

Furukawa Electric celebrates its 130th Anniversary. Our success is thanks to the ongoing patronage and support of our customers and shareholders, and we would like to take this opportunity to express our heartfelt appreciation to them.

Our corporate philosophy is to contribute to the realization of a sustainable society based on expertise in the development and fabrication of advanced materials, through continuous technological innovation. Furukawa Group's founder, Ichibei Furukawa, worked to build Japan with an aim of "making Japan brighter." He made the utmost effort to introduce technology as quickly as possible from Europe and the U.S. that were way ahead of Japan at that time and create world-class products.

We have inherited this mission from him and have a big sense of responsibility to make the world brighter. Looking back on what we have done for 130 years, we would like to keep trying as a company making social contributions.

## The Founder's Philosophy

#### The Path of Our Founder

In 1884, 130 years ago, our company began smelting copper in Honjo, Tokyo and manufacturing electric wires in Takashimacho, Yokohama. This is regarded as the foundation of our company.

Ichibei Furukawa, the founder of Furukawa Group, was born in Kyoto in 1832. His natural ability in business helped him rise to a senior position at Ono Group, a wealthy merchant group at that time. When Ono Group became bankrupt he became penniless. However, he received encouragement from acquaintance such as Eiichi Shibusawa and Munemitsu Mutsu, and in 1877 he began operating the Ashio Copper Mine. He overcame several crises to help the mine become the largest copper mine in Japan.

The Yamaichi logo, which is the Furukawa Electric company logo, was first registered in 1877 under the slogan Kogyo Sen-itsu ("Mining Above All").





Company logo/Yamaichi mark



Ichibei Furukawa

industrial capacity, including the construction of Japan's first full-scale hydroelectric power plant in 1890, and built the foundations for Furukawa Group.

#### The Founder's Philosophy

Ichibei set down a management philosophy - "Value people," "Value customers and society" and "Incorporate the latest technology" - and used his enthusiasm and his ability to get things done to open the way to a new era. In today's terms, his philosophy equates to fostering human resources who value health, safety and compliance and contributing to customers and society through the main business. This means we need to take on every challenge we are faced with in order to achieve our goals. This approach has been handed down through the long history of companies that have made up Furukawa Group, and our repeated efforts to value all people, including customers and employees, at the same time as taking on new challenges without fear of failure, have created the companies we have today. This is also reflected in Furukawa Electric Group's corporate philosophy: "Drawing on more than a century of expertise in the development and fabrication of advanced materials, we will contribute to the realization of a sustainable society through continuous technological innovation."

Ichibei left us with the memorable phrase Un-Don-Kon. He said that in order to achieve big things people need "Un" (good luck), "Don" (stubbornness), and "Kon" (perseverance). "Don" in particular refers to being stubbornly honest in your work. In other words, this means refusing to accept other people's opinions too easily; the more people think you are wrong, the more you need to carry out what you are doing with strong belief. This philosophy can be clearly seen in Ichibei's approach to his own life.

#### COLUMN

#### Social Contributions in Addition to Our Main Business

Since our foundation, Furukawa Electric has sought to contribute to society in ways other than just through our main business. For example, to commemorate the visit of Emperor Taisho, and Empress Teimei to the Nikko Works in September 1913, the Nikko Waraku-odori festival has been held ever since 1914. The festival started out as a way of recognizing the hard work of the employees. However, it has continued for over 100 years and has now become an established feature of the lively summer festival season in Nikko and numerous local people take part.



Nikko Waraku-odori in 1961

Furukawa Electric is also active in sports, and in 1955 it named soccer, ice hockey, volleyball and rowing as the official company sports with the aim of improving employee morale and contributing to local society. Furukawa Electric Soccer Club continues to this day as J-League team JEF Chiba.

# Across the Centuries Contributing to the Development of Social Infrastructure

#### Contributing to broadcasting infrastructure by installing the antenna on Tokyo Tower

Furukawa Electric installed the antenna on Tokyo Tower during its construction in 1958. This led to the start of a fully-fledged age of television broadcasting. The decade after 1955 was a time when Japan achieved rapid development through strong economic growth and recovery from World War II.

In 1964, the Tokyo Olympics were held. People were in exuberant spirits thanks to the information they received via television. Living standards improved and Japan accelerated towards modernization. The Tokyo Tower antenna continues to tower majestically over its surroundings and has made a significant mark on Furukawa Electric's broadcasting business.

Furukawa Electric's technology has continued to be used in later years, including during installation of the antenna on the Tokyo Skytree.



Tokyo Tower

#### Developing Overseas Business and Promoting Major Projects

#### **Developing and Expanding the Telecommunications Network in Bangkok**

In 1968, a plan was set out by Telephone Organization of Thailand operator to upgrade the telephone network in the metropolitan region of Bangkok. Furukawa Electric succeeded in receiving the order for the project despite competition from leading companies around the world. The project involved installing 21 telephone exchanges and 122,500 terminals throughout the city of Bangkok and was the largest project in the history of telecommunications cable exports. What's more, we accumulated know-how in relation to overseas projects and accelerated our business in developing countries.



Telecommunications Network in Bangkok

#### **Power Transmission Line Installation in Iran**

The biggest overseas projects Furukawa Electric has taken on was a large order we received from the Iran organization for electric power affairs for the installation of power transmission lines. This was a huge project. During the four years between signing the contract in 1978 and completion of the work in 1982 we overcame numerous difficulties and trials, including a revolution in the Iranian political system and the chaos brought about by the Iran-Iraq War. Moreover, the route for installation traversed paddy field zones, forest zones and desert zones, and we had to cross the Alborz Mountains to the north of Tehran, which contains a series of mountains above 4,000 m.



Power Transmission Line Installation in Iran

The companies that were working together on the project finally managed to complete the installation of power transmission lines with a total length of 449 km despite the harsh environmental conditions. The technological prowess of Furukawa Electric was highly regarded by the Iran organization for electric power affairs and the project made a major contribution to our future overseas power transmission line installation projects.

### Across the Centuries Contributing to the Realization of a Safe and Comfortable Society

# Contributing to the Construction and Development of Telecommunications Infrastructure

Improvements in internet technology have made a large contribution to the globalization of corporate activities and the safety of society, including crisis management in times of disaster, as well as the collection of big data that contributes to marketing, and improvements in convenience brought about by smartphones.



In the pioneering days of optical fibers, Furukawa Electric was the first company in the world to produce long-distance optical fiber cables, opening the way to the realization of optical telecommunications infrastructure. In addition to optical fiber cables, Furukawa Electric has developed a succession of peripheral technologies that are required to build infrastructure, including the optical amplifier pumping lasers that are essential to longdistance telecommunications, frequency-division multiplexing that is

necessary to expand telecommunications capacity, improvements in installation efficiency and innovations in connections technology. In this way, Furukawa Electric has supported to develop telecommunications infrastructure with advanced technologies.

#### Contributing to the Safety and Ecology in Cars

SRC (Steering roll connectors) are a core component of airbag systems, which protect passengers from impact during accidents. Furukawa Electric's SRCs maintain reliable operational performance in vehicle conditions ranging from below freezing in cold regions to above 50°C at the height of summer.



SRC (Steering roll connectors)

This reliability has been recognized in our top share of the global market.

There is a constant demand to make cars lighter. Furukawa Electric supports improvements in fuel efficiency and comfortable driving by maintaining the reliability of wire harnesses, which have increasingly complicated signal paths for vehicle computers, while achieving the required weight specifications by reducing every gram wherever possible.

# Contributing to the Discovery of the Higgs Boson through Superconductivity Technology

In the 1960s Furukawa Electric worked on developing superconducting wires, and in the 1980s we became one of the world's few manufacturers of low-temperature superconducting wires. Experiments to confirm the existence of the Higgs boson at CERN in Europe (which has been referred to as the "discovery of the century") required a huge superconducting magnet. Furukawa Electric was presented with the Golden Hadron Award in recognition of its efforts in supplying the huge volume of superconducting wires needed for this magnet.



Inside the Large Hadron Collider (LHC)

Furukawa Electric is currently working on the development of thirdgeneration yttrium high-temperature superconducting wires and cables, and in Shenyang, China in 2013 we succeeded in carrying out the equivalent of 30 years of current testing on superconducting cables capable of transmitting 275kV for 1,500,000 kVA, which was the highest standard ever achieved in the world at the time.

## Across the Centuries Contributing to the Realization of a Sustainable Society

#### **Growth Strategies in the Telecommunications Infrastructure Market**

Global telecommunications traffic is expected to continue increasing dramatically, particularly in newly-emerging economies. Furukawa Electric Group is making full use of the optical fiber photonics technologies it has accumulated in order to develop products capable of contributing to an increase in capacity.



Overseas, we are using single management at our global bases in order to capture demand in growth markets efficiently. In Japan, we have reorganized our production bases, established a supply system to match demand and promoted cost reductions.

#### **Growth Strategies in the Energy Infrastructure Market**

Over many years, Furukawa Electric Group has contributed to the construction of the energy network. We intend to make full use of the know-how accumulated during this time to handle burgeoning infrastructure demand, particularly in Asia, while also contributing to the realization of a smart-grid society that uses energy efficiently.

For example, we are promoting the development of high temperature superconducting power cables, which make major reductions in transmission losses, as well as products for use in various superconducting applications, such as coils.



High-temperature super-conducting power

#### **Growth Strategies in the Automotive Market**

Furukawa Electric Group will utilize its unique materials technologies to contribute to more environmentally-friendly cars, including through the development of lighter car parts and improvements in energy efficient, in order to help realize a low-carbon society.





