



Wire Connects the World





## Wire Connects the World

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Kiswire Center built in 2013 is a structure that is supported by the tensile force of wire ropes. 836 MT concrete roof is sustained by wire ropes only, creating a large open space without columns or pillars.



Since its founding, **Kiswire** has earned the trust of customers by focusing only on wire.

We aim to become the leading specialty steel wire company that places its highest priority on customer value.



Since our establishment in 1945, we have spearheaded Korea's specialty steel wire industry to become one of the leaders in the industry. Today, we have reached a global annual production capacity of 1.2 million tons, and we continue to support the growth of various industries including automotive, machinery, construction and energy as a global specialty steel wire manufacturer.

Kiswire has been able to enjoy stable growth because we are always faithful to our values and we have earned the trust of our customers. To maximize value creation for our customers, Kiswire has focused not only on producing quality products, but also on offering solutions through its comprehensive technical services. In addition, we have concentrated on developing new materials and technologies through our continuous R&D efforts to be at the leading edge of our industry.

Kiswire is ready to make the next leap forward to become the best company with its world-class technology and its global management system in place. Our employees and staffs at Kiswire will spare no efforts to build a production system around its core principles, to carry out social responsibilities as good corporate citizens, and to commit to growing together with our customers and communities. We will become the best global specialty wire company that always places its highest priority on customer value.

Chairman Young-Chul Hong

## Management Philosophy

Creativity  
Trust  
Perseverance  
Internal Efficiency

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Creativity, trust, perseverance and internal efficiency have been the cornerstones of Kiswire's success since its founding. Kiswire will continue to embody this management philosophy in our conduct. We are devoted to serving our customers and our society, and we will continue to contribute to the well-being of mankind.

## Management Principles

Competitiveness  
Globalization  
Rewarding Workplace  
Reliable Brand

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Kiswire will remain competitive through technological and cost leadership, achieving growth together with our customers, creating a rewarding workplace for our employees, and building the most trusted brand that customers can rely on.

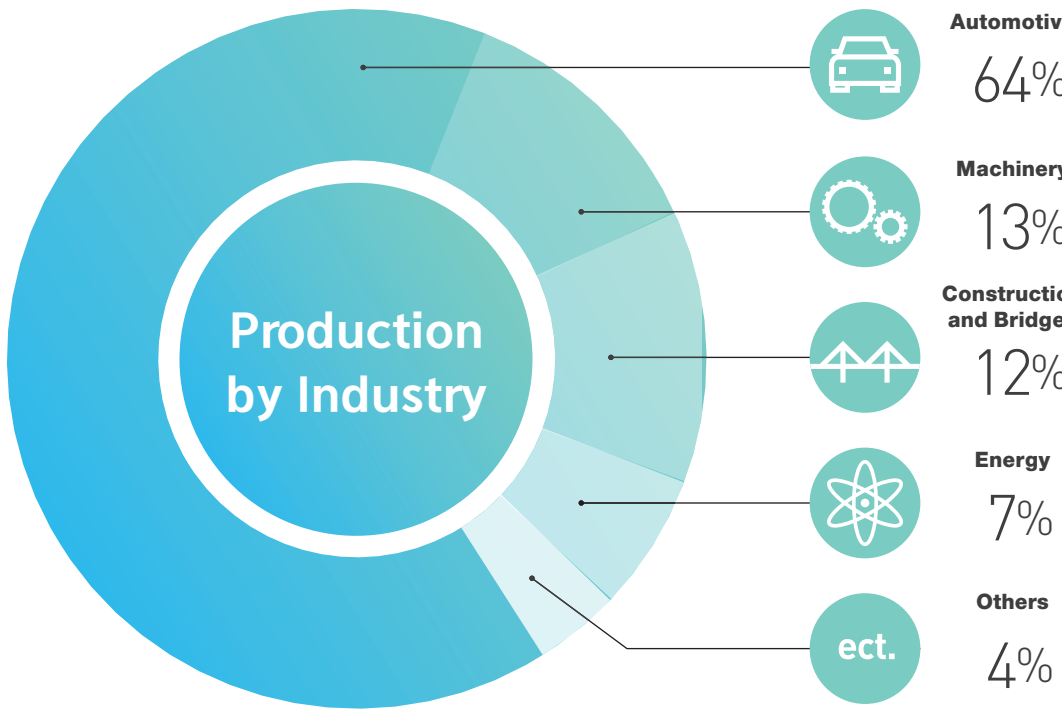


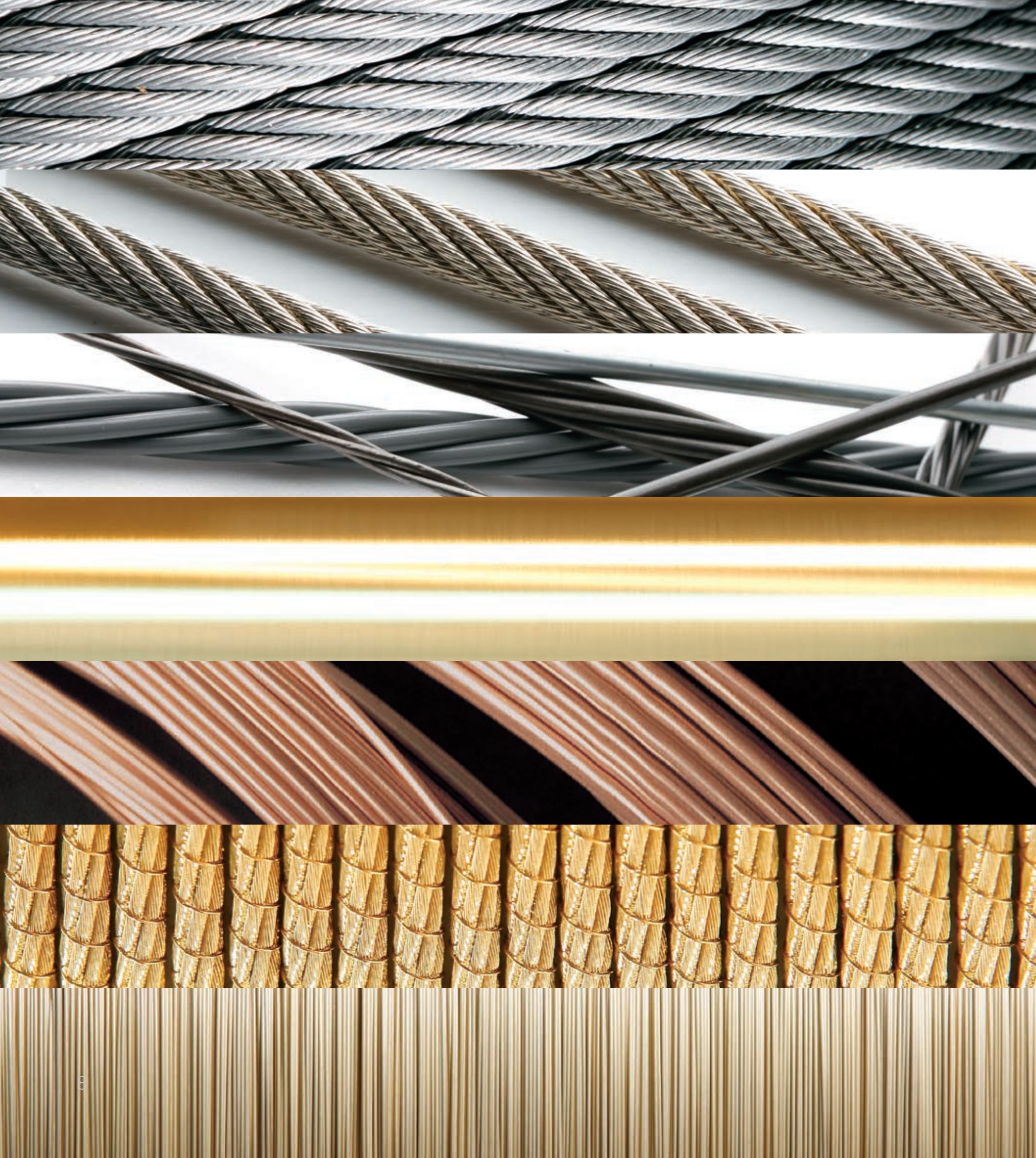
## Global Specialty Steel Wire Company

Founded in 1945, Kiswire manufactures specialty steel wire products for a diverse range of industries including automotive, bridge, energy, construction and electronics. Kiswire exports to customers in over 80 countries.

Kiswire maintains its global competitiveness through continuous technological innovation and new product development, and manufactures a wide range of specialty steel wire products from product-specialized factories.

Establishment	1945.9.22	Headquarters	Busan, Korea
# of export countries	80	Annual total production capacity	1,200,000t
Worldwide employees	6,000	Overseas sales	70%





## Kiswire Products

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### Wire Rope

Wire Rope for General & Special Application  
Elevator Rope  
Non-rotating Rope  
Compacted & Swaged Rope  
Logging & Fishing Rope  
Anchor-Wire Rope for Offshore (N2 Hyrope™, Neptune™)  
Mooring Rope for Offshore (N2 Spiral™)  
Specialty Wire Rope for Cranes (Hyrope™)  
Surface & Underground Mining Rope (K-Max™)

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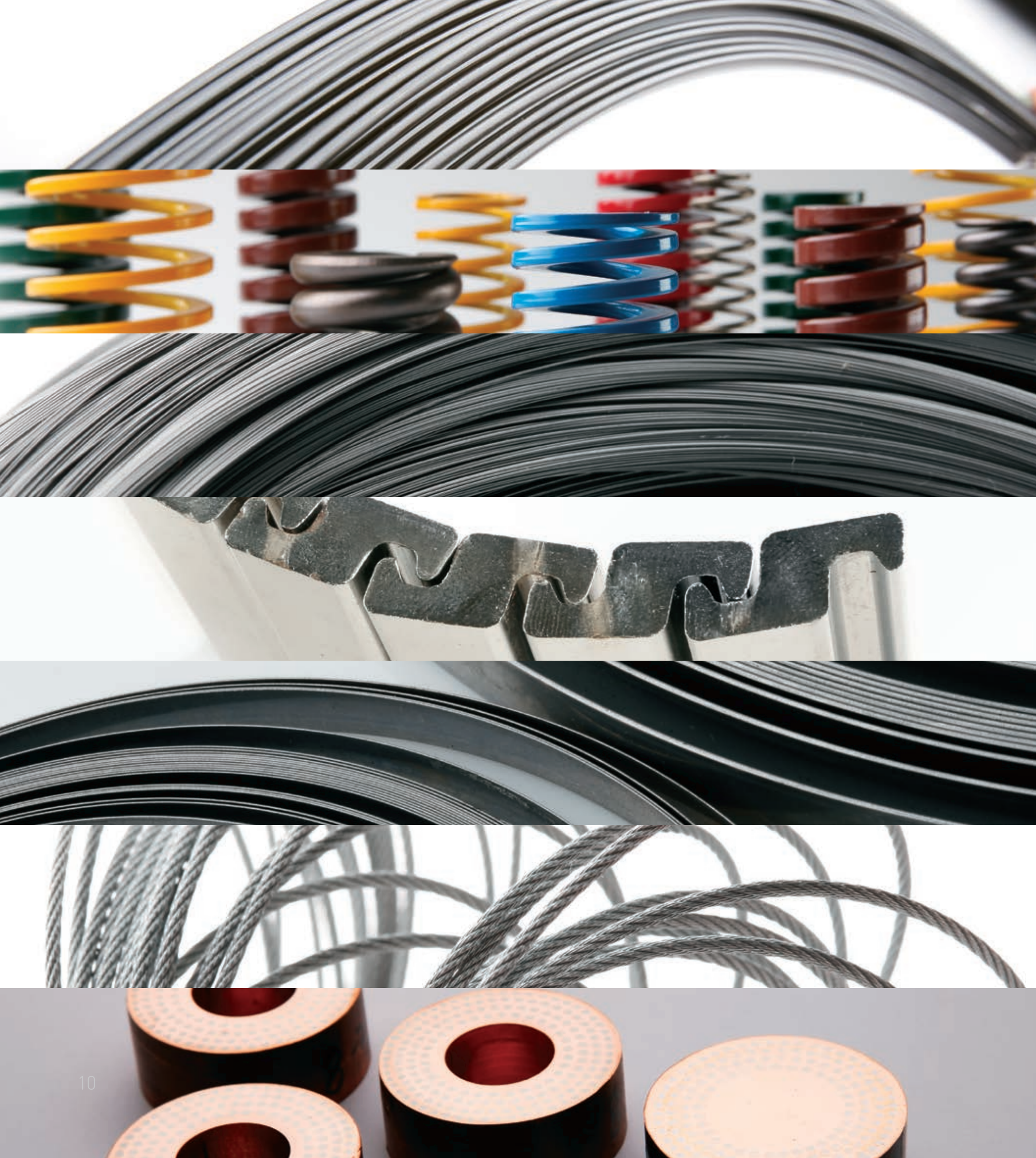
### PC Wire & Strand

Steel Wire & Strand for Prestressed Concrete  
PC Wire & Strand for Cable Stayed Bridge  
Galvanized Steel Wire & Strand for Suspension Bridge  
Galvanized Steel Wire & Strand for ACSR  
Galvanized Steel Wire & Strand for Guying Purpose  
Unbonded Prestressed Concrete Strand  
Epoxy Coated Wire & Strand

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### Bead Wire / Steel Cord / Hose Wire

Bead Wire  
Steel Cord  
Hose Wire  
Hose Mandrel Cord  
Brass Plated Wire Products



## Kiswire Products

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### Spring Wire / Flat & Shaped Wire

Hard Drawn Steel Spring Wire  
Bed & Mattress Spring Wire  
Piano Wire / Music Wire  
Oil Tempered Wire  
Flat and Shaped Wire  
Silk Wire  
Zeta Wire for Flexible Pipes

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### Control Cable

Galvanized Aircraft Cable  
Micro Cable  
Control Cable

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### Sawing Wire

Sawing Wire

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### Electrical Wire / Superconducting Wire

Superconducting Wire (NbTi, Nb<sub>3</sub>Sn)  
Electrical Wire

# Kiswire Major Milestones

**1961**  
Establishes KISWIRE's 1st wire rope factory



**1945**  
Establishes Goryeo Trading Company



**1964**  
Builds heat treating furnace and develops the 1st automated process in the Korean special steel wire industry



**1965**  
Builds Korea's 1st galvanizing process and system in the Korean special steel wire industry and begins production of PC wire and strand



**1981**  
Earns JIS certification for wire ropes



**1989**  
- Establishes the 1st offshore factory in Malaysia  
- Establishes Hongduk Industrial



**1990**  
Establishes Kiswire R&D Center



**1991**  
Supplies PC strands for Libya's Great Man-Made River Project



**2008**

Establishes Kiswire Neptune Sdn. Bhd.



Establishes Eonyang Factory for retired employees



**2012**  
Establishes Kota Kiswire



**1970**  
Begins production of bead wire for tire reinforcement



**1978**  
Establishes Kiswire Cord



**1976**  
Kiswire goes public on KOSPI



**1997**  
Contracts suspension cables for Diamond Bridge and stay cables for Seohae Bridge



**1999**  
Establishes factory in the USA



**2004**  
Establishes KAT to develop superconducting wire



**2013**  
Establishes Kiswire Center



**2014**  
Acquires ArcelorMittal's wire factories in China, USA and Hungary







# Research & Development

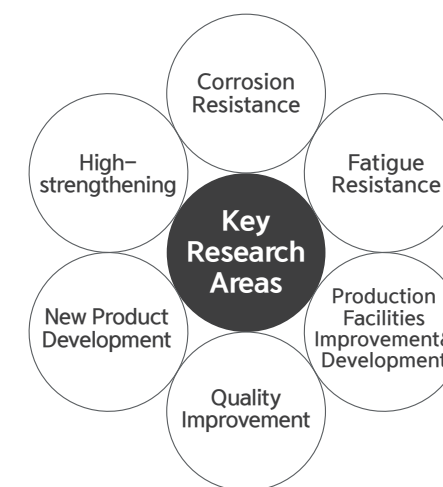
## Developing wire of the future

The Kiswire R&D Center tests the new possibilities of wire. We are committed to developing lighter, stronger, more durable wire so that our customers can create a world that is safer, more convenient, more efficient, and is a happier place to live.

The Kiswire R&D Center serves as the basis for the development of new materials and processes with state-of-the-art facilities in order to respond effectively to our customers' needs. Through our domestic and overseas research centers, we conduct systematic research to maintain our technological leadership, and we work with our customers to provide optimized solutions for various industries.

Our new coating technology developed at the Kiswire R&D Center greatly improves corrosion resistance and performance of wires for a wide range of applications. From bridge cables to offshore construction wire ropes, automotive engine valve springs and tire reinforcement wires, our high-strength, lightweight and corrosion resistant wires are known for their efficiency and long service life.

These R&D breakthroughs at Kiswire ultimately improve the performance of our customers' end-products, thereby helping to reduce costs, enhance stability, and create environmentally friendly products.



Kiswire R&D Center, Korea



Kota Kiswire, Malaysia

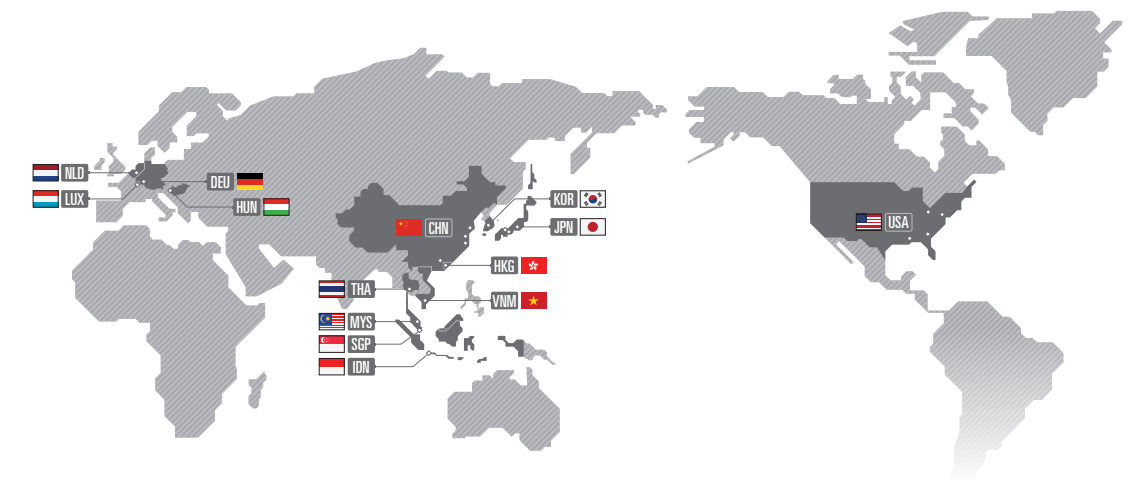


# Global Presence

Global Solution - 14 countries, 6,000 people  
No matter where you are, Kiswire will be there.

Kiswire exports specialty steel wire products to over 80 countries worldwide. With sales offices located in 14 countries spread throughout Asia, North America and Europe, we offer innovative products and optimized solutions for every customer. We collaborate closely with each customer to understand their needs and work relentlessly to make the best products for them.

Strategically located in key markets, our production facilities and service centers position us to provide fast product delivery and exceptional service. We will continue to actively expand our global network so that we can better reach and serve our customers.



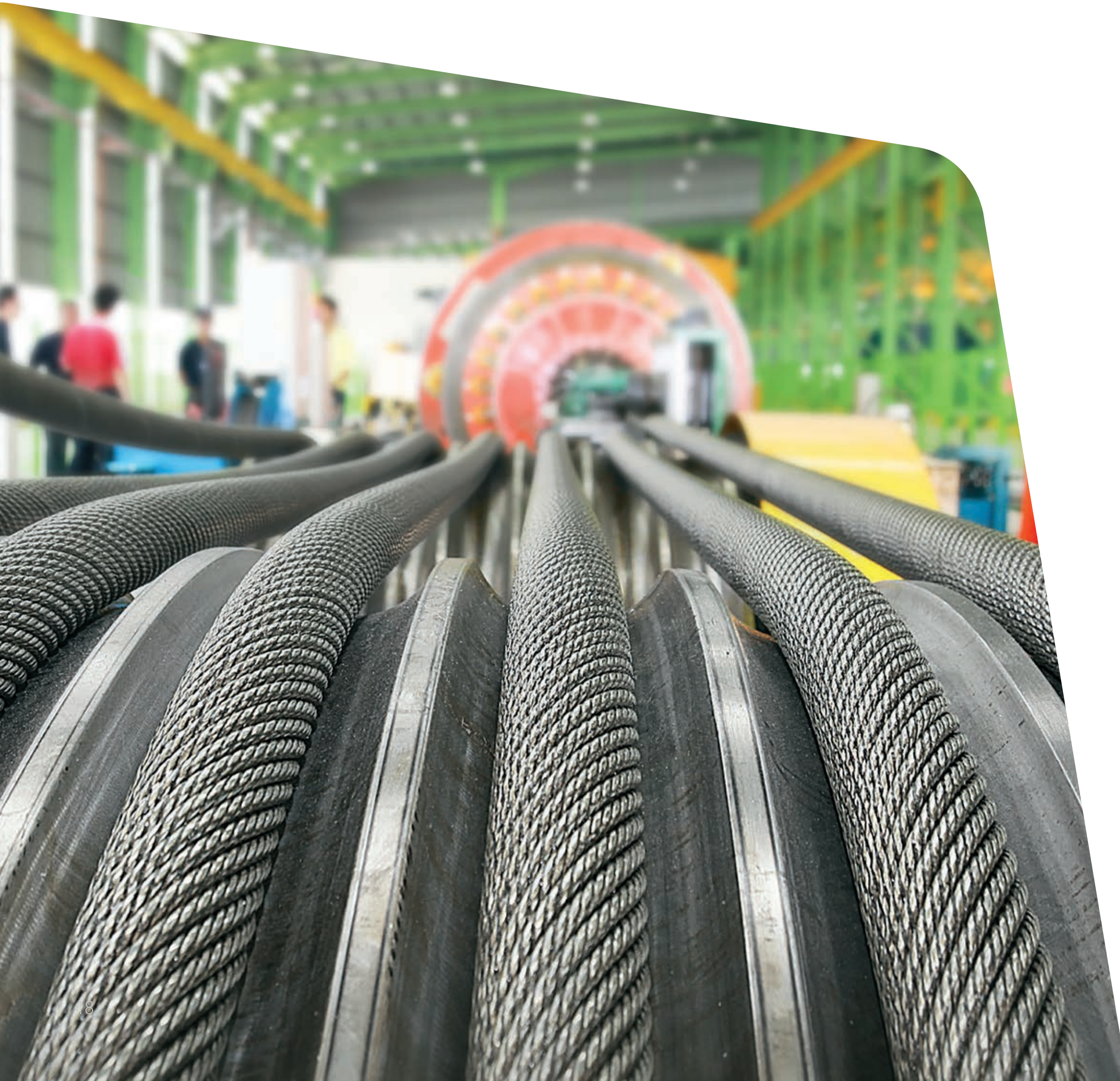
**17**  
OFFICE

**41**  
FACTORY

**03**  
R&D CENTER

**02**  
TRAINING CENTER

**06**  
SERVICE CENTER



## Operational Excellence

Our quality is identical across all our facilities worldwide.

Focusing on wire and wire only, Kiswire has developed proprietary wire manufacturing facilities and technologies to become an established specialty steel wire company. We have developed leading experts in the field and our unrivaled production processes and effective quality management and production systems have been standardized across all of Kiswire's factories throughout the world. Our exemplary labor-management culture is built on trust and Kiswire's passionate experts worldwide guarantee superb quality in every product.





## Products by Industry

- 22 Automotive & Movement
- 24 Tire & Performance
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- 32 Renewable Energy & Sustainability
- 34 Lifting & Transportation
- 36 Electricity & Communication  
Machinery & Operation
- 37 Healthcare & Diagnosis  
Harvest & Protection

## Automotive & Movement

Various types of wires are found in a car's engine, transmission, brake system, suspension system and control system, playing an important role in an automobile's power, comfort, control and safety.

Engine valve springs and clutch springs must pass stringent quality control testing in order to endure repetitive dynamic loading throughout the lifetime of the vehicle. Our oil tempered springs for engine valve springs have uniform tensile strength and outstanding thermostability and elasticity, sought out by global car manufacturers. Various control cables provide push or pull mechanisms to control various functions of an automobile.

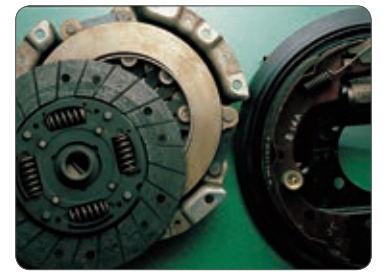
Oil Quenched and Tempered Steel Spring Wire  
Control Cable  
Hose Wire  
Shaped Wire



Faster and safer,  
eco-friendly automotive wires



Engine Valve Spring



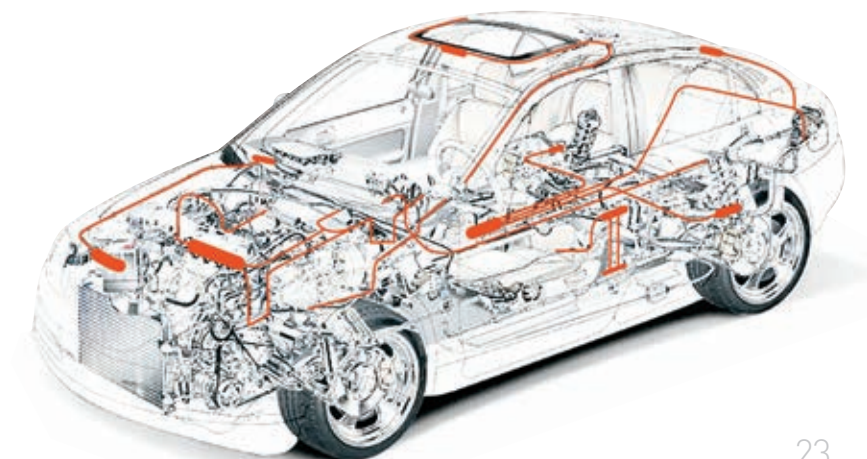
Clutch Spring



Suspension Spring



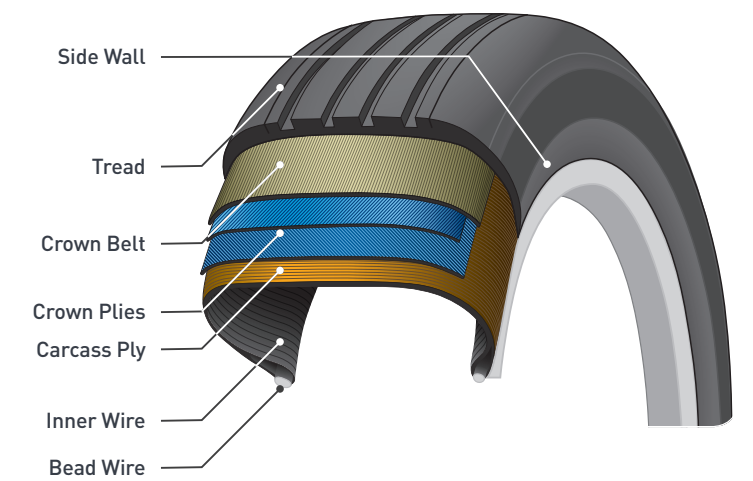
Hose Wire



## Tire & Performance

The quality and technology of our steel cord and bead wire for tire reinforcement are recognized by the world's top tire manufacturers. Steel cord helps reduce the stress on tires during high-speed driving, while bead wire provides structural integrity to the tire and firmly anchors the tire to the rim. Kiswire is at the forefront of tire weight reduction and service life improvement technology, developing new constructions and high-strength products in collaboration with the world's leading tire manufacturers.

Steel Cord  
Bead Wire



Tire reinforcement wire protects and improves performance and service life of tires

## Bridge & Connection

Modern bridges supported by wires create convenient passageways and significantly reduce travel time. The suspension bridges and cable-stayed bridges are common bridge types today that continue to evolve with newer technologies, complex engineering and use of special materials. Main cable and hanger rope for suspension bridges, PC wire and strand for stay-cable bridges, and PC strand for bridge deck reinforcement are Kiswire's main bridge wires. As the need for longer span bridges demand higher strength cables, Kiswire developed high-strength wires and high corrosion resistance coating (Alumar). Our bridge wires are found in prominent bridges around the world.

Zinc & Alumar PC Wire & Strand for Cable-stayed Bridges  
 Zinc & Alumar Wire (Air Spinning Wire) for Suspension Bridges  
 Hanger Rope / Hand Rope / S-Wrapping Wire

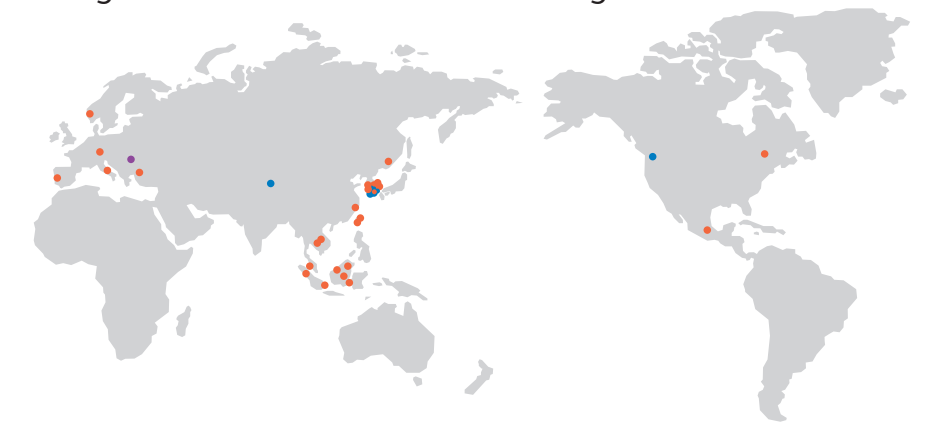


Cable Stayed Bridge  
 (Busan Harbor Bridge)



Suspension Bridge  
 (Yi Sun-sin Bridge)

### Bridges Worldwide with KISWIRE Bridge Cables

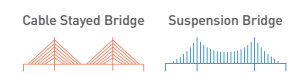


#### Cable Bridge Construction Performance Record Overseas



23 02 01

#### Cable Bridge Construction Performance Record in Korea



29 06

High-strength cables,  
 the key to building  
 longer span bridges

Diamond Bridge (Gwangan Bridge), Busan, Korea

## Construction & Building

Wire is indispensable in modern-day construction, providing structural support and reinforcement for nuclear power plant domes, LNG tanks and other large constructions. Wires are also found in civil engineering anchors, Libya Man-Made River huge concrete pipes, high-speed railway sleepers, and many other structures to increase compression strength and durability.

Wires can also be used to sustain the roofs of large stadiums, creating beautiful and solid structures for people to enjoy.

Kiswire developed K-Max™ Lock wire ropes, a locked coil rope that provides structural support for buildings.

PC Wire & Strand  
 Unbonded PC Strand  
 K-Max™ Lock (Locked Coil for Structural and Mining Industry)



Nuclear Power Plant



LNG Tank



Stadium



Sleeper for High Speed Railroad



Concrete Reinforcement



Prestressed Concrete Cylinder Pipe

More beautiful,  
 practical and stronger  
 with wire

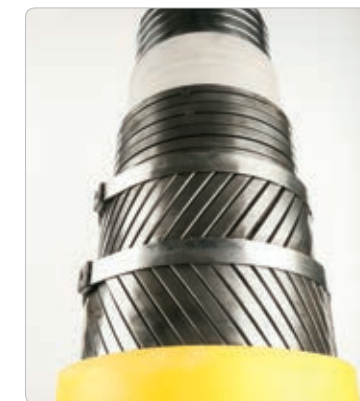


## Oil & Natural Resources

Kiswire's famous Neptune™, N2 Hyrope™ and N2 Spiral™ brand wire ropes are used for drilling, anchoring, mooring and lifting in the offshore oil and gas industry. From rope diameters ranging from 50 mm to 180 mm, offshore wire ropes are manufactured in our Malaysian factory and delivered to customers quickly and safely from our berth facilities.

The flexible pipelines that transport oil and gas from the ocean floor have a pressure armor made of shaped wire (Zeta Wire) for reinforcement. Zeta Wire is an excellent choice for improving performance of flexible pipes.

- N2 Hyrope™ High Strength Wire Rope for Offshore Oil and Gas Industry
- Neptune™ High Strength Wire Rope for Offshore Oil and Gas Industry
- N2 Spiral™ High Strength Wire Rope for Permanent Mooring
- Zeta Wire Zeta Wire for Flexible Pipes



Structure of a Flexible Pipe



Crane / Anchor / Mooring Rope

Wire expands the limits of deep sea resource development



Guinness World Records  
"The World's Thickest Wire Rope"  
(8X52 SW-IWRC, Diameter 175mm)

## Renewable Energy & Sustainability

Hair thin wires known as sawing wires provide precision cutting of silicon ingot to create wafers for solar panels. Our sawing wires have excellent winding quality and low breakage rate, and can be tailored to meet various customer demands. Our PC strands are found in wind turbines to sustain the weight of the turbine and withstand extreme winds.

Kiswire participates in the ITER program, and successfully developed superconducting wires that create powerful magnetic field in the nuclear fusion reactor.

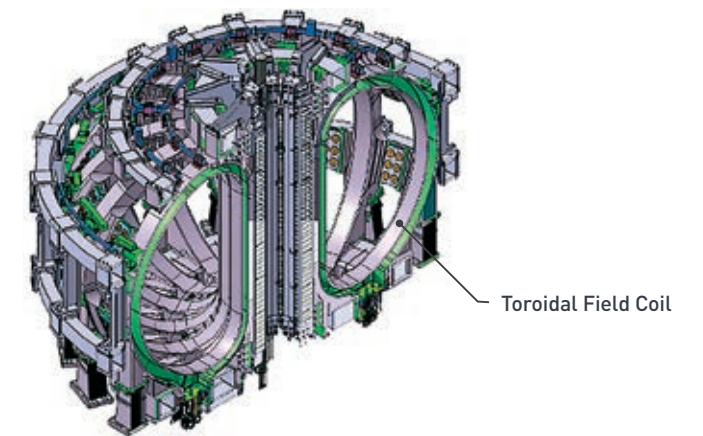
- Sawing Wire
- PC Strand
- Superconducting Wire Nb<sub>3</sub>Sn



Sawing Wire for Cutting Wafers



PC Strand for Supporting Structure of a Wind Turbine



Toroidal Field Coil

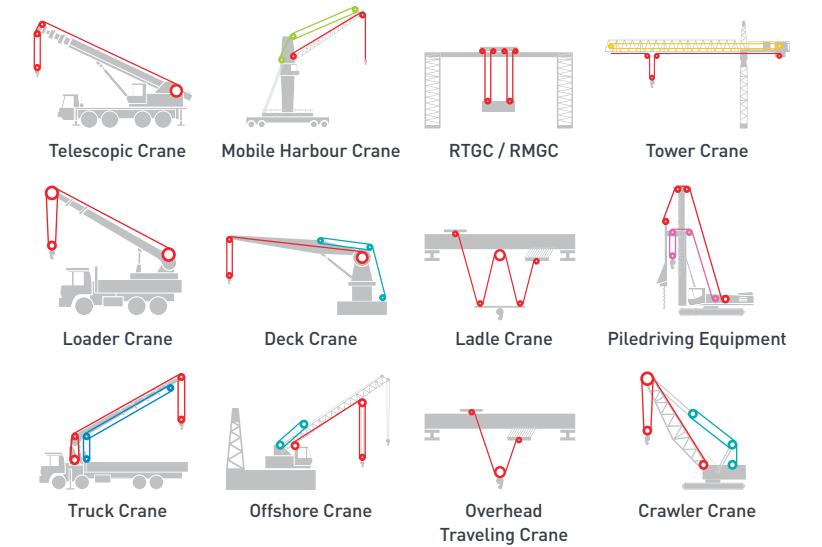
ITER (International Thermonuclear Experimental Reactor)

Wires found in various environments that reduce carbon emission

## Lifting & Transportation

Wire is a key component of cranes which are indispensable to the construction, transportation, and manufacturing industries for lifting and moving heavy loads. With our deep expertise and experience in wire ropes, we developed crane ropes that have excellent durability and wear resistance, boasting long service life. Our elevator ropes found in many skyscraper elevators around the world is a result of joint research with our customers.

Hyrope™ Specialty Wire Rope for Cranes  
 Elevator Ropes Main Hoist Rope / Governor Rope / Compensation Rope  
 K-Max™ Underground Mining Rope / Surface Mining Rope



Elevator Rope



Cable Car Propulsion Rope



Mining Rope (K-Max™)

Strong and flexible wires used for power transmission and weight support

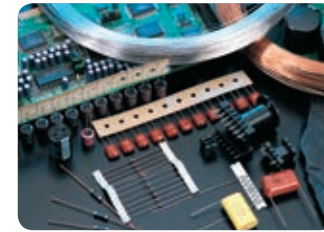
## Electricity & Communication

Reinforcement wires are also found in electrical power distribution cables, transmission cables and optical cables. Lead wire found in electric circuit are key component to electronics capacitors and electronic circuits.

Galvanized Steel Wire & Strand  
Lead Wire



Galvanized Steel Wire & Strand



Lead Wire For Electronic Circuit

## Machinery & Operation

Silk Wire is a very fine wire of uniform quality used to make springs for precision machineries, electronics, and automobile oil seals. Fine Cord for rubber belt reinforcements and Micro Cable used for power transmission are also key components to precision machineries.

Silk Wire Fine-sized Music Wire and Hard Drawn Wire  
Micro Cable  
Fine Cord



Silk Wire for Oil Seal



Timing Belt

## Healthcare & Diagnosis

In a noninvasive medical device MRI, superconducting wire (NbTi Wire) creates a magnetic field to produce detailed images of internal body structures. KAT successfully developed NbTi Wire, the next generation wire of the future.

Superconducting Wire NbTi



Superconducting Wire (NbTi)

## Harvest & Protection

Wires have numerous applications in the agriculture, fishery, forestry and primary industries. Wires help reap abundant harvests, protect animals and crops from natural disasters, and ward off intruders or predators.

Galvanized Steel Wire  
Wire Rope for Fishing



Wire Rope for Fishing



