

# C

hanging the world  
through infrastructure with  
**Total Cable Technology**



# OUR SERVICES



## ACFR, the best efficient solution among HTLS overhead conductors.

CFCC® is used as the core of innovated high performance conductor called ACFR. The electrical demand of the world has been increasing rapidly, and ACFR will provide the best solution offering twice the ampacity with lesser sag and lower temperature compared with conventional conductors.



## Elongating the lives of concrete bridges with Corrosion-Free CFCC®

CFCC®'s one of the most notable characteristic is that it is "Corrosion Free." CFCC® will make perfect replacement for steel bridge reinforcing materials suffering rust from salt damages in snowy areas and coastal zones.



## Frontline support of the disaster prevention-developed country

Taking advantage of knowledges and experiences from working on civil engineering in Japan, a country which acknowledged to be one of the most frequent subject to natural disasters, Tokyo Rope International's Engineering Division is ready to share the effective yet nature-friendly disaster prevention facilities with the world.

## CFCC® with the softness of strength and the fiber of steel materials

CFCC® (Carbon Fiber Composite Cable) is a carbon fiber with high strength, high elasticity, light weight, high corrosion resistance, nonmagnetic, low linear expansion.

- Lightness about 1/5 while having almost the same strength as iron
- Coil winding is possible because it is a flexible strand wire
- Long service life and easy maintenance / management because there is little expansion and deterioration

As core materials for power transmission lines that have about twice the power transmission capacity and cost reduction of facilities and maintenance, etc., and instead of iron, stainless steel, etc. as reinforcing materials for civil engineering and construction that prolong the life of concrete structures. It is used in many parts of the world.



light weight	flexibility	high corrosion resistance	nonmagnetic	low linear expansion
high tensile strength	high tensile elasticity	high tensile fatigue resistance	low relaxation	Small creep elongation

## Advanced cable technology to support comfortable lives in harmony with nature from power transmission line to buildings, engineering works, and disaster prevention facilities

Tokyo Rope International Inc. will keep contributing to the creation of rich and comfortable society with safe infrastructure systems around the world by providing Japan's best quality services and products supported by the technology that Tokyo Rope group has cultivated for 130 years.

# 2x Capacity

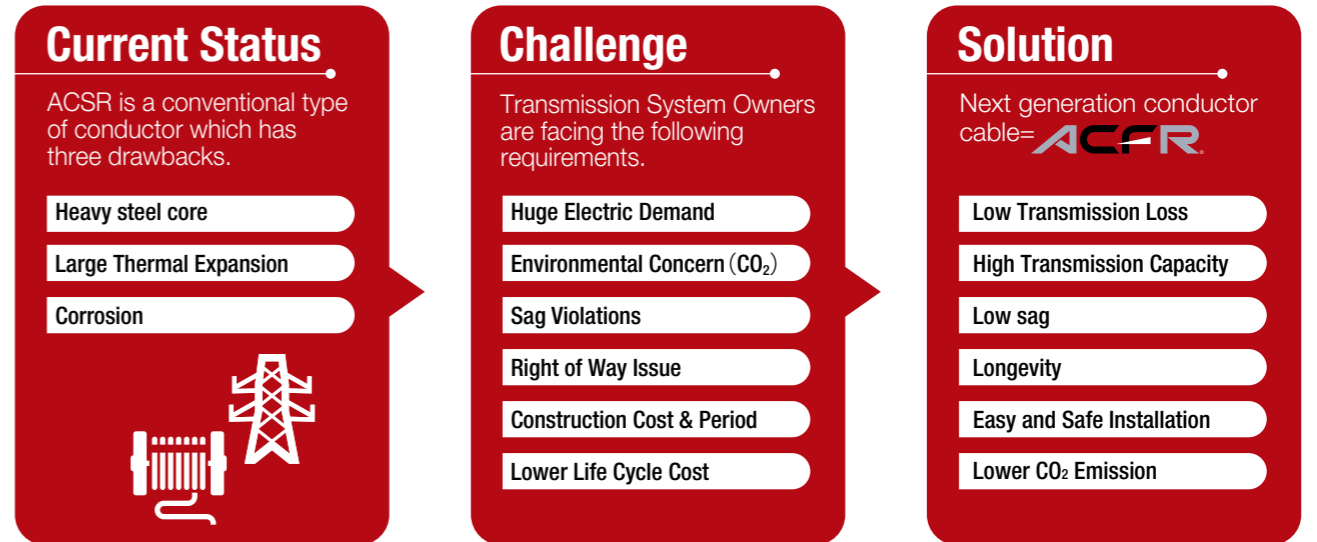
with easy and safe installation



## ACFR, the best efficient solution among HTLS overhead conductors.

Tokyo Rope is the technology provider of Aluminum-Conductor-Fiber-Reinforced conductors (ACFR) and manufacturer of the stranded Carbon-Fiber-Composite-Cable core (CFCC®). The electrical demand of the world has been increasing rapidly, and ACFR is the best available solution to meet this challenge.

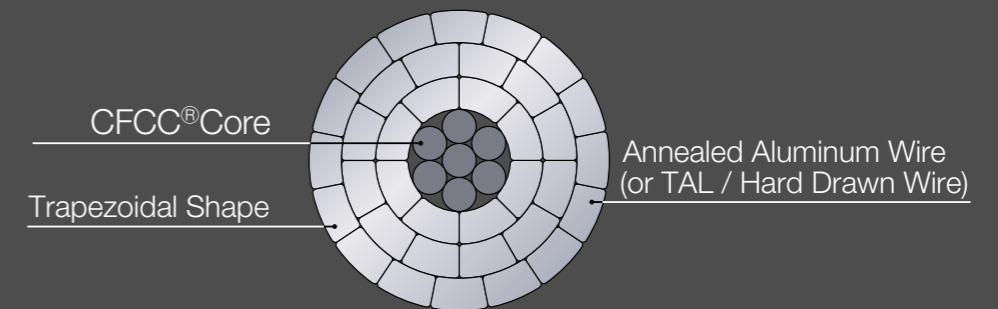
### Today's Overhead Conductor Market Challenges



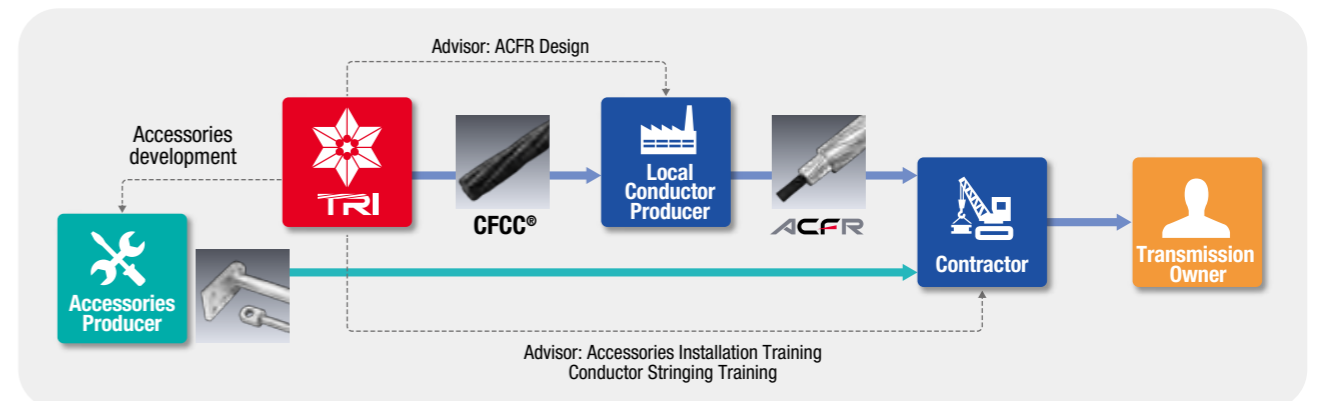
### ACFR Structure

ACFR stands for **A**luminum **C**onductor **F**iber **R**einforced

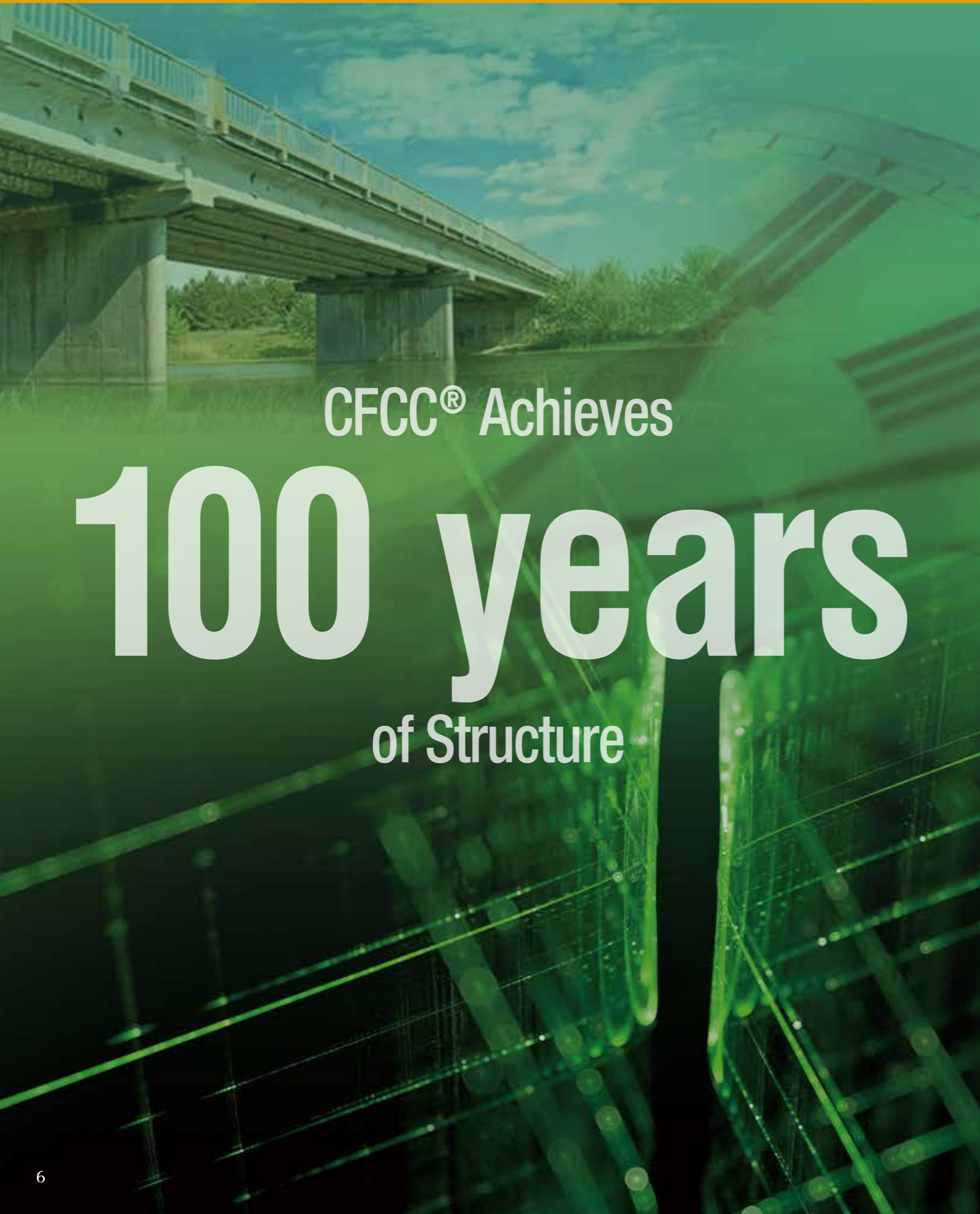
CFCC® Core ▶ Light Weight and Low Thermal Expansion  
 Trapezoidal Aluminum Wire ▶ Large Cross Sectional Area



### Supply plan

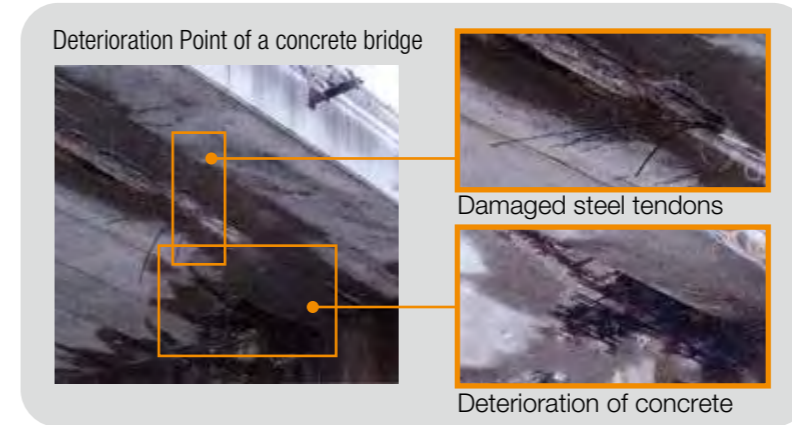


CFCC®'s one of the most notable characteristic is that it is "Corrosion Free." CFCC® will make perfect replacement for steel bridge reinforcing materials suffering rust from salt damages in snowy areas and coastal zones.



CFCC® Achieves

100 years  
of Structure



Corrosion of steel reinforcements causing Early deterioration of concrete structures.

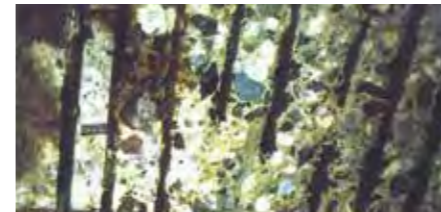


**Installation of CFCC®, a non-corrosive reinforcing material with high sustainability**

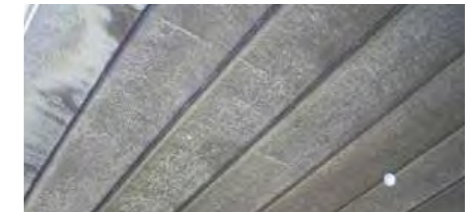
Realization of a structure lasting for 100 years

Example of a CFCC® reinforced concrete structure, "Shinmiya Bridge" formerly reinforced with steel materials, later replaced with CFCC® reinforcements, much less deteriorations.

20years after the construction, with Steel reinforcements.



20years after the construction, with CFCC® reinforcements.



**Overseas installation records**

Nimmo Parkway Bridge (Virginia, US)



**Completion of AASHTO CFRP Guide Specification**

In 2018, American Association of State Highway and Transportation Officials (AASHTO) has approved and formally documented the Design of Concrete Bridge Beams Prestressed with Carbon Fiber-Reinforced Polymer (CFRP) Systems, enabling the design of bridge beams using CFCC® in all states nationwide.

## Frontline support of the disaster prevention-developed country

Taking advantage of knowledges and experiences from working on civil engineering in Japan, a country which acknowledged to be one of the most frequent subject to natural disasters, Tokyo Rope International's Engineering Division is ready to share the effective yet nature-friendly disaster prevention facilities with the world.

More than  
**1,000**  
Solutions

### Mighty Net



Mighty Net prevents the development of rockfall by stabilizing loose rocks and rolling rocks on a slope with special wire nettings (thick netting). Mighty Net can also effectively promote greening.

### Rope Net

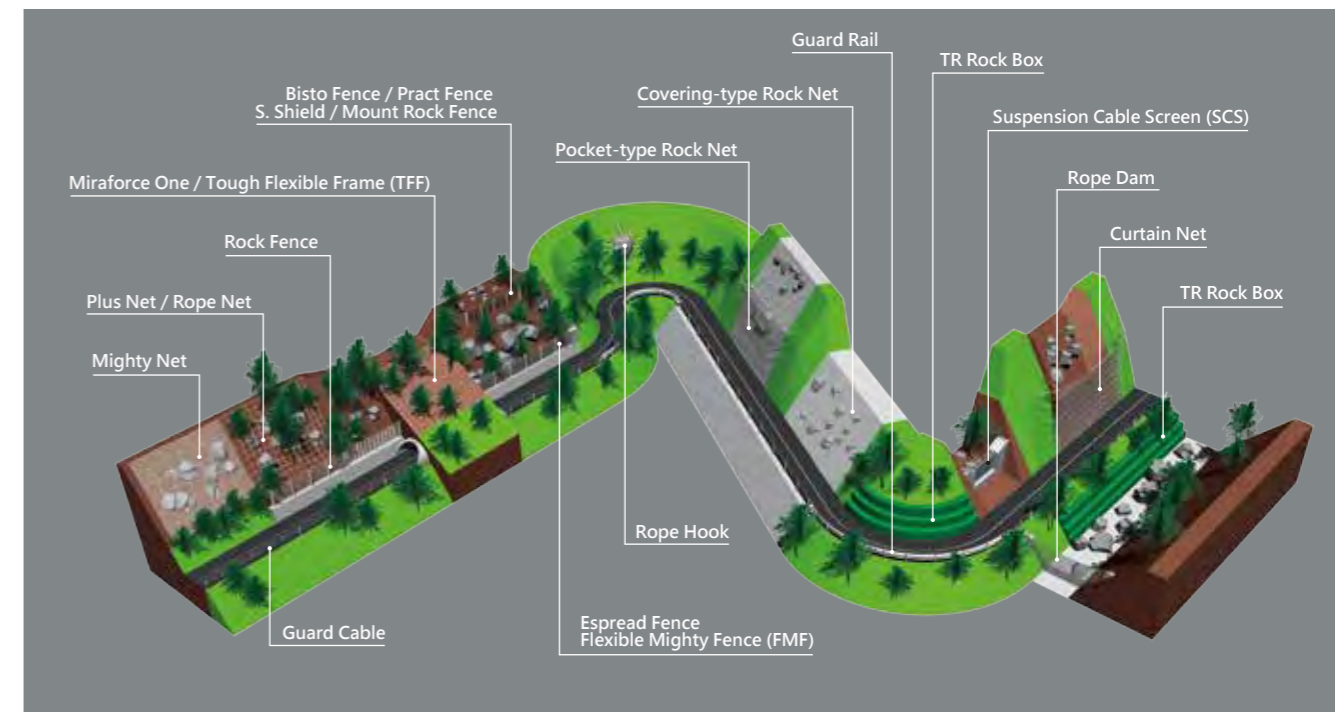


Rope Net prevents the development of rockfall with loose rocks and rolling rocks on a slope by placing wire ropes in a lattice pattern. Rope Net can be installed without affecting the natural aesthetic appearance.

### Curtain Net



Curtain Net is a high-energy-absorbing protection method capable of absorbing repeated rockfalls within the designed elastic limit.



### Other products



Rock Box



Snow Protection

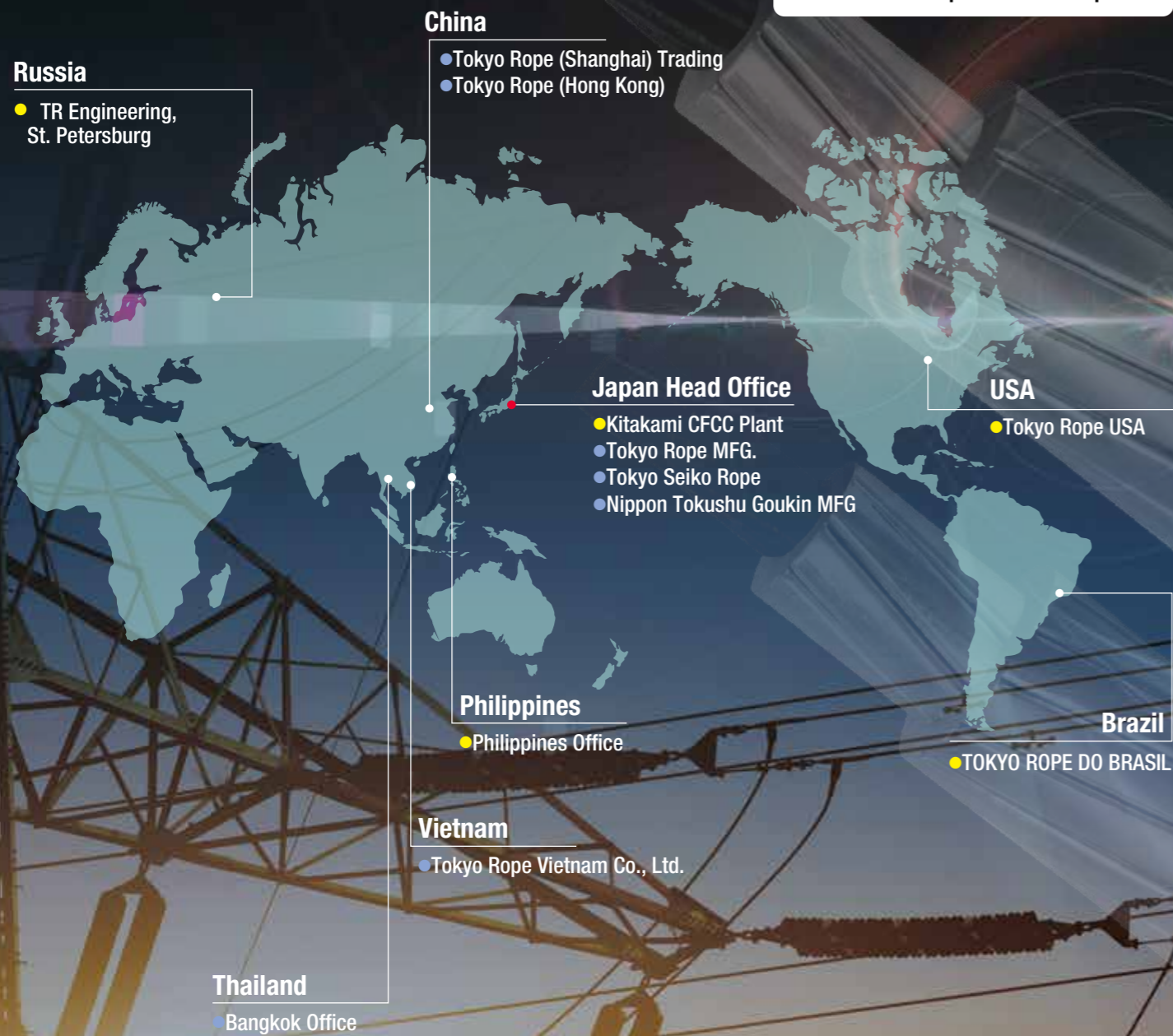


Mining Site



Road Safety

## Global Network



## Vision

Tokyo Rope International Inc. will keep contributing to the creation of safe social infrastructure systems that will allow people around the world to enjoy rich and comfortable lives by taking full advantage of the distinguished knowledge and technologies which Tokyo Rope Mfg. has cultivated for over 130 years, applying them to new materials, thus providing with Japan's best quality services and products.

## Our Mission

As a crucial part of our corporate group's long term vision; the pursuit of "Total Cable Technology," Tokyo Rope International will keep on putting our greatest effort into the development of social infrastructure systems around the world. In our corporate group's continuous pursuit of "Total Cable Technology," we have developed CFCC®; a carbon fiber composite cable with numbers of notable characteristics. Taking advantage of CFCC®'s unique features such as low linear expansion, lightweight and high corrosion resistance, it is used as the core of HTLS transmission conductor cable with increased transmission capacity, contributing to the growth and development in various countries. At the same time, it also works as a reinforcement material for bridges, contributing to the construction of bridges that can last 100 years. Also, Japan is known to be subject to frequent natural disasters. Taking advantage of experience-based knowledge of Japan as one of the most disaster-resilient country, we can design and provide nature-friendly disaster prevention facilities. We are to fully utilize these unique advantages to keep on contributing to the creation of safer social infrastructure which can provide rich and comfortable everyday lives for all the people around the world.

## Profile

Company name	Tokyo Rope International Inc.
Street address	2-37-28, Eitai, Koto-ku, Tokyo, 135-8306, Japan
Representative	President Tadahiro Mori
Capital stock	100 million yen
Establishment	December 1st, 2017 (Start of Business; April 2018)
Mother company	Tokyo Rope MFG. Co., Ltd.
Business	Production, processing and sales of carbon fiber composite materials, designing, manufacturing and construction and contractors of the road and disaster prevention related facilities, of any other legal business.

## Offices and Facilities

■ **Headquarters**  
Tokyo Rope International Inc.

■ **Domestic plant**  
Kitakami CFCC Plant  
Phone : +81-197-66-2042

### Group Companies

■ **Japan (Parent Company)**  
Tokyo Rope MFG. Co., Ltd.

■ **Russia**  
TR Engineering LLC  
Phone: +7-812-331-53-56

■ **Philippines**  
Philippines Office  
Phone: +63-917-686-3106

■ **USA**  
Tokyo Rope USA, Inc.  
Phone: +81-80-2562-7706 (Japan Sales)

## Website

<https://tokyoropeco.jp/>

