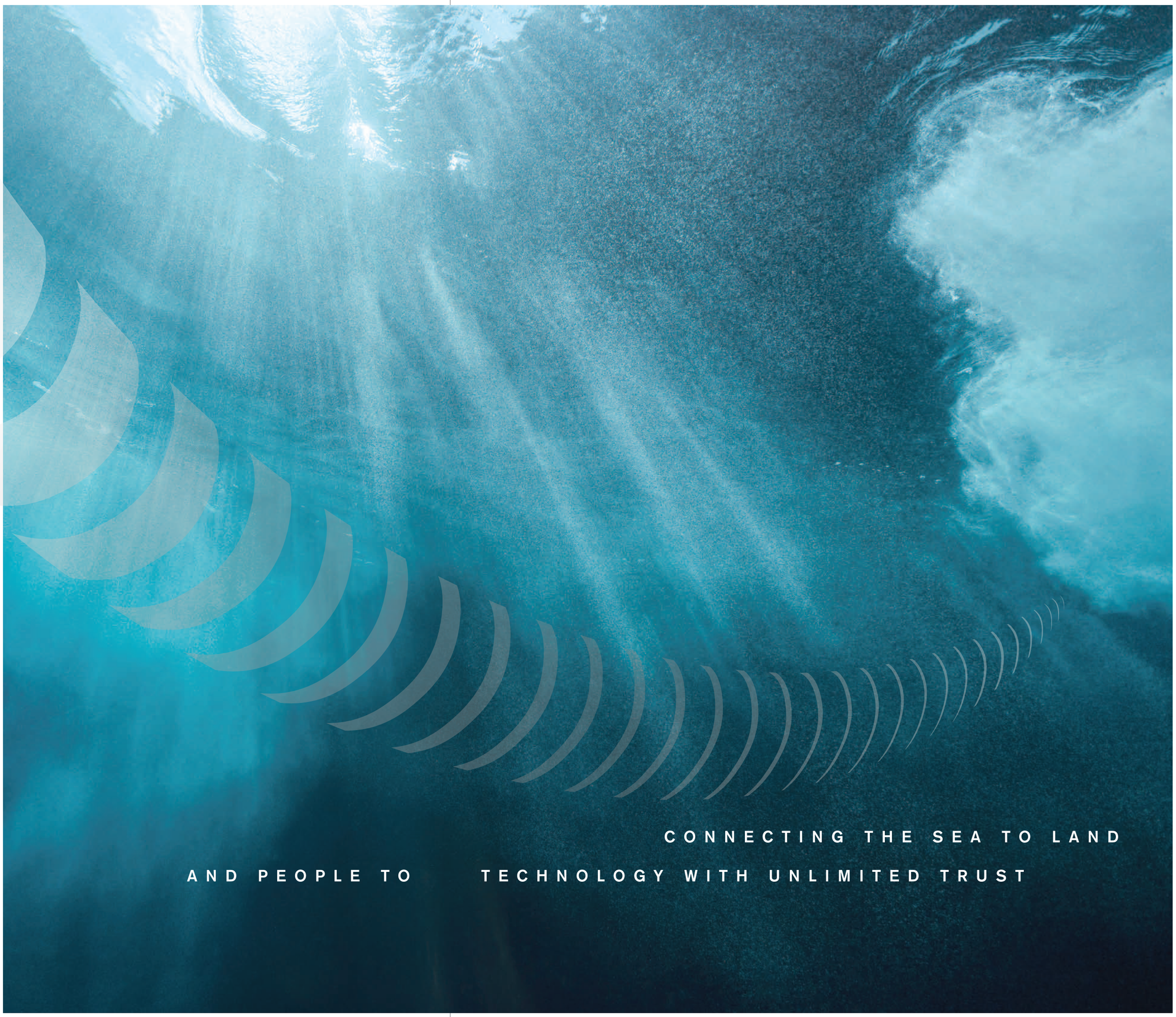
STACIR has high capacity and low sag without reinforcing pylons for transmission lines because it can transmit twice as much electric current as general overhead cables. This cable can also be installed in various environments.

Bus Duct

E-Series (Ez/Ex/Ef-Way)

Bus ducts can simplify electric power systems and effectively shield faulty current. The E-Series was especially designed for high-heat dissipation efficiency, and since it is light and easy to install, it can reduce labor time and costs.

SUBMARINE CABLES



Transcending the boundary between sea and land, and blazing a new trail in environmentally-friendly energy

LS Cable & System is becoming a global leader in submarine cables, the zenith of power cables. With environmentally-friendly and renewable energy industries rapidly growing around the world, we provide not only submarine cables but also deliver turnkey solutions for submarine power grid implementation to supply energy both at sea and on land.

LS Cable & System leveraged its advanced technology to implement the submarine power grid for the first offshore wind farm in the US, and supplied submarine cables for European offshore wind farms in the North Sea, the UK, and Belgium. We have successfully carried out large-scale submarine power grid projects in Qatar, Canada, and Venezuela.

DC Submarine Cable

320kV XLPE

DC submarine cables can energize super-long-distance lines up to 1,000km by minimizing power loss. Also, the company can produce MI, XLPE HVDC submarine cables.

AC Submarine Cable (one-core)

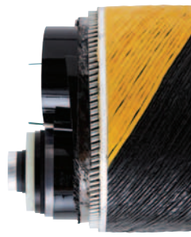
400kV XLPE

One-core AC submarine cables are primarily used for mid-to-long-distance transmission less than 100km. If they are linked to underground systems, there is no need for additional and costly DC conversion equipment.

AC Submarine Cable (three-core)

220kV XLPE

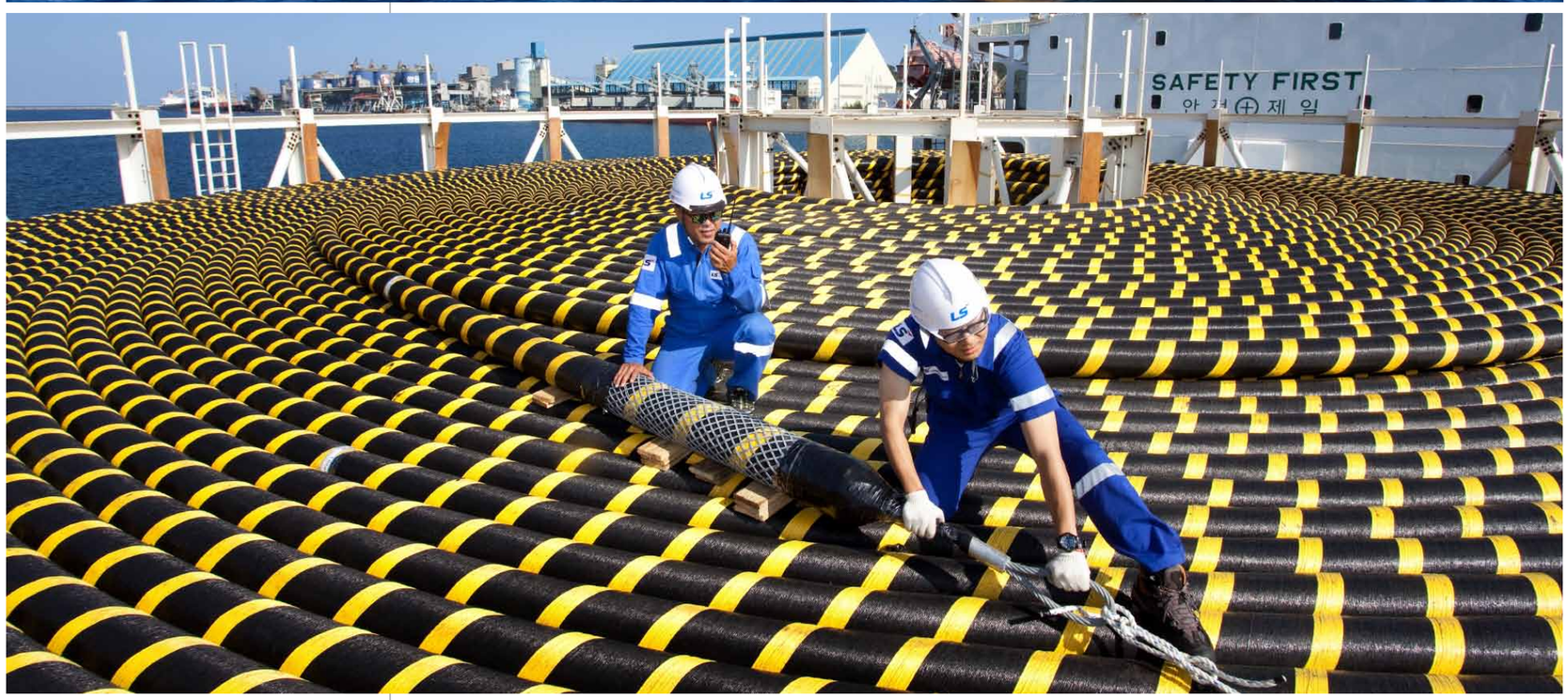
Three-core AC submarine cables can also be used as submarine fiber optic composite power cable and may yield installation cost savings as compared to 1-core AC submarine cables.



Leading the global market with top-tier cable technology

With years of collective cable technology and industry experience, LS Cable & System's submarine cables are manufactured to the highest quality. We have successfully developed the technology for producing DC 500kV large capacity submarine cables, which are currently manufactured only by top global cable companies, and AC 400kV submarine cables. The reliability of the cables has been certified by an international certification authority.

The Donghae Plant, which was specifically built to produce submarine cables, directly manufactures the cables in their entirety. As international power grid connection projects have increased, LS Cable & System has introduced MI, XLPE HVDC submarine cables that can transmit power over very long distances (100km~1,000km) with minimal power loss. Also, as the company has all the equipment and technologies necessary for production of AC submarine cables, it is supplying both one core and three core submarine cables that are used to connect offshore plants and wind farms.



TELECOMMUNICATIONS

TRANSCENDING
TEMPORAL
AND SPATIAL
LIMITATIONS AND
BECOMING THE FIRST
TO COMMUNICATE
WITH THE TOMORROW
OF MANKIND

Making network infrastructures faster and smarter

LS Cable & System is building the digital networks of the world with innovative telecommunication technology to transmit vast amounts of data swiftly and reliably. To meet the growing challenges in the rapidly changing communication industry, we supply high-tech products that are essential for implementing various multimedia systems such as 4G high-speed telecommunication networks.

As for optical fiber and optical cables, LS Cable & System supplies products customized for the operating environments in which they will need to perform such as overhead, underground and indoor installations, ships and offshore drilling rigs.

The structured cabling system represents the cabling infrastructure in a building and facilitates effective implementation of the data center by establishing an optimal design. In addition, SimpleWin™, an integrated cabling management system, systematizes telecommunication infrastructure operation and management, thus improving customers' lives.

The RF Feeder system quickly delivers large-capacity signals anywhere. LS Cable & System is taking the lead in revolutionizing the industry with coaxial cables that reliably transmit signals between telecommunications equipment and serve as antennas in broadband, and leakage coaxial cables that serve as antennas where it is difficult to install them.

Optical Cable

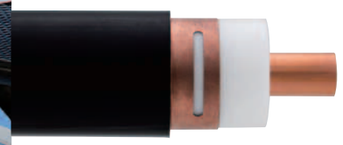
PP Tube & RFM Jelly cable

PP Tube & RFM Jelly cables are the first products in Korea to have polypropylene (PP) applied to loose tube optical cables. They are easy to install because they are lightweight, are more flexible, and require reduced operating areas.

Structured cabling system

Slim category 6A cable & channel system

As the external diameter of slim Category 6A cables is only 6.8mm, the smallest in the world, the overall installation area can be decreased. Stable and reliable data transmission is possible if a channel system is built.



Coaxial Cable

Leakage coaxial cable

Leakage coaxial cables are used where it is difficult to install antennas. They can be designed for specific frequencies and used for broadband. The slots can be freely designed depending on the installation environment.

INDUSTRIAL CABLES

Providing the best solutions for a rapidly-changing industrial market

LS Cable & System produces cables optimized for various industrial applications, ranging from cables for industrial equipment to specialty cables for offshore rigs, ships, wind farms, railroads, mines and photovoltaics. In addition, we supply automotive cables that supply electric power and electrical signals to automobiles, high voltage harnesses for environment-friendly vehicles, electronic components for batteries and ESS.

Industrial device cables provide customized solutions fit for the specific purposes of customers in all industries closely related to our daily lives such as home appliances, industrial robots, medical devices, broadcasting/acoustic systems and military weapons systems.

Industrial specialty cables boast high quality and performance. They can withstand extreme temperatures, as well as withstand mud, gas and particles stirred up during drilling processes.

High voltage harnesses provide customized solutions that improve insulation according to customer needs and take electromagnetic wave shielding and assembly into consideration.

Marine Cable

0.6/1kV RFOU cable

Marine cables must withstand the mud, oil and corrosive chemicals stirred up during drilling operations. They are used in offshore industrial equipment related to oil drilling.

Industrial Equipment

Factory automation cable

Factory automation cables are used to supply power and transmit signals to various machines for machine operation. We provide various customized products depending on the types of machines used in an industrial application.

Cables for Electric Vehicles

EEXV-SB

Cables for electric vehicles can be used for voltages ranging from 600V to 1,000V and are designed to withstand temperatures ranging from −40°C to 150°C. They are heavily shielded to reduce power loss and electrical resistance.

Automotive Tubes

Automotive tubes are used for the braking and fuel delivery systems. They are polymer synthetic resin products that are effective at insulation, corrosion prevention and water-proofing.

MATERIALS


TRANSCENDING GLOBAL STANDARDS WITH
INNOVATIVE MATERIALS TECHNOLOGY

Harnessing the best technology to solidify the future of the industry

LS Cable & System has the productivity and competitiveness to meet the diverse needs of customers. With the largest production facilities in Korea, the company manufactures products essential for industries such as copper rods, magnetic wire and aluminum products. In particular, we have developed flat wires which are a core component of the environmentally-friendly vehicles of the future, and has supplied them to global automakers such as GM.

We have also developed a new aluminum alloy that boasts more than double the corrosion resistance of existing aluminum so much so that the Aluminum Association of America has granted it a unique designation, guaranteeing the reliability and quality of the technology.

Copper Rod

Copper rods are used as conductors for various cables. They are made of electrolytic copper with a copper content in excess of 99.99%. Depending on product characteristics, the company provides products of various diameters ranging from 0.01mm to 23.0mm.

Magnetic wire

Flat wire

Flat wires are used in the fields which require high efficiency, e.g. drive motors for environmentally-friendly vehicles such as hybrid cars and electric vehicles, high-speed trains and super-large generators.

Aluminum

PFC tubes for heat exchangers

PFC tubes for heat exchangers are lighter and more energy-saving than copper. They are used in automobiles, home appliances, construction and electric wires.

RESEARCH & DEVELOPMENT

Conducting research for sustainable growth and customers' future

The electrical power and ICT industries will play key roles in the future of the energy industry. In order to take the lead, these industries will require state-of-the-art technology to transmit large quantities of electric power over long distances without loss and innovative solutions for transmitting large amounts of data faster and reliably. LS Cable & System focuses on R&D for securing core technologies for the future and continuously implements them. With increasing consumer demand to supply power to households and businesses that are integral to growth and production across the world, LS Cable & System is at the forefront of research and development on the future of the cable industry continuing its customer focus and manufacturing products.

Developing next-generation cable systems for the tomorrow of the energy industry

LS Cable & System has secured advanced next-generation cable system technologies by investing R&D in telecommunication and industrial cables with a focus on the energy sector including extra high voltage and submarine cables. In particular, we are looking towards the future by primarily focusing on developing superconducting cable systems that can transmit large quantities of electricity without any power loss, world-best HVDC/HVAC submarine cable systems, environmentally-friendly DC distribution networks, and core components for electric vehicles as the next-generation growth engines.

CORPORATE SOCIAL RESPONSIBILITY

People and world, connecting to happiness and tomorrow

LS Cable & System cares deeply about connecting with the world and developing for future generations. The company is fulfilling its social responsibilities and creating sustainable value by contributing to and connecting with local communities.

Global sharing activities ‘LS College Student Overseas Volunteer Corps’

The company is providing college students with opportunities to participate in overseas volunteer activities.

Science class for children ‘LS Dream Science Class’

Employees and college students become mentors for children and provide them with opportunities for practical science education and cultural experience in a specially designed science class.

On-site practical education for college students ‘JOB Schooling’

To identify talents for the power and cable industry, the company is providing education about cables, including both theory and practice, for college students.

Sharing with local communities ‘Employee Volunteer Corps’

These special volunteers help the underprivileged in local communities who need a helping hand through special activities, bazaars and donations.

Global network spreading around the world

LS Cable & System has been more than 50 production subsidiaries, sales subsidiaries and branch offices in 20 countries around the world. Based on this solid network, the company is exporting its products to more than 100 countries, and developing global business markets.

KOREA

Gumi Plant

EHV, MV, LV, Overhead cable, Bus duct, UTP, Coaxial cable, SCR, Magnetic wire

Indong Plant

Optical fiber, Optical cable, Aluminum

Donghae Plant

Submarine cable, Industrial specialty cable

CHINA

LSHQ (Yichang)

EHV, MV, LV, Industrial specialty cable

LSCW (Wuxi)

Bus duct, Industrial devices cable, Automotive cable, Tubes, Harness & module, Aluminum

VIETNAM

LS-VINA (Haiphong)

EHV, MV, LV, Overhead cable, ACSR, SCR

LSCV (Ho Chi Minh)

MV, LV, Optical cable, UTP cable

INDIA

LSCI (Bawal)

EHV, MV, LV, Overhead cable, Coaxial cable

USA

LSCUS (Tarboro)

MV, LV, Control/ Instrument cables

POLAND

LS EV Poland (Dzierzoniow)

Components for automotive batteries


Cable & System