

### **Editorial Policy**

This report aims to inform all stakeholders about the philosophy and measures of Furukawa Electric Group in relation to its business activities, management, the environment and its relationship with society. Our goal is to report on our CSR philosophy and efforts and gain the understanding of our stakeholders.

### Scope of This Report

### **Period Covered**

Fiscal 2017, from April 1, 2017 to March 31, 2018 (note) Includes selected information on past initiatives and activities during fiscal 2018.

### **Organizations Covered**

This report covers Furukawa Electric Co., Ltd. and group companies in Japan and overseas. Where activities are limited to specific regions or companies, this fact has been clearly indicated in the reporting.

### **Publication Timeframe**

Publication date: September 14, 2018

Planned publication of next edition: September 2019

### **Editing and Publication**

CSR Department, Administration & CSR Division, Furukawa Electric Co., Ltd. Marunouchi Nakadori Bldg., 2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8322, Japan

### Accuracy of the Data Disclosed in This Report

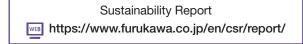
In order to maintain accuracy in data disclosure, the information provided in this report has been vetted by the divisions in charge of the relevant information, the Investor & Public Relations Department and the CSR Department, which is in charge of editing this report. We have also provided a third-party opinion so as to offer the point of view of an outside expert.

### **Information Disclosure System**

Furukawa Electric is fully aware that the timely and appropriate disclosure of corporate information to investors is essential to a healthy stock market. We take a serious approach to providing timely and appropriate corporate information to investors, including through the development of internal systems that allow us to disclose rapid, accurate and fair corporate information in a way that always keeps investors' perspective in mind.

Moreover, in order to increase the understanding of all stakeholders in respect to our company, we try to provide information through a variety of media, including non-financial information.

Non-financial	Financial
- CSR website - Sustainability reports - Corporate governance reports	- IR website - Financial statements - Securities reports/Quarterly reports - Summary of accounts, etc.



### History of Furukawa Electric's CSR Activities

1974	Companywide Rules for Pollution Prevention formulated
	Environmental Control Department established
1000	Energy Conservation Team established
1989	Team for Reduction in Use of Specified CFCs established
1992	Anti-Monopoly Act Guidelines issued
1993	Basic Framework for Protecting the Global Environment formulated
1996	(Furukawa Electric's voluntary environmental preservation plan)  Use of specified CFCs and trichloroethane discontinued
1997	Team for Promotion of Reduction in Industrial Waste established
1998	Furukawa Electric Basic Environmental Policy formulated
	Acquisition of ISO 14001 certification commenced
	Companywide Regulations for Pollution Prevention revised to creat
	the Companywide Regulations for Environmental Management
2000	First Environmental Report published
2001	Environmental accounting started
	Zero-emissions activities commenced
2002	Anti-Monopoly Law manual published
2003	Furukawa Survival Plan announced
	Executive Officer System introduced
2004	Furukawa Electric Basic Environmental Policy revised
2004	Company system and chief officer system introduced
	Furukawa Electric Group Action Guidelines formulated Furukawa New Leaf established as a special subsidiary offerir
	employment to people with disabilities
2005	Internal reporting system introduced and internal and external reporting
2005	desks established
	Compliance Handbook published
2006	Medium-term management plan Innovation 09 announced
	Report published under the revised title "Environmental and Soci
	Report"
2007	CSR Division established
	Chief Social Responsibility Officer (CSRO) appointed
	Report published under the revised title "CSR Report"
	Corporate philosophy and corporate message of the Furukav
2008	Electric Group formulated
2008	Furukawa Electric Basic Environmental Policy formulated Furukawa Electric Group Basic Policy on Social Contribution
	Activities formulated
2008	Furukawa Electric Basic Policy on Pandemic Influenza Preparedness formulated
	Compliance pledge introduced
	e-Friendly mark (environmentally harmonious product) certification
	system started
2009	Furukawa Electric Group Green Procurement Activity Guideline
	published
	Basic Policy on BCM (Business Continuity Management) formulated
	Compliance awareness survey covering all employees conducted
	A CSR award newly established as a part of the Outstandir Affiliated Company Awards
2010	Medium-term management plan, New Frontier 2012, formulated
-	CSR Deployment Guideline for Business Partners issued
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# Furukawa Electric Group Sustainability Report

2018

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### **Group Profile**

### Company Profile

Company Name Furukawa Electric Co., Ltd.

President Keiichi Kobayashi

Founded 1884 Established 1896

Paid-in Capital ¥69,395 million

(As of March 31, 2018)

Net sales ¥967,333 million (Consolidated)

(Years ended March 31, 2018) ¥457,730 million

(Non-Consolidated)

Number of Employees 51,925 (Consolidated)
(As of March 31, 2018) 3,704 (Non-Consolidated)

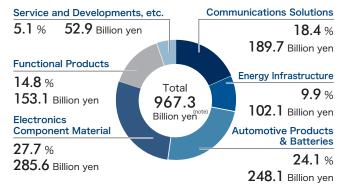
Head Office Marunouchi Nakadori Bldg., 2-3,

Marunouchi 2-chome, Chiyoda-

ku, Tokyo 100-8322, Japan

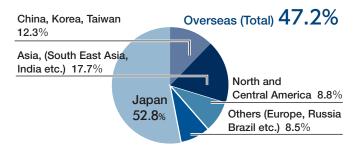
TEL. +81-3-3286-3001

### Percentage of net sales by segment



(note) Figures excludes intersegment transactions

### Percentage of overseas sales



### Major Products and Services

### Infrastructure



Optical fiber cables /
Semiconductor optical devices /
Metal communication /
Fusion Splicer /
Network equipment /
CATV system / Radio products /
Power transmission cable /
Power transmission cable
accessories and installations, etc.

### **Electronics & Automotive Systems**



Automotive components and wiring harness /
Battery products /
Copper and copper alloy products (plates, strips, pipes, rods, and wires) /
Superconducting products /
Special metal materials (Shapememory and superelastic alloys), etc.

### **Functional Products**



Cable conduits /
Water-feeding pipe materials /
Foam products /
UV tapes for semiconductor
manufacturing / Heatsinks /
Hard disc drive (HDD)
aluminum substrates /
Electrodeposited copper foil,
etc.

### Service and Developments, etc.



Logistics / Information processing service / Software development / Service business (real-estate leasing, hydraulic power generation and so on) / R&D, etc. Global Network

As of March 31, 2018

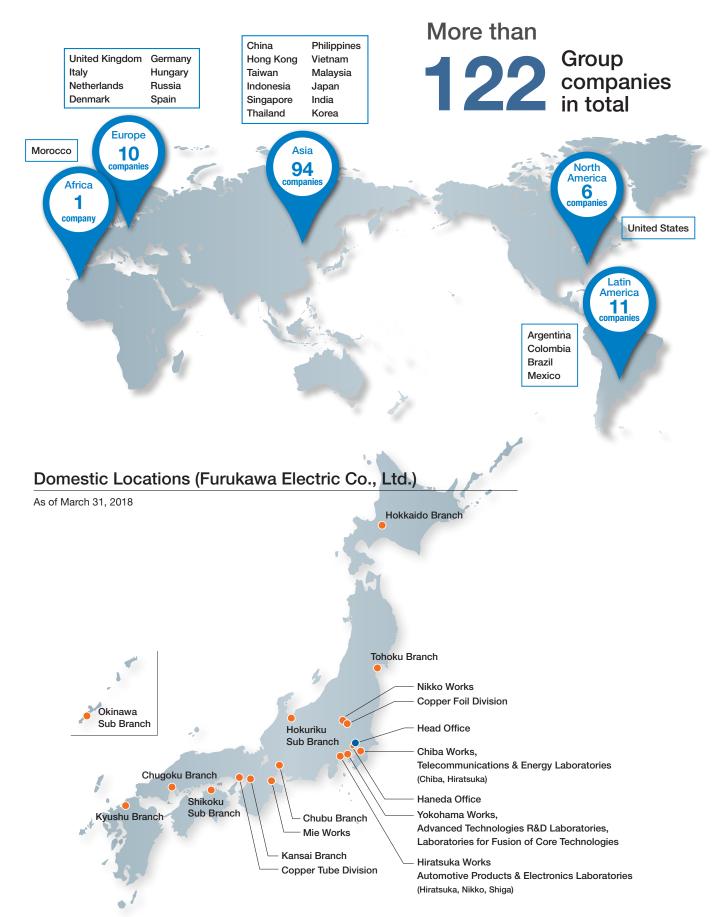




Photo Yu Kaida

What about the progress of the mid-term management plan and the future outlook?

The Group launched the mid-term management plan "Furukawa G Plan 2020" in Fiscal Year (FY) 2016 and was strengthening the focused areas of the Infrastructure Business (the telecommunication and the energy) and the Automotive Business. In FY 2017, we were able to achieve the financial target for FY 2020 ahead of the schedule in the Plan, then the mid-term management plan was revised during the period and the higher target was set. We will continue to keep the following main policies "Strengthen and reform the business", "Expand sales in the global market" and "Step up efforts to tap into new markets" and will surely achieve the new targets by answering to various technological innovation and business changes in the infrastructure and automotive fields and the fusion area of both fields. Human resources are the foundation of this. We will engage in a planned development of corporate manager candidate including overseas subsidiaries. By nurturing human resources across the Group, we will build a system in which the group will continue to grow globally.

### New financial target in FY 2020

	Conventional target value	New target value
Consolidated operating income	Over 40billion yen	Over 55billion yen
Net income attributable to the owners of the parent company	Over 20billion yen	Over 30billion yen
ROE	Over 8%	Over 10%

Technological innovation is progressing at an unprecedented speed. How will you respond?

I feel the swell of technologies such as Al (Artificial intelligence), 5G (Fifth generation mobile communication system) and Automobile CASE (Connected, Autonomous, Shared, Electric) that substantially changed the industry until now. It seems that business opportunity will rapidly spread in the areas of the smart communication infrastructure, the diversification of the energy infrastructure, the area of the green automobiles and their fusion areas. For instance, in the utilization of the renewable energy and for the stabilization of the power system, the electricity storage technology and the information communication technology are required. Further, in order to automate the automobile driving, the automobiles are developed as information terminals by integrating the information communication and automobiles, such examples are actually created.

For 134 years, the Company has created products and services to protect the health of the people and their social infrastructure and to support their growth, through our technologies "to transfer, to connect and to store" "energy, information and heat". I am taking pride and believe that an era has come when we can greatly contribute to the future social changes and technological innovations by taking the most advantage of these technological capabilities and experience. The Company has a lot of business opportunities.

However, in order to create the technological innovation in the technologies fusion area, open

innovation is necessary instead of being stacked to our own technologies. For this purpose, Fun Lab has been established in Yokohama R&D Laboratories as a place to bring in new innovations through "Comprehension", "Cooperation" and "Collaboration" with our guests. Also, in collaboration with the National Institute of Advanced Industrial Science and Technology (AIST), "Carbon nanotube electric wire development" is conducted and since this February, a Social Cooperation Program "Creation of Next-Generation Signal and Power Transfer Technologies" has been started at the University of Tokyo. Thus, we are engaged in activities to develop businesses with new ideas by combining our new material technologies with the academic knowledge of the university.

# In recent years, Environment, Society and Governance (ESG) management has been focused. What do you think about this?

Our corporate philosophy is to "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". We have aimed to realize a rich and sustainable society by protecting the environment through our business. We are promoting ESG management in various ways for our own sustainable growth for the future.

For instance, regarding the environment, we are contributing to the prevention of global warming through various activities, including reduction of CO2 emission by supplying lightweight products such as the aluminum wire harness for automobiles, the utilization of the renewable energy from the hydro power generation of Furukawa Nikko Power generation Inc. of the group company, the energy saving based on the energy balance and promoting the solar power usage. Also, aiming to "Nurture human resources at every level, so that we can become a more diverse and creative organization" as listed in the management philosophy, we are developing an environment and cultural climate in which diverse human resources are active by setting "Goals for promoting women activities" and supporting women's career development. As for the corporate governance that supports these variety of activities, we regard it as the most important management foundation for the Company and we are strongly promoting the activity to strengthen such as the establishment of the basic policies at the corporate

governance, the annual evaluation and the disclosure of the results in order to improve the effectiveness of the Board of Directors and increasing the number of outside directors.

In addition, although we have just started to make a study, we will proceed with our activities in full consideration of "Sustainable Development Goals (SDGs)" adopted by the United Nations in 2015, and we are going to expand business opportunities with a long-term business vision, in conjunction with contributing to solving global environmental and social problems. As for the Company, among the themes of SDGs, we believe that we can contribute to such as "ensuring access to a sustainable and modern energy", "building resilient infrastructure including information and communication" and "ensuring sustainable production and consumption patterns".

From now on, we clarify the relationship between the business and products of the Group and ESG and strengthen the information dissemination of our concrete activities. Furthermore, we intend to strive for the improvement of the corporate value by integrating ESG into our management strategy and through dialogue with investors as well as various stakeholders.

# Finally what is important to keep the company sustainable?

Ichibei Furukawa, the founder of Furukawa Group, said "Let employees be important, customers be important and the new technology be important." I believe "The three importance" is a fundamental culture that still works today, in order to remain as a sustainable company. While adhering to this spirit, striving to ensure safety, quality and compliance, these are absolute conditions for the Company to survive. Then, making discussion with internal and external people with an open mind by watching changes in the society from a broad perspective, creating products and services that can solve customer's and society's problems with a new technology, working "excited" as our own pleasure for customer's pleasure, having pride and responsibility for what we have sent out to the world, then maintaining to be in such a virtuous cycle, I believe that we can continue to be a sustainable company and an indispensable part of the society.

Last but not least, I appreciate your continued understanding and support for the Group.

1



# Fun Lab creates innovation to realize a prosperous society

Broadcast the state-of -the-art technology to realize a sustainable society



http://www.furukawa.co.jp/funlab/en

In August 2016, an open laboratory named Fun Lab was established in Yokohama Works as a "place" to promote open innovations and to create new businesses by transmitting our technology. We are utilizing it as the platform to further strengthen open innovations through a Collaboration with customers and other companies, universities, public research institutions and others.



# Assignment of the establishment in Yokohama is because it is Furukawa Electric was founded and it is where the core of research and development resides.



Scenery from Takashimadai in around Meiji 40.

The roots of Yokohama works is where the Yamada Cable Works was established at present Kinkocho in 1884 (Meiji 17), therefore Yokohama is one of the founding places of the Company. And, as a part of the events commemorating the 100th anniversary, the Central Laboratory which was located in Oimachi, was relocated to Yokohama, and where Yokohama R&D Laboratory was opened in 1987. Thus, Yokohama is also the central core of the technology for the Company. The fact that Fun Lab is opened in this land is the message that the Company that has continued its contribution to the society through the relentless technological innovation beyond the century, will further accelerate its technological innovation and will continuously contribute to the society.

### Concept of Fun Lab

"The place" was used for communication with people outside the Company and for knowing each other, then facilitate open innovation in the following 3 stages.

### **COMPREHENSION**

Recognize each other's strength.

### **COOPERATION**

Propose and share new senses of values utilizing each other's strength.

### **COLLABORATION**

The place to jointly expands and realizes the shared senses of values.

### Feature of Fun Lab

- On both sides of walls following the Fun Lab entrance, the history of the diversification of the technologies and the products are exhibited as a genealogy of the technologies. With these displays, we wish that visitors will deepen their understanding of our technologies and have a sense of trust and security.
- Visitors can have a look at our technologies with the exhibits in each field of "superconductivity", "nanotech" and "energy", centered in our core technologies in "metals", "polymers", "photonics" and "high frequency electronics". Weight reduction and fuel economy of automobiles, the latest information communication network and the state-of-the-art technologies, which are applicable to expansion of renewable energies and which contribute to the realization of a sustainable society, are exhibited.
- The Collaboration area is surrounded by full-wall whiteboards, and idea matching boards. The area is designed to become a place where it is



Collaboration area

- easy to create new values through discussions with people outside the Company.
- The exhibition panels and the samples are displayed individually on portable display fixtures. While discussing in the Collaboration area, necessary panels can be moved and available to discuss while handling the sample.

### Usage status of Fun Lab

### - Towards realization of the sustainable society -

"The OneF car", which is a small EV implementing the technology and the products of the Group Company, was exhibited. With this exhibition, the latest technology such as the millimeter wave radar that realizes automatic driving and the CNT electric wire leading to weight saving of automobiles, are made available to watch on a dynamic exhibition. (2017/8/2 press release)

As of the end of March 2018 which is about one and half year since its establishment, 189 groups (more than 800 people) from inside and outside the Company and 58 groups from the Group companies have participated and Fun Lab has been in rising popularity. Among the visitors are Yokohama Small and Medium Enterprise Support Center, Yokohama City Policy Bureau, local junior high school students, etc., and it is becoming recognized in the area. Also, media company's people visited and reported our activities in a news release.



Appearance of the OneF car

### **Future Fun Lab**

We are planning to expand the contents of discussions with visitors by increasing exhibit items and by carefully improving the means of displays. We will make further promotion for new application methods of Fun Lab, such as increasing foreign visitors, promoting of the use of the Group companies, holding workshops, and further open innovation will be pushed on.



# The local junior high school students conducted scientific experiments 高温超電導磁管

Students in Yokohama city Seya junior high school visited Fun Lab for their company experience on January 30 and 31, 2018.

They experimented the magnetic levitation from high-temperature superconductivity, along with acquiring their understanding about the principle of the near future superconducting linear Shinkansen. It was an opportunity for them to learn that the superconducting technology contributes to the realization of high energy efficient social infrastructures such as the electricity storage technology in the flywheel, the wind power generator.





Open the Social
Cooperation
Program at the
University of Tokyo

On January 31, 2017, Professor Masayuki Nakao of the University of Tokyo Graduate School of Engineering Department of Mechanical Engineering visited Fun Lab and looked at our latest technology. Based on this initiative, and as a result of discussions, it is possible to develop diverse and innovative technologies through the integration of the unique technologies and know-how owned by the Company, the advanced technologies and the broad range of discernment of the University of Tokyo. As a result from February 2018 the Social Cooperation Program "Creation of the Next-Generation Signal and Power Transfer Technologies" was opened at the University of Tokyo.

### Innovative technology with the open innovation

In the Social Cooperation Program being opened this time, by integrating the material research and the production technologies which have been developed over many years in the Company with the advanced academic expertise possessed by the University of Tokyo Graduate School of Engineering the themes in the following areas are implemented with the aim of improving quality and productivity, of creating new business and new products and of developing advanced professional human resources.

- Utilization of the lot related technologies leading to MONOZUKURI innovation.
   The lot and AI are key wards in the research and development contributing quality and productivity improvement.
- 2. New business and new products creation. (Products designing, Process designing, Control technology)

New materials research and development such as the carbon nanotube electric wire and the thermoelectric conversion element.



Left: President Gonokami (The University of Tokyo) Right: President Kobayashi (Furukawa Electric)

# Efforts to strengthen corporate governance

Aiming for the sustainable growth and for the improvement of the corporate value over the medium to long term



### Responses and efforts up till now

We have been working on strengthening the corporate governance since 2008, including increasing the number of the Outside Officers. In response to the establishment of the "Corporate Governance Code" by Tokyo Stock Exchange, Inc. in June 2015, we have implemented various efforts such as the formulation of basic policies on the corporate governance and starting among which is effectiveness of the Board of Directors evaluation.

We will continue to work on the improvement of the corporate governance by the positioning and the strengthening of the corporate governance as an effort to improve the corporate value being as one of our important measures to strengthen the management.

### Major efforts towards the strengthening of the corporate governance

2003	- The number of the Directors was reduced (The term of service of the Directors was
	reduced from two years to one year.).
	- The executive officers system was introduced.

2008 - Started the effort to increase the number of the Outside Officers.

2010 - Established the Compensation Committee

2014 - Structured the Audit & Supervisory Board members, to 3 people from in-house and 3 people from outside.

2015 - Established the Independence Standards for the Outside Officers.

- Established the Nominating/Compensation Committee, former Compensation Committee.
- Started the evaluation of the effectiveness of the Board of Directors, and the summary of the result was published. (annually conducted)
- Established "Guidelines on Corporate Governance"

- An Outside Director was appointed as the chairman of the Nominating/ Compensation Committee

- The Chairman became the Director without the representative right of the Board of Directors
- Revision of the officer's compensation system.
- The number of the Outside Directors was changed to the current 5 members.
- As a process to evaluate the effectiveness of the Board of Directors, the Chairman

### Board meeting and related organizations

Our corporate governance structure consider that the effectiveness of the audit on the execution of the duties by the Directors is secured, based on the coordination with the accounting auditors and the internal auditing department, while maintaining the institutional independence of the Audit & Supervisory Board Members and of the Audit & Supervisory Board from the Board of Directors. And we adopted the "Audit & Supervisory Board" type of the governance organization.

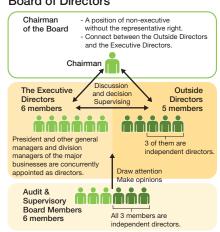
As our policy, the Outside Officers are expected to make suggestions from various viewpoints and angles in the discussion of the Board of Directors, and people with different knowledge and backgrounds are selected.

With respect to the selection of the officers, the Board of Directors makes a decision by consulting the Nominating/Compensation Committee which is constituted of the majority of the members by the Outside Directors, and is based on their report.

### **Expertise of the Outside Officers**

Outside Directors	Sumitaka Fujita	Mr. Fujita has served for many years in a key positions on the management such as a Chef Financial Officer (CFO) and has a wealth of knowledge and experience on general business management including financial accounting. He also has a high perception of the corporate governance.
	Nobuyoshi Soma	Mr. Soma has served for many years in key positions such as President and Chairman of the manufacturer which operates business in adjacent areas to our Group, and he has a wealth of knowledge and experience on the corporate management in general.
	Osamu Tsukamoto	Mr. Tsukamoto has a long experience of involvement in the industrial policy at the Ministry of Economy, Trade and Industry, and has a high perception on the technologies and the development of the new businesses.
	Tatsuo Teratani	Mr. Teratani has a high perception as an engineer based on long years of the experience in the car electronics related design at a major automobile manufacturer.
	Akira Nakamoto	Mr. Nakamoto has served for long years in key positions such as President and Chairman of a major precision equipment manufacturer, and has an extensive knowledge and experience in the corporate management in general.
Outside Audit & Supervisory	Yuzuru Fujita	Mr. Fujita has served for many years in key positions such as President and Chairman of a life insurance company and has an extensive knowledge and experience in overall corporate management, including the financial accounting.
Board Members	Takashi Tsukamoto	Mr. Tsukamoto has served for many years in key positions such as Chairman and a director in charge of finance in a financial institution and has an extensive knowledge and experience in overall corporate management, including financial accounting.
	Kunihiko Sakai	Mr. Sakai has a high perception in fields such as: the corporate governance, the legal risk associated with management and its compliance to regulations, capitalizing his long experience as a legal professional including its foreign one.

### **Board of Directors**



Outside

**Outside Directors** 

- Company manager Government experience Technical engineer Financial, accounting expert
- Legal affairs, Risk management expert
  Governance expert
  Governance expert
  Governance expert

Variety of human resources with wealth of knowledge and experiences such as shown above

# Nominating/Compensation Committee

We have established the Nominating/Compensation Committee with a majority of the members from the Outside Directors, aiming to supplement the supervisory function of the Board of Directors. The Committee deliberates succession plan of the officer and of the president, the officer compensation and others, aiming to ensure the objectivity and transparency regarding these matters.

Recently, in 2016 the officer compensation system was revised, and in 2017 the new President was appointed based on the succession plan, these were resolved at the General Meeting of Shareholders or the Board of Directors after the deliberation at the Committee.

Nomination/Compensation Committee 6 directors





At June 22, 2018

### **Outside Officers Meeting**

The Outside Officers meeting is regularly held for the purpose of exchanging information, sharing recognition among the Outside Officers based on the objective position, and for reporting their opinions shared with the Board of Directors if necessity.

The Committee consists of all Outside Directors and Audit & Supervisory Board Members, and the Secretary of the Outside Officers is elected from the independent outside directors.

In FY2017, the meeting was held three times with discussion about the management issues in general and the management of the Board of Directors.



### Effectiveness of the Board of Directors evaluation

In every year since the FY2015, we have been working on analyzing and evaluating the effectiveness of the Board of Directors for the purpose of improving the function of the Board of Directors, through a continuous process. Through the process, the necessary measures are taken in order to improve or further strengthen the issues reported through the verification on the suitability of the function as the Board of Directors.

In FY 2017, which was the third time, in addition to have a questionnaires for all the members of the Board of Directors and the Audit & Supervisory Board members, an individual interview was conducted by the Chairman, for the purpose of a deeper understanding of the response to the questionnaires. Thus more substantive analysis and evaluation were implemented.

# Evaluation items on the effectiveness of the Board of Directors

- Effectiveness of the Board of Directors.
- Management of the Board of Directors
- System related to support and cooperation with the Outside Officers.
- Roles and expectation for the Audit & Supervisory Board Members.
- Relationship with the shareholders and other stakeholders.
- Others

(The Board of Directors in general, individual and peer evaluation, Responsibility of the Board of Directors)

### FY 2017 Flow of the Board of Directors effectiveness evaluation.



Implementation of the anonymous

questionnaire.

Oct.

Individual questionnaires by the Chairperson

Newly implemented in FY 2017, aiming at a deeper understanding of the responses to the questionnaire. Nov.

Outside officers Meeting

Compilation of the opinions on the results of the questionnaire.

Nov. to Jan.

Multiple
Discussions
by the Board of
Directors

Confirmation of the status of ensuring the effectiveness of the Board of Directors

Jan.

Completion of the analysis and evaluation

Publish the analysis and evaluation results.

Next FY

The Business execution and the management of the Board of Directors based on the actions.



Plant tour

### Various activities by the Outside Officers

Keynote lecture by an Outside Director.

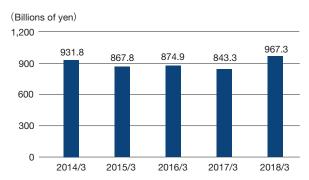


In order to enhance information awareness to the Outside Officers, opportunities are offered to participate in our research and development presentations and plant tours.

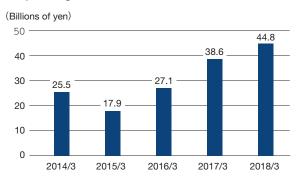
In FY 2017, a tour in Hiratsuka Works was held. Also, the Outside Officers attended the research and development presentations that are held annually in each plant. In Yokohama Works, an Outside Director presented a keynote lecture.

# Financial and Non-financial Highlights

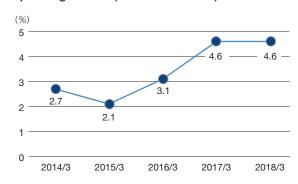
### Net sales



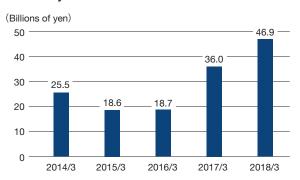
### Operating income



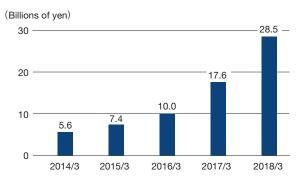
### Operating income (Ratio to net sales)



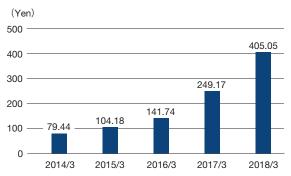
### Ordinary income



### Net income attributable to owners of the parent company



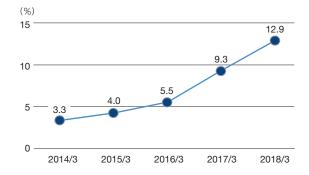
### Net income per common share



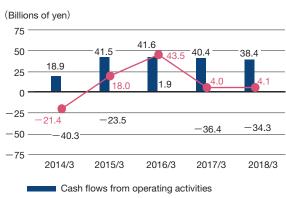
We changed the number of shares in a unit of the company's ordinary shares from the current 1,000 shares to 100 shares with an effective date of October 1, 2016.

Assuming that similar stock consolidation took place, we have calculated figures before the fiscal year ended March 2016.

### Return on equity



### Cash flows

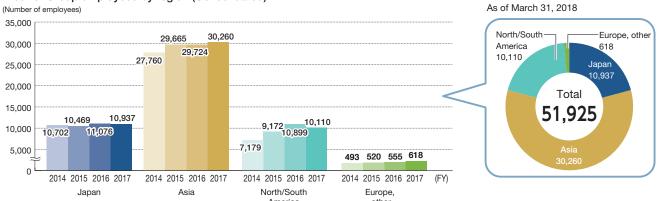


Cash flows from operating activities

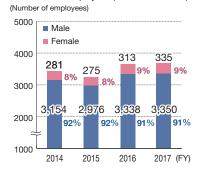
Cash flows from investment activities

— Free cash flows

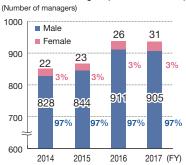
### Number of Group employees by region (Consolidated)



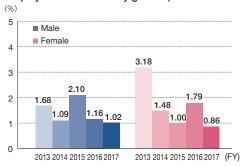
### Gender ratio of employees (Furukawa Electric)



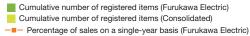
### Gender ratio of managers (Furukawa Electric)



### Employee turnover rate by gender (Furukawa Electric)



### Environmentally friendly products as a percentage of sales



Percentage of sales on a single-year basis (Consolidated)



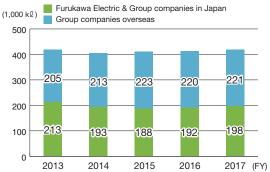
### Climate change measures

CO<sub>2</sub> (Furukawa Electric & Group companies in Japan)
CO<sub>2</sub> (Group companies overseas)
SF<sub>6</sub> (Furukawa Electric)

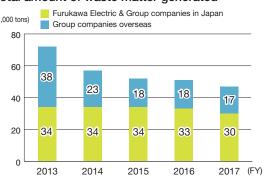
(104 tons-CO<sub>2e</sub>) 100 8.7 6.3 80 45.5 47.5 60 48. 46.1 46.0 40 20 41.338.0 35.7 35. 35.3 2014 2017 (FY)

(note) For the overseas CO<sub>2</sub> emission coefficient, the coefficient for each country according to the IEA (International Energy Agency) is used for purchased electricity, while the Japanese emission coefficient is used otherwise. Emissions of greenhouse gases other than CO<sub>2</sub> are converted to CO<sub>2</sub> equivalent emissions using Global Warming Potential (GWP).

### Energy consumption



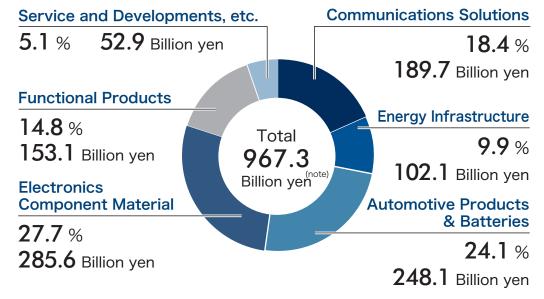
### Total amount of waste matter generated



(note) Valuable resources are included in total waste generated for Japan only.

# **Business Report**

### Percentage of net sales by segment (As of March 2018)



(note) Figures excludes intersegment transactions

Net sales (Billion					
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Infrastructure	_	_	252.7	263.8	291.8
Communications Solutions	_	_	159.1	168.5	189.7
Energy Infrastructure	_	_	93.5	95.3	102.1

Infrastructure	_	_	252.7	263.8	291.8
Communications Solutions	_	_	159.1	168.5	189.7
Energy Infrastructure	_	_	93.5	95.3	102.1
Electronics & Automotive Systems	_	_	491.1	455.5	533.8
Automotive Products & Batteries	_	_	234.1	223.4	248.1
Electronics Component Material	_	_	257.0	232.1	285.6
Functional Products	_	_	136.3	131.5	153.1
Service and Developments, etc.	_	_	51.5	49.7	52.9
Eliminations	_	_	- 56.7	<b>- 57.0</b>	<del>- 64.3</del>
Total	931.8	867.8	874.9	843.3	967.3

Operating income	(Billion yen)
------------------	---------------

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Infrastructure	_	_	7.7	14.3	12.8
Communications Solutions	_	_	8.0	14.2	14.1
Energy Infrastructure	_	_	- 0.3	0.1	<del>-</del> 1.4
Electronics & Automotive Systems	_	_	10.5	12.8	18.2
Automotive Products & Batteries	_	_	8.0	10.1	13.2
Electronics Component Material	_	_	2.4	2.7	5.0
Functional Products	_	_	8.5	11.7	14.0
Service and Developments, etc.	_	_	0.4	- 0.1	-0.2
Eliminations	_	_	0.1	-0	0.1
Total	25.5	17.9	27.1	38.6	44.8

### Operating income (Ratio to net sales)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Infrastructure	_	_	3.1%	5.4%	4.4%
Communications Solutions	_	_	5.0%	8.4%	7.4%
Energy Infrastructure	_	_	- 0.3%	0.2%	-1.3%
Electronics & Automotive Systems	_	_	2.1%	2.8%	3.4%
Automotive Products & Batteries	_	_	3.4%	4.5%	5.3%
Electronics Component Material	_	_	1.0%	1.2%	1.8%
Functional Products	_	_	6.2%	8.9%	9.1%
Service and Developments, etc.	_	_	0.8%	-0.3%	-0.4%
Eliminations	_	_	- 0.1%	0.1%	-0.1%
Total	2.7%	2.1%	3.1%	4.6%	4.6%

### Communications Solutions

**Business** divisions

Optical Fiber and Cable Products, FITEL Products
Broadband Solutions

### Fiscal 2017 Settlement of Accounts

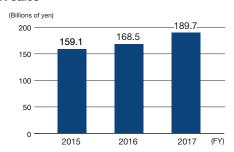
Consolidated net sales 189.7 billion yen (12.6% up year-on-year)

Consolidated operating income 14.1 billion yen (0.5% down year-on-year)

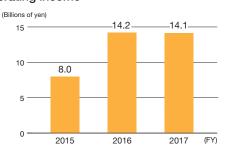
In Communications Solutions business, although sales of digital coherent-related products have fallen by continuing inventory adjustments in the Chinese market, demand for optical fiber and cable has been strong globally, and network systems-related construction work and sales of equipment have trended well in Japan.

In addition, we also decided on investment to increase production in September last year to strengthen our optical fiber manufacturing capacity to about double the level of fiscal year 2016 by fiscal year 2019. We will build a production and supply framework able to cope with globally increasing demand and promote sales expansion in the global market.

### Net sales



### Operating income



### **Fiscal 2017 Main Topics**

Dec.

- Furukawa Electric Group is opening a new manufacturing facility in Mexico focused on the production of solutions for the communications market
- Close to the United States, the plant will allow Furukawa Electric Group to rapidly and flexibly meet its clients' needs –



Jan.

- ▶ CommScope and OFS Extend Long-Term Fiber Partnership
- New eight-year supply commitment to address growing demand for bandwidth –

Feb.

- Furukawa Electric Receives "Okochi Memorial Production Prize"
- Prize received in recognition of developing variable wavelength laser modules for high-capacity digital coherent optical telecommunications systems –



# **Energy Infrastructure**

# **Business** divisions

Power Cable, Industrial Cable & Power Cable Accessories

### Fiscal 2017 Settlement of Accounts

Consolidated net sales

102.1 billion yen (7.2% up year-on-year)

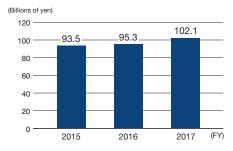
Consolidated operating income

-1.4 billion yen (¥1.5 billion deterioration year-on-year)

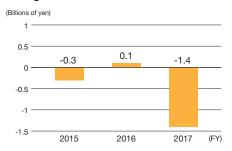
In Energy Infrastructure business, although we had some large projects in electrical construction work in Japan, an increase in our product composition ratio for low-profit export business related to underground power cable, etc., put pressure on profit overall.

By strengthening our construction and installation capacity, including the securement of human resources, and conducting production capability enhancement through technical development and facility investment, we will accumulate orders for ultra-high-voltage cable and submarine cable projects in Asian markets including Japan.

### Net sales



### Operating income



# **Fiscal 2017 Main Topics** ► Haneda Office was opened Apr. Taking advantage of the highest experience in the new energy projects, we will continue our contribution to the decarbonization of the society. Tempoku Wind Farm Setana Offshore Wind Farm (first in Japan) Rokkasho solar park First renewable energy project in Japan to use 154kV Higashiyurihara Wind Farm Kitakyushu fixed-bottom offshore wind power demonstration project Ohoravama Wind Farm Fukushima floating offshore wind farm demonstration research

### **Automotive Products & Batteries**

# **Business** divisions

### **Automotive Products & Batteries**

### Fiscal 2017 Settlement of Accounts

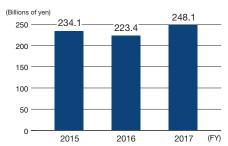
Consolidated net sales 248.1 billion yen (11.1% up year-on-year)

Consolidated operating income 13.2 billion yen (31.2% up year-on-year)

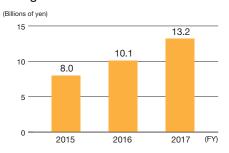
In Automobile Parts business, total sales have increased by recovering from the stagnation of domestic demand due to the impact of the Kumamoto Earthquake of April 2016, etc., and sales of wire harnesses for new vehicle models increased.

We will advance the switch to production in optimal locations such as using production bases in Southeast Asia, aim to improve cost competitiveness, and strengthen our aluminum wire harness production framework to respond to needs for lighter products.

### Net sales



### Operating income



### **Fiscal 2017 Main Topics**

Aug.

- Selection as an Official Team Sponsor of the World's Most Prestigious Motorcycle Road Racing Championship
- Contributing to the growth of motor sports -

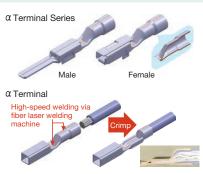


Movistar Yamaha MotoGP team

Jan.

- Furukawa Automotive Systems to Being Selling Automatic Cutting and Crimping Equipment to Spread "α Terminal Series" Worldwide
- New product set to accelerate conversion to aluminum harnesses and help to make greener cars –

Automatic cutting and crimping equipment



From now on, in addition to expanding the target of the  $\alpha$  terminal series to two-wheel vehicle from four-wheel vehicles, the sales of this automatic cutting crimping machine will be sequentially started in Asia, Europe and United States. By encouraging the worldwide distribution of the " $\alpha$  terminal series", we will further accelerate the conversion from the copper wire harnesses to the aluminum wire harnesses and contribute to the greening of automobiles.

# **Electronics Component Material**

**Business** divisions

Electric Conductor, Magnet Wire,

Copper & High Performance Material Products, Copper Tube

### Fiscal 2017 Settlement of Accounts

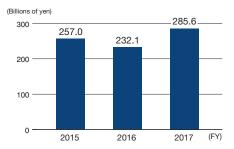
Consolidated net sales 285.6 billion yen (23.1% up year-on-year)

Consolidated operating income 5.0 billion yen (83.2% up year-on-year)

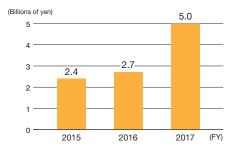
In copper strip and high-performance material business, we improved operating profit margin by optimizing the product mix and captured strong demand with increased production based on productivity improvements. Because of that and increased sales of magnet wire business for automobiles and smartphones, Electronic component materials business results trended well.

In magnet wire business, we will further promote cooperation with the Superior Essex Inc. (US) Group, which we have engaged in for some time, and capture high function magnet wire demand for automobile electrification mainly in European market.

### Net sales



### Operating income



### **Fiscal 2017 Main Topics**

Apr.

- ► Furukawa Electric Develops Oxygen-free Copper Strips with Superior Heatresisting Properties
- World-leading heat-resisting properties
   realized through proprietary structure control –

Dec.

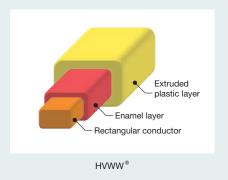
 Opening ceremony of the Essex Furukawa Magnet Wire Europe facility in Bad Arolsen, Germany



Bad Arolsen, Germany - November 8, 2017

Mar.

- ▶ High-voltage Rectangular Magnet Wire Takes First Place in the Innovation Award
- Contributing to the Electrification of European Automobiles –



### **Functional Products**

**Business** divisions

AT & Functional Plastics, Thermal Management Solution & Products, Memory Disk, Copper Foil

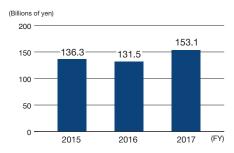
### Fiscal 2017 Settlement of Accounts

Consolidated net sales 153.1 billion yen (16.4% up year-on-year)

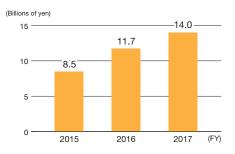
Consolidated operating income 14.0 billion yen (19.8% up year-on-year)

In copper foil business, in addition to capturing strong demand by improving productivity, operating profit margin improved due to an optimization of product mix. We will advance the integrated management of our manufacturing and sales bases in Japan and Taiwan, implement optimal function sharing, and allocate management resources to high performance foils to build a system that can ensure profits stably. In thermal and electronic parts business, sales of heat dissipation products for data centers trended firmly. Furthermore, in AT / functional plastics business, we expanded sales of products that contribute to the conversion of power poles and power cables to underground facilities such as underground cable-protecting pipes, etc.

### Net sales



### Operating income



### **Fiscal 2017 Main Topics**

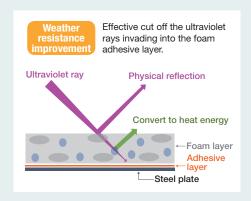
May

- Furukawa Electric Launches "EFLEX Square Duct" Underground Cable-protecting Pipe to Help Eliminate Power Poles
- The perfect pipe for compact multi-strip piping helps to reduce costs –



Nov.

- ► Furukawa Electric Develops "TAIKO ACE®" a Non-film Type Foam Material with Improved Weather Resistance
- Helps to control condensation from metallic roofs on carports, garages, and more –



UV accelerated test





Conventional Product

TAIKO ACE

# Group Philosophy

Since our founding in 1884, we have worked to create the technologies and products that society requires. We consider it our mission to contribute to the realization of a sustainable society. We promote ESG management, and steadily advance our efforts closely in line with SDGs (Sustainable Development Goals), thus continuously responding to the expectations and the trust of the society.

# CORPORATE

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.

### MANAGEMENT PHILOSOPHY

With an eye to the future, the Furukawa Electric Group management team pledges to:

- Live up to the expectations and trust invested in us by society, with fairness and integrity.
- Apply the sum total of our expertise to satisfy our customers and grow with them.
- Continuously strive to achieve world-class technological innovation, and transform ourselves in every area of endeavor.
- Nurture human resources at every level, so that we can become a more diverse and creative organization.

### **CREDO**

- 1. Maintain high ethical standards, and value honesty and integrity above all.
- 2. Continually improve, innovate, and lead, in every area of endeavor.
- 3. Take a hands-on approach that addresses the reality of every situation in the office, at the factory, and on site.
- 4. Be proactive take the initiative and work with others, persevering until a solution is found.
- 5. Maintain open channels of communication between departments and divisions, so that we can share ideals and help each other grow.

### **ESG** management

Based on the robust Corporate Governance and by exercising the management in consideration of the Environment and the Society, we will get rid of risks and expand the business opportunities, therefore achieving a sustainable growth.

# Risk elimination Expansion of the business opportunities Core emission reduction in the business activities a void environmental pollution expansion of the environmental business, etc. Corporate governance (G) Expansion of the environmental business, etc. Corporate governance (G) Expansion of the outside directors Evaluation on the effectiveness of the Board of Directors Establishment of the Nominating/Compensation Committee, etc.

### SDGs (Sustainable Development Goals)

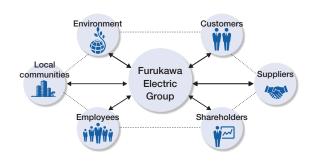
This is the social agenda adopted by the United Nations in 2015 consisting of 17 Goals and 169 targets, and aiming to resolve them by 2030 as an international common goal.

By configuring business goals conscious of SDGs, we will establish a sustainable and inclusive business model.



# Stakeholder Relations

Furukawa Electric Group works on resolving the social agenda such as SDGs while monitoring the business activities appropriately across the various stakeholders with different positions, and fulfill our responsibilities as a company.



Main Stakeholders	Means of Communication	Main Responsibilities	Related SDGs
Environment	<ul> <li>Participation in the environment related projects and cooperation on their investigations</li> <li>Cooperation on environmental efforts by customers</li> <li>Environment conservation activities through the value chain</li> <li>Participation in environmental activities by NGO and NPO</li> <li>Participation in the industry associations related to our business</li> </ul>	- Climate change measures - Promote energy conservation - Protect biodiversity - Sustainable resource recycling Manage chemical substances	7 AITORAMILANO 7 GLIANGERIT  ANDROGRATIA  AN
Customers	- Dialogue through regular business - Website, Sustainability Reports - Dialogue at technology exhibitions, trade shows	Maintain and improve the quality of products, operations and services     Offer products and services that are useful to society     Provide solutions to issues confronting customers through a broad array of technologies and know-how	7 AFFORMALIEAN 9 MOUSTITI PROVINCIA
Suppliers	- Partner Meetings - Dialogue through regular business - CSR surveys - Feedback interviews on results of partner evaluations	- Establish a sound relationship founded on fair trading in compliance with laws and regulations - Realize CSR throughout the supply chain by implementing CSR Deployment Guideline for Business Partners	12 REPORTED A ADMINISTRAL ADMI
Shareholders	- Sustainability Reports - General meetings of shareholders, shareholder reports - Management briefings and results presentations - Investor visits - Shareholder plant tours	- Provide appropriate returns - Ensure timely and appropriate disclosure - Enhance corporate value	16 PLACE JUSTICE AND STROME NOTIFIED IN STROME NOTI
Employees	- Internal newsletter, intranet - Management briefings	- Respect human rights - Cultivate and appropriately value and reward human resources - Promote health, including occupational health and safety, as well as mental health - Support diverse workstyles and work/life balance	5 centre 8 decent work and conformation of the
Local communities	- Factory tours - Cooperate with and sponsor sports and traditional events - Support the activities of and collaborate with local NPOs - Preserve the Satoyama Environment	- Nurture future generation - Promote sporting and cultural activities - Live in harmony with the natural environment and local communities	З осоонилин — М

### Examples on SDGs related activities.



environmental contexts over the conventional products at each stage of purchasing,

manufacturing, usage, transportation and disposal

of the raw materials and components.





# Governance

## **Corporate Governance**

### Basic Views on Corporate Governance and Guideline on Corporate Governance

### **Basic Views on Corporate Governance**

Based on the "Furukawa Electric Group Corporate Philosophy", Furukawa Electric Co., Ltd. and the Furukawa Electric Group secure the transparency and fairness and strive to enhance its performance by promptly responding to changes in the business environment and the market through efficient management based on prompt decision making. At the same time, we ensure sound management by developing and establishing an internal control system and applying it effectively. We uphold the basic policy of seeking to expand and develop our operations on a sustainable basis and to raise corporate value through these efforts. In accordance with the following views, we seek to strengthen and enhance our corporate governance.

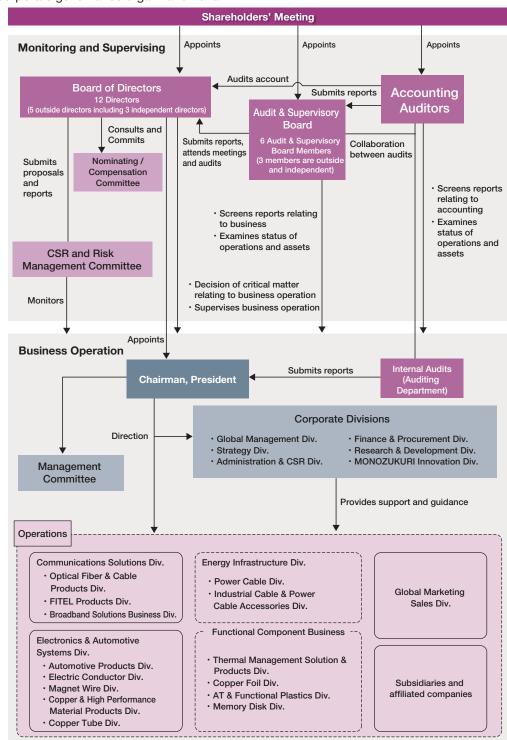
- i. We secure the rights and equal treatment of shareholders.
- ii. We consider interests of stakeholders including shareholders, and cooperate appropriately with them.
- iii. We ensure appropriate information disclosure and transparency.
- iv. Given its fiduciary responsibility and accountability to shareholders, the board regards the roles of independent directors important and carries out effective oversight of operation from objective standpoint.
- v. We engage in constructive dialogue with shareholders who have investment policies in accordance with interests of mid- to long-term shareholders.

### Guideline on Corporate Governance

Based on "Basic Views on Corporate Governance", we adopted "Guidelines on Corporate Governance" as a policy for enhancing our corporate governance.

### **Overview of Corporate Governance System**

We adopt the "Audit & Supervisory Board" type of governance organization under the Japanese Companies Act taking account of the importance of maintaining the independence of the statutory audit function. And we have a "Nominating/Compensation Committee", majority members of which are outside directors to complement oversight function of the board.



### Corporate governance organization chart

As of June 22, 2018

### Oversight and Supervising

### Board of Directors

Given its fiduciary responsibility and accountability to shareholders, the board is responsible for promoting sustainable corporate growth and the increase of corporate value over the mid- to long-term and enhancing earnings capability and capital efficiency. The

board oversights and determines the matters listed below:

- 1. Determination of corporate governance-related matters;
- Establishment and amendment of business strategies and oversight of execution of such strategies and plans by management;
- 3. Setting capital allocation policy;

- Appointment and dismissal of executives including representative director and corporate vice president, and determination of the compensation of them (including delegating these to Nominating/ Compensation Committee);
- 5. Establishment of an internal control system relating to compliance and financial reporting and risk management systems, and oversight of them;
- 6. Decision on important business matters;
- 7. Others prescribed by the applicable laws and regulations etc.

At present, the board consists of 12 directors with 5 outside directors including 3 independent directors.

Outside directors have rich management experiences in financial institutions, trading companies or manufacturing companies, or expertise in the field of legal or industrial governmental policy etc. The board respects their views and opinions based on their variety of experiences in making its decision.

We also evaluate the effectiveness of our meetings of the Board of Directors on an annual basis, and release summaries of the evaluation results on our company website.

### Nominating/Compensation Committee

We establish the Nominating/Compensation Committee.

The committee's aim is to enhance our corporate governance securing objectivity and transparency by deliberating on nomination and compensation for directors, etc., including the selection of candidates for the position of our President and Chief Executive Officer. The committee consists of 5 or more members, majority of which shall be outside directors, appointed from directors by board resolution.

At present, the committee consists of 6 members (4 outside directors).

### Audit & Supervisory Board

Audit & Supervisory Board and each its member auditor collect information about management under statutory investigation authority and report and express their views to the board meetings and the management from an independent and objective standpoint as a fiduciary to shareholders.

Auditors ensure coordination with internal audit department through regular meetings, and report the

policy, plan and result of auditing to the board regularly.

Full-time auditors attend the meetings such as Management Committee which decides major business matters, and they report information obtained from these audit activities to the non-Full-time and outside auditors.

We strengthen our audit function by appointing an assistant staff to the auditors who is dependent of management.

At present, the Audit & Supervisory Board consists of 6 members (3 members are outside and independent).

### **Business Operation**

President is responsible for management of our whole business operation as a chief executive under the board's oversight.

Our business consists of 14 business divisions, and General Managers of each division are responsible for leading each business operation including subsidiaries and affiliated companies management.

We also appoint General Managers of Communications Solutions Division, Energy Infrastructure Division and Electronics & Automotive Systems Division in order to supervise closely related business divisions. Furthermore, we appoint Advisors of Functional Component Business in order to assist President's supervising function over each business operations and to plan integrated business strategy for each business sector.

In addition, we appoint General Manager of Global Marketing Sales Division that are responsible for our group's sales and marketing entirely, and General Managers of Corporate Divisions that are responsible for planning group strategy and assisting operation.

These officers are members of the Management Committee, which is the highest decision-making body of business operation.

Management Committee, held 3 times a month basically, deliberates and determines major operational matters. Further, their business affairs and operation are quarterly reported to the Committee to foster common understanding of company business among them and integrated business operation as a whole.

These business affairs and operation are also quarterly reported to the board.

# Process of Determining Officers' Compensation and Avoiding Conflict of Interests

At Furukawa Electric, the policy on officers' compensation and details of each officer's compensation are determined by the Nominating/Compensation

Committee consisted the majority of the committee comprising outside directors, based on the delegation from the Board of Directors in order to ensure objectivity and transparency of the decision-making process.

In addition, in the case where Directors conduct transactions involving a conflict of interests, they must be based on approval at the Board of Directors' meeting as required by law.

### Compensation policy of Company's officers

The compensation of officers shall be determined in a way that encourages each officer to exert his/her abilities to the maximum level and proactively fulfill his/her duties, so that the Company Group will increase its corporate value and achieve sustainable growth while contributing to society through its business activities.

### **Reinforcing Internal Controls**

Furukawa Electric establishes, develops and operates its internal controls based on the following principles:

### 1) Efficient Execution of Responsibilities

After setting concrete management goals for the Medium-Term Management Plan and over the course of the fiscal year, all those responsible for operational performance execute their responsibilities toward achieving these goals and regularly report their progress to the Board of Directors.

### 2) Compliance System

Upholding the basic philosophy of compliance with ethics and prevailing laws as laid out in the "Furukawa Electric Group Philosophy" and the "Furukawa Electric Group CSR Code of Conduct", we, with the President assuming the highest responsibility, promote compliance activities including in-house education and efforts to prevent and detect legal violations through our CSR and Risk Management Committee, which is under the immediate control of the Board of Directors, and the Administration & CSR Division. We also have an Internal Reporting System for the early detection and correction of compliance violations, and establish a system not to treat the person unfavorably because of reporting.

### 3) Risk Management System

We have established our risk management system and

management method in the "Basic Regulations on Risk Management and Internal Control". In addition, we have established a system in which the CSR and Risk Management Committee, chaired by the President, grasps an overall picture of the risks associated with the business operations of Furukawa Electric Group and determines effective methods for evaluating and managing these risks.

### 4) Information Management System

We appropriately manage and store records and documents related to important decisions, in compliance with prevailing laws and internal rules. With respect to other information related to our operations, the Information Security Committee establishes uniform standards and operates an information management system.

### 5) Group Company Management

In accordance with the "Regulations on Group Management Control", administrative managers of individual subsidiaries shall be appointed, and they shall require own subsidiaries reporting subsidiaries' business conditions on a regular basis, and offer management guidance to subsidiaries. Predetermined matters shall require approval of us. We also carry out a mid-term management plan and budgets for single fiscal years, risk management, and compliance as Furukawa Electric Group.

### 6) Securing Appropriateness of Financial Reporting

Based on the "Basic Regulations on Risk Management and Internal Control", we will establish the "Furukawa Electric Group Basic Philosophy for the development and evaluation of an internal control system, to ensure the appropriateness of financial reporting (J-SOX Core Policies)". At the same time, the system and responsibilities shall be clarified for the system's construction, development, operation, and monitoring.



# **CSR Management**

### Basic Policy and CSR Code of Conduct

Each of the companies in Furukawa Electric Group develops CSR activities in line with the following Group basic policy. The CSR Code of Conduct defines fundamental rules of behavior for Furukawa Electric Group executives and employees to follow in conducting corporate activities based on Furukawa Electric Group philosophy and from the perspective of corporate social responsibility.

### Furukawa Electric Group Basic Policy on CSR (Revised March, 2011)

Based on the Furukawa Electric Group Corporate Philosophy,

- · We will operate our businesses in harmony with society and the environment and endeavor to create social value through technological innovation, complying with laws, social norms, and ethics as a member of the international community.
- · We will strive to maintain and build sound and friendly relationships with all of our stakeholders and contribute to the sustainable development of society.

### Furukawa Electric Group CSR Code of Conduct

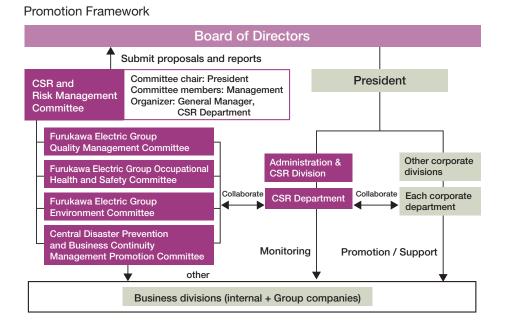
1. Human rights

- (Revised March, 2011)
- 2. Working conditions and environment
- 3. Environment
- 4. Products and services
- 5. International businesses and transactions
- 6. Fair competition
- 7. Relations with customers, partners, and society
- 8. Management and preservation of Company assets
- 9. Disclosure of information
- 10. Duties and obligations of senior management and employees



### **Basic Approach**

In order to contribute to the realization of a truly rich and sustainable society, we need to understand the social responsibilities of Furukawa Electric Group and implement policies in line with the Basic CSR Policy. We will promote CSR initiatives alongside our business activities so that each and every Group employee is able to take the lead in putting CSR initiatives into practice.



### **CSR Promotion Framework**

Furukawa Electric Group has established the CSR and Risk Management Committee, which comprises members of management, as the structure for supervising and promoting CSR activities throughout Furukawa Electric Group, including risk management, internal control, compliance and social contribution. We have set up the CSR Department within our Administration & CSR

> Division. This department promotes CSR by facilitating communication among various committees and corporate departments.

Targets and Results (Risk Management / Internal Controls / Compliance)    Ontrols / Compliance    Ontr						
FY 2017			FY 2018			
Targets	Results	Achievement	Targets			
Develop a system for the globalization of legal and compliance functions  - Examination and implementation of compliance education in Southeast Asia etc.	- Conducted compliance education for group company staff in Indonesia (Jakarta)	<b>:</b>	Enhancement of the compliance functions associated with the global business expansion  - Implementation of the compliance related education in the overseas high risk area			
Strengthening overseas risk management  - Understand and summarize any risks which could conceivably impact business, and also formulate policies to address those risks	- Formulation of the action policies based on the captured and organized risks obtained from surveys on overseas risk	•	Strengthening overseas risk management  - Extension of the overseas emergency response manual			
Expansion of the introduction of internal reporting systems to overseas group companies  - Improvement of the introduction rate of internal reporting systems in companies with consolidated systems	- Approximately 95% of the overseas institutional consolidated companies have introduced the whistle- blowing system	•	Enhancement of the cyber security measures  - Implementation of the emergency response training based on the activity policy of the "Furukawa Electric CSIRT (note)".			

(note) CSIRT: The abbreviation of "Computer Security Incident Response Team". The team is prepared to cope with the occurrence of cyber incidents. The team promptly investigate causes, identify the range of impacts and eradicate the infection upon an occurrence of an incident.

Message from the General Managers



We will promote the Corporate Social Responsibility (CSR) activity based on the firm functional capability of the promotional structure and mechanism.

### Yasuhiro Yonezawa

General Manager, CSR Department, Administration & CSR Division

In the activity of the increasing change in the business environment due to the global business development, Furukawa Electric Group is requested to steadily fulfill the responsibility to the stakeholders while adapting changes being aware of various stakeholders. Under these circumstances, the CSR activities are an important foundation for the business growth and the continuation of

Furukawa Electric Group. Based on our Group Philosophy, Furukawa Electric Group has established Basic Policy and Code of Conduct regarding the CSR and has consolidated the promotional structure and the mechanism. Furukawa Electric Group will devise the solid functional capability and continue to promote the CSR activities.

### **Risk Management**

### Overview of the Risk Management Structure

Our CSR and Risk Management Committee conducts regular risk assessments to determine what risks exist, define important risks that require a companywide response and prioritize measures to counter these risks. Through specialized committee activities in segment-specific areas—environment, quality, safety, disaster prevention—we are working to manage the risks that relate to our business activities.

### Important Companywide Risks

- Compliance
- Quality control
- · Large-scale disasters, such as earthquakes
- Information security
- Affiliated company controls

In the event a large-scale disaster occurs or other such risk materializes, Furukawa Electric Group will establish Emergency Response Headquarters, headed by the president, and Site Response Headquarters that defines each department's roles and clarifies them ahead of time. We also conduct regular exercises on preparing initial action manuals, stockpiling necessary supplies, and setting up communication structures and systems to confirm people's safety.

### **BCM** (Business Continuity Management)

### [Business continuity ISO]

In order to meet the increasing demands of our stakeholders for the business continuity activities, the Company is actively proceeding with the acquisition of international certifications for our Business Continuity Management Systems (BCMS). Up to this point, our businesses for the "laser diode products business" (Chiba Works), "copper wire products business" and "copper winding products business for motor" (both in Mie Works) have successfully received the BCMS ISO standard (ISO22301) certification. Each business division operates the Business Continuity Management (BCM), as well as implements a BCM activity plan at the beginning of the term, an education at the workplace and an internal audit, take into account such as "super heavy rain" and "pandemic" other than earthquakes, as an exercise, and working to strengthen the resilience of the important business continuity.

### [Emergency headquarters training]

In the BCM training for fiscal 2017, based on the assumption that the Chiba Works of the Company was affected by a major earthquake, we conducted in a workshop format exercises related to the roles and the actions to be taken between the Site Response Headquarters, the Production Divisions and the Sales Divisions in the disaster area, and the Emergency Response Headquarter in the Head Office. The President gave the following instructions: "Organizational leaders should have strong thoughts on restoration and reviving from the disaster, in consideration of the mental and physical health of the employees and







Situation at Emergency Response Headquarters training workshop

having a smile to encourage the employees." and "I wish you to keep your eyes open regarding making a plan to fill the gaps between the ideal state and the current states."

### [Disaster headquarters training at the Head Office]

In the training at the Disaster headquarters in the head office, after the safety confirmation call over training, education on the earthquake response manual of the head office, the health lecture such as how to use AED and triage presented by an industrial doctor, a training to carry out from a stockpile warehouse, etc. In addition, "Walking Home Training" which is actually take a walk on the return home route having a return home route map in the event of a disaster, was implemented with 21 participants by newly adding a Koshu Kaido (Shinjyuku) direction to 4 routes starting from Marunouchi. In each route, the participants walked about 2 hours while checking the hazardous places and the evacuation facilities, etc. The participants explained their impression: "I was encouraged to be acquainted with colleagues returning home taking the same route", "It was a good experience to obtain a sense of the places by walking", "It will create a severe difficulty as streets will be filled with a large number of people in the event of an emergency", etc.

### Disaster headquarters training at the Head Office





Safety confirmation call over training

Health lecture





Briefing on "Walking Home Training"

Walking Home Training: Leaving the office

### Information Security

Information security is considered one of the highestpriority risks Furukawa Electric Group has to handle. Therefore we promote various countermeasures through intergroup collaboration by exchanging information among the related divisions, from the perspectives of protecting information systems and intellectual property as well as information management. We continue our efforts to prevent information leaks by focusing on the management of hardware (mainly mobile devices) taken outside the office and to manage IT assets through such measures as software license management. We provide Furukawa Electric Group with educational materials and information on the revisions of information security-related laws such as the Act on Prohibition of Unauthorized Computer Access, the Unfair Competition Prevention Act and the Act on the Protection of Personal Information. In our aim for ongoing improvement, we get feedback from divisions promoting these activities.

In these days, the risks of the cyber security are getting more and more serious due to the increasing damages caused by conditions such as the target type attack (note 1) of the cyber attacks aiming at companies and individuals. In connection with these situations, the Company established the cyber security system based on the "Cyber Security Management Guideline" issued by the Cabinet Office, and set up the "Furukawa Electric CSIRT (note 2)". In the ordinary situations, the CSITR analyses the vulnerability diagnosis and the risk together with the monitoring of the network environment. In the emergency situations, the CSIRT identifies the causes of the incidents and promptly determinates the situation by finding out the range of the influence together with taking a role to prevent the spread of the damages in collaboration with internals and externals to the Company. We will continue

to enhance the cyber security management system including Furukawa Electric Group companies.

### **Intellectual Property Risks**

The Company aims to stabilize the management by strategically creating the intellectual property rights based on the patent portfolio management that grasps the trends in the other companies, also by decreasing the intellectual property risks.

The intellectual property risks are divided into four categories: "Rights infringement risks", "Counterfeit products risks", "Contract risks" and "Technology leakage risks". For example, against the "Technology leakage risks", the following measures are taken: "Technology concealment of the development site and the production site", "Information maintenance strengthening with the time stamp system", etc.

We also develop the intellectual risk reduction activity in Furukawa Electric group globally, based on the implementation of the systematic training of Furukawa Electric Group in domestically and internationally, the regular issuance of the newsletters introducing efforts to reduce intellectual property risks, by the President' awards for excellent inventions and activities, etc.

### Organizational structure on cyber security



(note 1) Targeted attack: This is characterized by the step by step progress like "Identifying the attack target-Initial infiltration-Infiltration base building-Purpose execution". At the initial infiltration step, mail containing computer viruses etc. are mailed and causes the virus to infect by opening the attachment or by clicking on the link in the text body.

(note 2) CSIRT: The abbreviation of "Computer Security Incident Response Team". The team is prepared to cope with the occurrence of cyber incidents. The team promptly investigate causes, identify the range of impacts and eradicate the infection upon an occurrence of an incident.

### **Challenges and Future Policy**

Following our international business development, risks that Furukawa Electric Group faces are becoming more diversified and complicated each year. We particularly recognize that risks inherent in overseas operations—mainly in emerging countries—and risks from the supply chain standpoint are our top priority issues, and we will be strengthening our countermeasures against them.

## **Compliance**

### **Basic Approach**

Furukawa Electric Group regards compliance as "not only observing laws and regulations, but also as acting in accordance with the values and ethics required of the company and its employees as responsible members of society". Each and every employee is encouraged to perform day-to-day compliance activities in line with our three musts for compliance activities: to "be aware", "speak" and "rectify".

### **Three Musts for Compliance Activities**



### 1) Be aware

- Is this in line with the philosophy and CSR Code of Conduct?
- Is this an improper practice?
- Does this run counter to society's requirements and expectations?

### 2) Speak

- · Do not neglect it.
- · Talk about it openly.
- If still not sure, take it to your boss.

### 3) Rectify

- · As soon as you become aware of it, fix it.
- · Always improve.

### Training and Raising Awareness among Employees

We conduct a host of training and awareness activities in the aim of instilling compliance awareness among all employees.

### **Compliance Education**

Our primary shared educational materials are the Furukawa Electric Group CSR Code of Conduct and its corresponding Furukawa Electric Group CSR Compliance Handbook. We distribute this handbook to Furukawa

Electric Group employees and take many opportunities to make use of it. We conduct compliance education for employees at every level of the Company, from new recruits to directors. At the same time, we hold themebased group training and e-learning courses, and conduct groupwide compliance education.

### Education Results (fiscal 2017)

	Course Name	Target	Participants
Hierarchy- based education (note 1)	Training for executives	Newly appointed executives	18
	Training for managers	Newly appointed managers	79
	Training for managers and assistant managers	anagers managers and assistant	
	Training for new employees	New employees	92 (note 2)
Theme-	Competition laws and anti-bribery regulations		246
specific	Subcontractor L	627	
education	Security trade co	853	

(note 1) In hierarchy-based education, manager training and new employee training includes education on human rights.

(note 2) Figures apply to Furukawa Electric only.

### **Initiatives in Compliance Months**

Furukawa Electric Group has designated October and November as Compliance Months, during which we implement measures aimed at tackling the variety of compliance issues faced by companies across our Group.

# Principal Initiatives during Fiscal 2017 Compliance Months Main Initiatives at Furukawa Electric

- Conduct workplace self-checks according to section-specific checklist
- <Section-Specific Checklist>
- 1) Anti- Monopoly Act, 2) Worker Dispatching Act
- 3) Subcontracting transactions, 4) Occupational safety
- 5) Asset protection, 6) Information security
- Conduct workplace meetings
- 3 Courses on competition laws and anti-bribery regulations
- 4 Submission of Compliance Pledge (for assistant managers, managers and above)

### **Employee Compliance Awareness Surveys**

We have biannually continued to implement compliance awareness surveys at Furukawa Electric and affiliates in Japan. Designed to gauge employee awareness and understanding of compliance, these surveys aim to encourage recognition of compliance. Feedback is given on the results of the survey to our Group companies and Furukawa Electric divisions, and the results are used to make proposals for compliance measures at each organization. In fiscal 2018, as in fiscal 2016, we will conduct compliance awareness survey based on CSR Code of Conduct.

### **Internal Reporting System**

Furukawa Electric Group has introduced an internal reporting system to earlier detect and correct illegal acts. The Company has in place an internal reporting desk as well as an external reporting desk that makes use of outside third-party institutions (the Furukawa Electric Group Hotline), both of which allow employees to make reports anonymously. An internal reporting secretariat manages the content of such reports stringently, taking ample care to prevent people making such reports from suffering any negative impacts, looking into issues swiftly and taking appropriate action. In fiscal 2016, we newly set up external reporting desks for oversea affiliates. By the end of fiscal 2017, we have set them up in 10 countries and 40 affiliates.

### **Security Trade Control**

Furukawa Electric Group considers security trade control to be one of its most important responsibilities as a company with global business operations. In accordance with the laws and regulations that make up the international framework on security trade control (the export control regime), we have improved and strengthened our management systems for cargoes and technologies that can be converted to weapons or military uses. In exporting products and providing technology, we conduct transaction screenings based on our Security Trade Control Regulations to ensure compliance with relevant legislation and are careful to prevent circumvent to countries of concern.

### **Anti-Bribery**

Furukawa Electric Group formulated the Furukawa Electric Group Anti-Bribery Statement in April 2012. In December, we published the Furukawa Electric Group Anti-Bribery Guide, and we are promoting activities toward creating a groupwide bribery risk management system.

### Overseas compliance seminar

From fiscal 2014, we started to conduct group-type compliance seminar focused on competition law and anti-bribery taking account of local laws and customs. By fiscal 2015, we held the seminar in China. In fiscal 2016 we held it at Bangkok in Thailand and in fiscal 2017 at Jakarta in Indonesia. 38 sales or purchase staffs from 5 affiliates attended the seminar lectured by lawyers in Indonesian and Japanese and discussed on compliance.



### **Challenges and Future Policy**

Regarding the various legal compliance measures we have taken to date, we recognize as a Group that our task is to expand the scope of participation of Group companies. To this end, we will try to raise compliance awareness by focusing on more effective education content with a Group perspective and enhancing its global implementation system. We will also hold more compliance seminars taking account of local laws, languages and customs, encouraging individual initiative under the slogan "Think and conduct compliance together".

### **Relations with Our Customers**

### **Basic Approach**

Each of the Company's divisions has acquired ISO 9001 certification. Through initiatives such as these to standardize our operations and work consistently to improve quality, we are striving to contribute to society by providing excellent-quality products and services from a customer perspective.

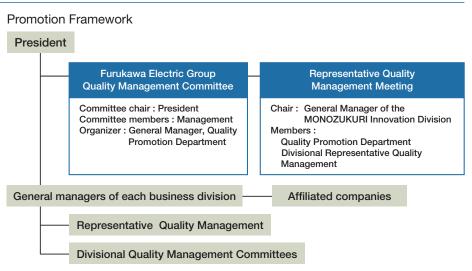
Going forward, we will continue endeavoring to further enhance "quality power" throughout Furukawa Electric Group by developing products that are attractive to our customers, based on a policy of Group-focused management.

### **Quality Management Policy**

At every stage of our operations, from research and development to manufacturing, sales, customer service and management, in all sections and all hierarchies, we always strive to adhere to a PDCA management cycle based on actual facts, maintain and improve our products, customer services and the quality of our operations and put our management policies into practice.

### **Organizations for Improving Quality**

Furukawa Electric has established Furukawa Electric Group Quality Management Committee, which is chaired by the president, as the topmost body for promoting quality management at Furukawa Electric Group level. Directed by this committee, Divisional Quality Management Committees led by divisional heads promote ongoing efforts to maintain or improve the quality of our products, customer services and operations.



Message from the General Managers



In order to firmly achieve "the next level quality", we promote the strengthening of quality awareness and quality governance.

### Kazuhisa Kashihara

General Manager, Quality Promotion Department, MONOZUKURI Innovation Division

Based on the recent public information on many articles, causes and measures concerning quality fraud in other companies, we never consider it as the business of other company and we wish to learn from them and lead to improvements.

In fiscal 2018, along with continuation of the quality improvement measures including two projects that have been worked on, the quality awareness and the quality governance efforts will be further strengthened and promoted.

### Targets and Results (Quality)

C Achieved Partially achieved Not achieved



Strengthening of fundamental Quality Power

Targets

- Reduce "failure costs" by 10% from fiscal 2016

- In all 14 business divisions, the expansion of the Quality Strengthening Project activities within the divisions were conducted.

Results

FY 2017



### Strengthening of fundamental **Quality Power**

Reduce "failure costs" by 10% from fiscal 2017

**Targets** 

### **Quality Strengthening Project**

The "Quality Strengthening Project", that has been underway for four years, sets the important themes related to the "failure costs" in each business division (including the supervisory affiliates) and the improvement is promoted by the team activities. In fiscal 2017, the promoting method was clarified based on the "Guideline" for problem solving process, and the expansion of the



autonomous activities was promoted in each division. At the end of the fiscal year. the meeting to report results was held and the improvement cases were shared.

### Risk Free Design (RFD) Project

In the "RFD project", the resource improvement which is "Reformation of the way of thinking" was started, based on the innovative change of consciousness of engineers involved in designing and development and of the people in charge. Also, the improvement of the process for design and development "Restructuring of the mechanism" was started.

In fiscal 2017, in "Reformation of the way of thinking", the training has started for all the topics aiming for further improvement by fiscal 2020. In "Restructuring of the process", the guidelines were created, and the operation started at the training implementation divisions.



### **TOPICS** 50th anniversary of EFLEX

Our flexible underground cable protecting pipe "EFLEX" launched in 1967, celebrated its 50th anniversary in 2017. The corrugated HDPE pipe, with its light weight, long



**EFLEX Square Duct** 

length and flexibility features were highly valued by the customers, and the cumulative shipment of the product reached approximately 520,000 km in fiscal 2017, which is equivalent to 13 circumferences of the earth in distance.

The "EFLEX Square Duct" series was launched in February, 2018, responding to the market needs to support accelerating removing utility poles in Tokyo for the 2020 Tokyo Olympic Games.

We will continue to support and to respond to the needs for realizing a sustainable society.

### Issues and the future policy

In order to achieve the next level quality, two projects will be continued.

As differences were shown in the procedures for the problem solving processes among the departments, the "Quality Strengthening Project" will continue to be the autonomous activities of change by each divisions. Also, in this activity, the key human resources for the quality improvement will be developed

In the "RFD Project", the practical development of consciousness and knowledge obtained through the training will be promoted.

Also, the enhancement activity on the "quality compliance" and the "quality governance" will be promoted, taking into account the recent quality frauds in the manufacturing industry in Japan.

### **Relations with Business Partners**

### Optimum Purchasing on a Steady, Ongoing Basis

Furukawa Electric Group procurement policy is to establish strategic relationships with business partners to ensure optimum purchasing on a steady, ongoing basis.

### Furukawa Electric Group Procurement Policy

We will realize the optimal procurement for Furukawa Electric Group through global partnerships by:

- 1. Conducting CSR activities and full compliance in purchasing
- 2. Building strategic relationships with business partners aimed at stable and continuous optimum purchasing
- 3. Expanding Group and global procurement
- 4. Constructing BCM for stable procurement and purchasing of raw materials, materials and parts
- 5. Promoting continuous cost reduction activities in line with business strategy

### **Conducting Training on Subcontracting Transactions**

In order to forge sound relationships with business partners through fair transactions that comply with rules and regulations, Furukawa Electric Group provides training for employees on subcontracting transactions. In fiscal 2017, in addition to continuing with the courses we have conducted to date, we sought to ensure thorough awareness of the content of the act against delay in Payment of Subcontract Proceeds, Etc., to Subcontractors.

### Partners Meeting and Partners Evaluation Scheme



Furukawa Electric seeks to deepen awareness among our business partners through regularly held Partners Meeting, where we explain the state of the Company, our

procurement policy and individual company management strategies. For fiscal 2017, this meeting was held in June and was attended by 55 main business partners.

We also evaluate main business partners on the basis of quality, technology, price, delivery system, degree of social contribution and credit condition, and then, we provide feedback on our findings, in partners meeting. In addition, we discuss the results of our evaluations with them to more closely align our awareness of procurement activities. As part of that, we accelerated the activities of Procurement Logistics in fiscal 2017. By collectively transporting purchased goods on our logistics, it will be leads to environmentally conscious effort such as CO<sub>2</sub> reduction, and it will also be an activity that leads to cost

reduction through efficient logistics.

In fiscal 2017, we evaluated some 199 business partners and provided feedback to them. Furthermore, based on the results of the assessment and our own experiences during the suspended production that resulted from snow damage at Our Nikko Works, we requested ongoing cooperation from certain business partners on business continuity and stable supply initiatives.

### Promoting CSR in procurement activities

Based on our CSR Deployment Guideline for Business Partners, we engage in procurement activities with "full legal compliance and fair trading practices" and "consideration for human rights, safety and the environment". We are also continually providing encouragement at partners meeting by explaining the state of our efforts to our business partners, asking for their cooperation with our activities, and so on.

### Value chain BCM (Business Continuity Management)

Furukawa Electric conducts regular questionnaire surveys on its main partners about their BCM measures.

In fiscal 2017, we held questionnaire surveys for main partners and placed the results we received from our business partners onto a database. In this way, we have become able to quickly identify which partners are mostly likely to be affected during a natural disaster.

### Conflict Minerals (note)

Regarding the handling of conflict minerals, our approach to responsible mineral procurement has been to comply with the code of conduct of the EICC

(Electronics Industry Citizenship Coalition), including setting a Group policy and informing other Group companies and partners.

In fiscal 2017, in addition to carrying out ongoing survey into the usage of conflict metals in mainstay products at Furukawa Electric and our Group companies, we have actively promoted procurement from smelters that have received accreditation under the EICC's conflict-Free Smelter Program.

Going forward, in addition to requesting the cooperation of Group companies and our business partners in the responsible sourcing of minerals, we will work with the Japan Electronics and Information Industries Association (JEITA), an industry organization, on initiatives targeting the responsible sourcing of minerals. (note) Defined as minerals (tantalum, tin, gold, tungsten or their derivatives) that originate in or near the Democratic Republic of the Congo that may help to finance armed conflict.

### Challenges and Future Policy

We want to fully grasp the state of our CSR activities along the value chain by regularly asking our partners to complete a questionnaire on their understanding of our CSR Deployment Guideline for Business Partners.

We will also seek to deepen BCM by giving encouragement to partners based on the results of our BCM questionnaire and manufacturing site survey, with the aim of improving crisis response levels along the entire value chain. Internally, during group training held at the Procurement Department, we have held exercise and seminars on the handling of BCM in order to raise our awareness.

### Targets and Results (Procurement)

Achieved



Partially achieved Not achieved



FY2018

**Targets** 

### Targets Strengthen strategic relationships with

- partners - Ongoing implementation of the partner assessment system and utilization of
- Promote awareness of CSR Deployment Guidelines among partners

feedback discussions

- Examination and implementation of measures to strengthen the value chain by utilizing BCM questionnaire surveys and site surveys results
- Carry out conflict minerals survey (data update survey)

- Conducted partner evaluations of about 199 main partners and held partners meeting

Results

FY2017

- Introduce our CSR Deployment Guideline by procurement system
- Reviewed and increased the number of supply points (and sometimes recommended to hold inventory) for important products
- A conflict materials surveys (data update surveys) was done

### Strengthen strategic relationships with partners

- Continue partner evaluation system
- Continue to inform partners about **CSR** Deployment Guidelines
- Communication with partners with a view to strengthening the Value chain based on the results of BCM questionnaire surveys
- Conflict minerals survey (data update survey)

Message the General Managers



We will strive to achieve mutual understanding with our business partners and take further steps to strengthen our supply chain.

### Kazuhiro Takamatsu

General Manager, Procurement Department, Finance & Procurement Division

Ever since its foundation, Furukawa Electric has stayed in business by partners with social infrastructure and contributing to society as a partner of products. However, our success is not just the result of hard works at our company. It is also thanks to the steady delivery by our partners of the raw materials we use to create products.

In the future, our business environment is likely to change even more rapidly. Under these circumstances, we will need to strengthen our value chains further in order to continue contributing to society. We intend to use a partners meeting and partners assessments to improve the mutual understanding we have with our partners, and to continue contributing to society through measures such as the promotion of CSR activities and strengthening of BCM.

### **Relations with Shareholders**

### Information Disclosure Policy and IR Framework

Furukawa Electric Group Basic Policy on CSR requires that Furukawa Electric Group seeks to improve upon the sound, friendly relationships we maintain with all of our stakeholders. Our Own Regulations on the Timely Disclosure of Corporate Information meanwhile set out a framework for the disclosure of appropriate information at the appropriate time.

Based on this policy, all IR activities are conducted by the Investor & Public Relations Department and overseen by the director in charge of IR, who is General Manager of the Finance & Procurement Division.

### Relations with Institutional Investors and Securities Analysts

In addition to holding management briefings (covering interim and year-end results and mid-term plans when announced) for institutional investors and securities analysts, we actively encourage communication all year round.



Briefing for institutional investors

### **Relations with Individual Investors**

In October 2017, we held our 10th plant tour for individual investors. Visitors were selected by lottery from among those who responded to an open invitation, with 50 people invited to attend out of the 150 who responded. During the tour, we offered participants a number of opportunities to get a feel for Furukawa Electric. We introduced our production processes for optical fiber cables and automotive components in Mie Works.



Optical fiber plant



Automotive components plant

### **Returning Profits to Shareholders**

Furukawa Electric aims for management emphasizing capital efficiency and has made the basic policy of its capitalization strategy to balance strategic investment for growth, the cultivation of the next generation of new businesses, the improvement of the financial structure and returns to shareholders.

Under this basic policy, in the "Furukawa G Plan 2020," the new medium-term management plan, we will apply management resources prioritizing facility investment and R&D for profit expansion in focus business areas (infrastructure / automobile markets) and the creation of new businesses, strengthen the earning capacity of our group and improve its financial structure, all of which will support the sustained growth of our group. With regard to returns to shareholders, we also positions the continuation of stable dividends as one of the most important issues of management.

Regarding the year-end dividend for the fiscal 2017 ended March 2018, based on the business result and others for the current fiscal year, the dividend was increased in order to increase the return of the profit to the shareholders, and 80 Yen per share was paid as a year-end dividend.

Regarding the dividend for the fiscal 2018 ended March 2019, based on the comprehensive consideration on the future business development and the return of the profit to the shareholders, we plan to pay a year-end dividend of 80 Yen per share which is equal to the current term.

#### Stock Information and Dividends

General stock information (as of March31, 2018)

Stock Code on the Tokyo Stock Exchange	5801				
Stock Exchange Listings	Tokyo Stock Excl	nange, First Section			
Number of shares authorized	Common Stock	250,000,000 shares			
Common stock issued	Common Stock 70,666,917 shares				
Minimum trading units	100 shares *				
Shareholder register	2-1 Yaesu 1-chome, Chuo-ku, Tokyo, Japan				
agent	Mizuho Trust & Banking Co., Ltd.				
Fiscal year	From April 1 to March 31				
Shareholders' meeting	June each year				

We changed the number of shares in a unit of the company's ordinary shares from the current 1,000 shares to 100 shares with an effective date of October 1, 2016.

Distribution of ordinary stock among shareholders (as of March 31, 2018)



Cash dividends per common share (including forecast)

Fiscal year	2015/3	2016/3	2017/3	2018/3	2019/3
Interim dividend (Yen)	0.0	0.0	0.0	0.0	0.0
Year-end dividend (Yen)	3.0	4.0	55 <sup>(note)</sup>	80 <sup>(note)</sup>	80 <sup>(note)</sup>
Total dividend (Yen)	3.0	4.0	55 <sup>(note)</sup>	80 <sup>(note)</sup>	80 <sup>(note)</sup>

(note) We have carried out a reverse stock split at a ratio of 1 share for every 10 ordinary shares with an effective date of October 1, 2016. The amounts if the reverse stock split is not conducted will be, respectively: 55 yen → 5.5 yen, and 80 yen → 8.0 yen.

(as of March31, 2018)

Major top 10 shareholders of the Company and the Company's capital contributions to such shareholders

Name of major shareholders	Number of shares	Shareholding ratio
Japan Trustee Services Bank, Ltd. (Trust Account)	8,404,900	11.90%
The Master Trust Bank of Japan,Ltd. (Trust Account)	5,741,100	8.13%
Trust & Custody Services Bank, Ltd. (Mizuho Trust & Banking; Employee Retirement Benefit Trust, Mizuho Bank Account)	2,413,500	3.42%
Japan Trustee Services Bank, Ltd. (Trust Account 4)	2,304,800	3.26%
Asahi Mutual Life Insurance Company	1,365,050	1.93%
FURUKAWA CO., LTD.	1,329,045	1.88%
Japan Trustee Services Bank, Ltd. (Trust Account 5)	1,257,600	1.78%
THE BANK OF NEW YORK, NON-TREATY JASDEC ACCOUNT	1,127,210	1.60%
Fuji Electric Co., Ltd.	1,100,000	1.56%
Trust & Custody Services Bank, Ltd. (Mizuho Trust & Banking; Employee Retirement Benefit Trust, FURUKAWA CO., LTD. Account)	1,091,900	1.55%

(note) 1. Shareholding ratio is calculated with the number which deducted 48,650 shares of the Company's treasury stock.

2. Mizuho Bank, Ltd. holds 173 shares separate from the 2,413,500 shares indicated above which have been set by Mizuho as a retirement benefits trust.

3. In addition to the JPY 1,365,050 shares mentioned above, Asahi Mutual Life Insurance Co. also has a further 1,050,000 shares in a retirement benefits trust.

Message from the General Managers



We will make efforts to disclose and provide explanations of our diverse businesses for understanding of our shareholders and investors.

#### Mami Masuda

General Manager, Investor & Public Relations Department, Finance & Procurement Division

Furukawa Electric's business began with copper smelting and the manufacture of electric wires. The numerous products that we manufacture based on our materials technology support the lives of people around the world in a wide variety of fields, including telecommunications, electric power infrastructure and automobile.

Based on the four business segments of "Infrastructure", "Electronics & Automotive Systems", "Functional Products" and "Service and Developments", covering our

diverse businesses, we will make efforts to disclose and explain information in order to gain understanding from our shareholders and investors.

You may have a less chance to see our web site "Furukawa Here and There" where our products supporting daily life are introduced and where are receiving good reviews. We aim to be a company being trusted into the future.

## **Relations with Employees**

#### **Personnel Management**

#### **Personnel Management Policy**

We aim to be a creative and dynamic corporate group by utilizing diverse human resources globally. It is fundamental to human resource management to continuously create personnel who can embody Furukawa Electric group philosophy, core value and contribute to strengthening competitiveness.

Please refer to page 20 for "Furukawa Electric Group Corporate Philosophy".

#### Medium term policy

In the 2020 Mid-term Management Plan, we set a mission of pursuing diversity and autonomy in order to continue growing on global markets, improving our ability to respond to changes in the business environment, and realizing greater creativity and practical capabilities in our "people" and "organizations".

We will implement human resource management to support Furukawa Electric group's growth strategy through penetration of "Group HR Vision" (note), development of management human resources, enhancement of HR function in group and global, fostering an employee's autonomous career awareness and improving willingness to develop capabilities toward realization of career. (note) This is our vision for human resources at Furukawa Electric Group.

Main measures contributing to the Group's global management

- 1 Realization of "Successor Training Plan" and strategic placement in important position within group
- Early selection of candidates and systematic development and arrangement, for the training of the next generation of managers
- 3 Establishment and penetration of "Group HR Vision", promotion of career development support and improvement of personnel system for that purpose
- Improvement of training curriculum and promotion of human resources exchange, overseas dispatch of young employees
- 5 Acceleration of diversity management efforts
- 6 Promotion of productivity improvement and flexible working way through "work style reform"

#### **Human Resources Development**

#### **Enhancement of Education Program**

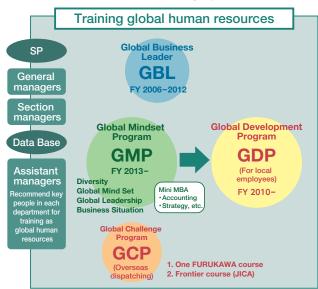
We are training human resources who have rich humanity and strong challenge spirit, for the sake of our group development.

The state of our leaders affects corporate culture and reflects in our business results, which is why we give training at each level to develop leadership, and construct relationships between people by "dialogue" among all our employees. We work hard to cultivate an interest in people and a sense of respect for others.

#### Nurturing Leaders Adapted to the Global Scene

We started our Global Business Leader (GBL) training in 2006 in order to develop personnel who will take on the role of management in the future. Since fiscal 2013 this has been reformed to Global Mindset Program (GMP), with its extra emphasis on global human resource education. We have also operated a Global Development Program (GDP) for overseas local employees since 2010 with the aim of strengthening links within Furukawa Electric Group, the curriculum being partly shared with the GMP. Furthermore, in fiscal 2014 we launched the Global Challenge Program (GCP), which dispatches young employees to foreign countries. We are working to align these various programs to develop human resources who can play a dynamic role on the global stage.

#### Global Human Resources Training System



#### Project to Improve GENBA-RYOKU Capabilities

From fiscal 2009, the training targeted for the employees in MONOZKURI (manufacturing) site is carried out at each of our Plants. In fiscal 2017, was reopened the freshman training targeting the novice technicians. And, the "Workplace Leader Training" targeting forepersons was opened, and the consistent training plans from novices to veterans were prepared. The site staffs from 21 domestic Group companies participating in the MONOZUKURI training. In addition, The "all employees participating special programs" are opened at the major plants in many companies in Furukawa Electric Group. More than 3,100 trainees participated in the site strength training and the activation of the "MONOZUKURI power" in the workplaces is strived by taking advantage of the "sight strength" in which each person takes action based on their own consideration.

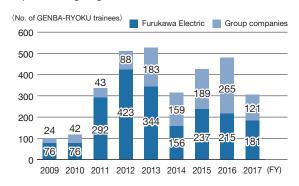


Training for novice technicians.
Exercise in safety by pointing out and giving voice.

Lecture on MONOZUKURI staffs training for the sight strength.

We are promoting to create a culture which carries out the operation with the common language of "strengthening the GEMBARYOKU". What's more, we will strengthen our "Monozukuri capabilities" by working together as a united Furukawa Electric Group both in Japan and overseas.

#### People Undergoing GENBA-RYOKU Reinforcement Training



#### **Using Diverse Human Resources**

One of our Group's management philosophy is to "nurture human resources at every level, so that we can become a more diverse and creative organization". It is essential for the progress of our Group's global management to create a corporate culture in which more diverse personnel can succeed.

In April 2014, we set up a Diversity Promotion Section, and are working on various measures such as organizational mind fostering, women's career formation support, autonomous work-life management, etc., aiming at building an environment where diverse human resources can be active.

#### **Diversity & Inclusion Activities**

In fiscal 2017, we strengthened the transmission from the top management such as an accession to "Iku-Boss Enterprise Alliance", and support for "Declaration on Action by A Group of Male Leaders Who will Create a Society in Which Women Shine.".

We worked on individual fostering of female managers, created child care brochure for men and held a seminar on compatibility between work and nursing care.

These efforts were evaluated, and in March 2018, we were



Iku-Boss enterprise alliance





"Nadeshiko Brand" logo

selected as "Nadeshiko Brand" as a listed company of nonferrous metals with excellent women's success.

## [Objectives related to support the success of women in the workplace] (Set new target value in fiscal 2018)

- (1) We aim for 7% of females in managerial positions by fiscal 2025.
- (2) We aim for 15% of females in chief positions by fiscal 2025.
- (3) We aim for 40% of females in university graduates recruits by fiscal 2025.

(note) A summary of our company's initiatives is available on the Ministry of Health, Labour and Welfare's "Enterprise database promoting women's success".

http://www.positive-ryouritsu.jp/positivedb/detail?id=529

#### Work style reform

From both aspects of "work style change" and "organizational culture reform", we are promoting activities aiming at balancing "sustainable growth of the company" and "enhancement of individual lifestyles (life)". In fiscal 2017, in addition to encouraging executive officers and department heads to take the initiative, we implemented a campaign called "Working Style Reform Challenge Month" and accelerated efforts in each department.

Furthermore, in order to achieve results, we believe that it is important to work together on a team as "an organization where everyone can share own ideas openly". We conducted a "dialogue party" between the president and the department/section managers at eight locations nationwide to deepen their understanding of the importance of interactive leadership.

#### **Diversity in Hiring**

In order to respond to the global development of our business, Furukawa Electric Group has come together to implement a variety of initiatives with the aim of securing human resources. In addition to information exchanges to share know-how on hiring within Furukawa Electric Group, we held Furukawa Electric Group Forum in Tokyo, at which actively appealed our attractiveness to students.

#### Recruitment figures by gender (Number of employees)

		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Specialized	Male	21	28	45	61	73
	Female	5	8	15	31	31
staff	Total	26	36	60	92	104
	Foreign nationals	1	0	0	1	0
Professional	Male	0	0	0	15	46
staff	Female	0	0	0	0	0
Stall	Total	0	0	0	15	46

#### **Encouraging Employment of Disabled People**

Furukawa Electric has established special subsidiary Furukawa New Leaf in fiscal 2004 for the purpose of improving our employment rate of disabled people. As of March 31st 2018, Furukawa New Leaf employs 41 people who are intellectually challenged. As of March 15th 2018, Furukawa Electric has an overall disabled employment rate of 2.13%.

Furukawa New Leaf is doing its bushiness at Hiratsuka Works, Chiba Works and Mie Works, to further increase our disabled employment rate.

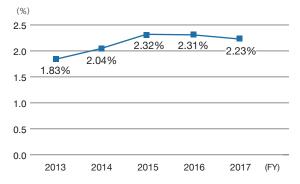




Furukawa New Leaf employees at work

#### Real employment rate

(From our employment status report on disabled persons)



#### **Internships**

Ever since the Japanese government introduced a system of internships in 1997 as part of an industry-academia-government collaboration, in our role as a manufacturer Furukawa Electric has taken on numerous science and engineering interns with the aim of contributing to the fostering of Japanese technicians of the future. We have already taken on more than 200 students across our various workplaces.





Internship training

## Improving the Working Environment through Labor-Management Opinion Exchanges

Furukawa Electric maintains a basic position that both labor and management should endeavor to engage in sincere discussions, and therefore we focus on issue resolution and deepening mutual understanding.

We hold our Central Management Briefings twice annually for public exchanges of opinion between labor and management. We have conducted such meetings for 66 years from fiscal 1952. As of May 2018 we had held these briefings 131 times. Representatives from

labor and management exchange frank opinions and share information about a broad spectrum of items at these briefings, such as the business environment, management, and topical matters.

We also have in place various committees such as the Personnel System Exploratory Committee and the Committee for Studying Shorter Hours that are designed to improve the working environment, which management and labor discuss on a daily basis. These discussions lead to improvements in various systems and strengthen monitoring functions, such as compliance response and the implementation status of other CSR activities.

#### **Employee Data Book**

Please see the URL below for Employee Data Book.

http://www.furukawa.co.jp/en/csr/report/

Targets and Results (Personnel Development and Working Environment)

Achieved Partially achieved Not achieved



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	FY 2017		FY 2018
Targets	Results	Achievement	Targets
Strengthening of global human - Training menu is to be revised for the penetration of "One Furukawa Mind" and the awareness of "Core Value" - Continuous implementation of GCP	<ul> <li>- 30 participants from 15 countries participated from 8/28 to 9/2 Implemented GDP</li> <li>- Review the content of the training, based on Core Value after reviewing their thoughts and actions, formulating action plan</li> <li>- One participant in the GCP-One-Furukawa course Addition (dispatch from the Legal Department to OFS for 3 months)</li> </ul>	<b>©</b>	Strengthening of global human - Implementation of OneFurukawa Mind Penetration and "Core Value" conscious GDP training - Continued dispatch of GCP
Reinforcement of Monozukuri capability  - Building an educational system to strengthen "Monozukuri capabilities"  - Implementation of GENBARYOKU strengthening activities for affiliated companies (Japan and overseas) (ongoing)	- Monozukuri education system created - As a support for strengthening "Monozukuri capabilities" of affiliated companies, local on-site field training was conducted at affiliated companies in Japan (KANZACC Co., Ltd.)	•	Reinforcement of Monozukuri capability  - Implementation of "Monozukuri capabilities" Education  - Continue to strengthen  "Monozukuri capabilities" of affiliated companies (Japan and overseas) (ongoing)
Support for diverse ways of working, and work-life balance - Promotion of birth and child care participation of father, awareness of our system, support for infertility treatment hour	<ul> <li>27 people with male childcare leave, Increased by 20 people over the previous year</li> <li>Updated in-house site to inform work- life balance related system and published guidebook for male childcare participation</li> <li>Introduction of leave system for infertility treatment</li> </ul>	•	Support for diverse ways of working, and work-life balance  - The number of people with annual regular vacation acquisition less than 5 days shall be zero  - Introduce a seminar as a career development support to parents who take childcare leave

Message the General **Managers** 



#### Continue to challenge change based on "Carefully take advantage of the people"

#### Masako Tanaka

Corporate Vice President, Deputy General Manager, Strategy Division and General Manager, Human Resources Department

Challenges for the Human resources Dept. are getting more sophisticated, such as the rapidly progressing low birthrate and the aging population, the diversification of work and work styles based on the technological innovation and the lack of human resources to support the global business development. It is not an exaggeration to say that "the strategy of the human resources and the organization" is the most important factor affecting the competitiveness of the company and for the business continuity.

For its history of more than 130 years, "Carefully take advantage of the people" has been the DNA of Furukawa Electric Group. As a person in charge of Human Resources Dept. I am dedicating with courage more efforts for the new challenges by taking heed of its origin, in order to survive this era, and by changing Human Resources Dept. itself.

"A new value is created by a cooperation and by the diversity of human resources taking the advantages of the individual strengths", "To grow individuals and enrich their lives autonomously, it is also essential for the growth of a company", I would like to sympathize with these ideas, and increase the people who make consideration and practice together.

#### **Occupational Health and Safety**

#### Basic approach to occupational health and safety management

In addition to basic legal compliance, Furukawa Electric Group prioritizes initiatives that promote "becoming a safety conscious person" and "realizing fundamental safety". Our basic approach is to aim for zero accidents and zero illness.

#### Basic policy on health and safety management

- Endeavor to eradicate accidents by inspections and management in accordance with the Industrial Safety and Health Act.
- Promote the realization of "fundamental safety" with a goal of achieving Stage III or higher in separating pedestrians and vehicles and separating people and equipment.
- Improve "safety consciousness" through practical education and risk prediction to encourage employees to become safety conscious person. (\* "Safety consciousness": (1) Ability to identify points of risk (2) Ability to propose improvements)
- Improve Safety and health management systems with a medium-term goal of achieving Stage IV or higher.
- Promote mental and physical health improvement by Furukawa Electric group's health management activities.

#### **Promotion System**

Furukawa Electric Group has established the Furukawa Electric Group Occupational Health & Safety Committee (on which the President serves as committee chairman) as the highest body for promoting occupational health and safety at a group level. The committee membership is composed of executives, and carries out deliberation, decision-making and follow-up activities for Furukawa Electric group as a whole in respect to policies and initiatives in health and safety.

#### **Promotion Framework**



#### Safety and Health Activities Presentation Meetings

We have been holding presentation meetings on Furukawa Electric Group's safety and health activities and

awarding the best with commendations. In fiscal 2017, fourteen teams were selected from the SBUs (including five teams from group companies) to give presentations and receive awards from the president.



Furukawa Magnet Wire (Japan) giving a presentation

#### Site inspections by officers

Furukawa Electric's safety officers make site inspections at Furukawa Electric Co., Ltd. and group companies whenever an accident occurs and in accordance with performance in the previous fiscal year. They



Site inspections by officers at Yokohama Drum Manufacturing (Japan)

confirm how appropriate the safety measures are, and check the extent to which these measures have become firmly established. In addition, they exchange opinions with a view to achieving fundamental safety, and work

hard to prevent any recurrences.

They also conduct visits to domestic and overseas group companies, and exchanged opinions with 10 companies in fiscal 2017.

Farmata and Daguita (Agaidanta)





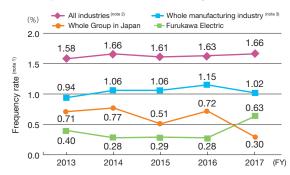


Zero "accidents with working loss days"	Five "accidents with working loss days"	2	Zero "accidents with working loss days"
Targets	Results	Achievement	Targets
	FY 2018		
largets and Results (Acc	Achieved	Partially	y achieved 🔀 Not achieved

#### **Work Accident Occurrence Status**

In terms of its performance in fiscal 2017, Furukawa Electric recorded five "accidents with working loss days", and failed to meet its target of "zero accidents with working loss days". The frequency rate of accidents resulting in time off work (note 1) increased to 0.63 in Furukawa Electric only but decreased to 0.3 among all Group companies in Japan (note 2).

#### Frequency rate of accidents resulting in time off work



(note 1) Frequency rate = (No. of casualties / Total actual work hours) x 1,000,000 (note 2) The calculation for fiscal 2017 covered full-time employees and temporary staff at Furukawa Electric and 36 Group companies in Japan. See page 59 for companies included in the calculation. (note 3) Data on all industries and the whole manufacturing industry is from Ministry of Health, Labor and Welfare survey results

Meanwhile, the 2017 accident frequency rate for the whole Group including overseas Group companies was 0.8. This included accidents both resulting in and not resulting in time off work.

#### Healthcare for Employees Working Long Hours

In accordance with the Guidelines issued by the Labor Standards Bureau entitled "Measures to be Taken by Employers to Prevent Health Impairment Due to Overwork", we strive to manage the health of employees who work long hours by implementing strict limitations on working hours based on the results of health checkups and by arranging consultations for such workers with industrial physicians.

#### **Mental Health Education**

We began conducting mental health measures in fiscal 2002, In the past, stress control training, workplace mental health training with a focus on Work Engagement, and Pleasant Workplace Discussion Sessions aimed at improving the workplace environment have been implemented across the company.

In fiscal 2014 and fiscal 2015, we promoted self-care training and line care training for all employees in their early 40s and all middle-ranking managers in order to improve their ability to respond to various changes. In fiscal 2016 or later, in addition to continuing to implement these trainings, we will introduce a stress check system in accordance with legal revisions.

#### Strengthening Smoking Measures

Since fiscal 2003, the Company have been making the full-scale efforts on smoke curbing and implementing the actions for the prevention of secondhand smoke and non-smoking promotion. As a result of these activities, the smoking rate of the employees (male) has decreased from 53.3% in 2002 to



Non-smoking poster

28.9% in 2017, and in fiscal 2017, non-smoking within working hours was achieved. In order to achieve the full non-smoking all over the Company, under the slogan of "The Company will welcome the 2020 Tokyo Olympic with full non-smoking!!", we will continue the multidirectional efforts of the triad (information provision, non-smoking support, non-smoking environment maintaining).

#### Measures to Prevent Falling Accidents

The falling accident increases with age, even in the Company, as its members are aging, as the increase of falling accident (including commuting injuries during walking) is a serious concern, the preventive education for the falling accidents and fitness exercises (muscle training) were introduced from fiscal 2016. In addition, in fiscal 2016 the physical function check-ups has been implemented for employees over 50s, and from fiscal 2017, it was expanded to over 40s.

## The Health management declaration and certificated as the Health management superior corporation 2018

The Company was certified for two consecutive years as a "Health management superior corporation 2018 (White 500)" which is practicing excellent health management, by the Health Management superior corporation certification system of the Ministry of Economy, Trade and Industry.



White 500 certificate

In addition, on May 15, 2017, from the managerial view point, "Furukawa Electric Group Health Management Declaration" was enacted, in order to promote "Health Management" which strategically strives for the health management and the health promotion of the employees. In order to "aim to become a creative and full of vitality corporate group by taking advantage of the diverse human resources", we will keep making "a company where everyone works vigorously, keeps growing and is proud" by prioritizing safety and health to everything, promoting various activities mindful of health management throughout the Company.

#### **Relations with Communities**

#### **Basic Policy**

Furukawa Electric Group has continued to conduct social contribution activities that are rooted in the local community. Going forward, we will strengthen these actions further along the three dimensions of nurturing future generations, promoting sport and culture, and living in harmony with the natural environment and local communities.

#### Furukawa Electric Group Basic Policy on Social Contribution Activities (Revised March, 2011)

Furukawa Electric Group will continuously undertake social contribution activities focusing on nurturing future generations, promoting sport and culture, and living in harmony with the natural environment and local communities, in addition to its business-related activities, in order to maintain and strengthen community ties built over centuries and create a better tomorrow for future generations.

## Efforts of career education "Hamakko Future Supporter" in Yokohama city

The Company participates in the efforts of "Self-Development Education" promoted by Yokohama city, and carrying out the work experience learning and the delivery classes for elementary and junior high school students.

At Yokohama Works in fiscal 2017, in order to convey the excitement of the basic research, a group work on the world in the next 100 years and conducted a simulated running experiment of a linear motor car using the superconductive technology. From the participated junior high school students, we received a comment "What kind of society will be in the future, I am looking forward to creating it together."

As a friendly Furukawa Electric and as a dream inspiring Furukawa Electric, we will continue to work closely and to contribute to the local community.







Work experience learning by junior high school students at Yokohama Works

## Implementation of the private companies training for teachers.

From 1st to 3rd August, hosted by the general incorporation foundation of Keizai Koho Center (Japan Institute for Social and Economic Affairs) the private companies training was conducted for teachers, and 10 teachers from elementary schools and junior high schools in Chuo-ku and Shinjyuku-ku participated. While valuing the pleasure of awareness and the sense of accomplishment with the themes of "Social responsibility of schools and corporates", "Safety and environmental activities" and "What is human resources development", we learned together through the exercises, factory tours and companies training.



Group exercise



Practicing at "Anzen Dojo"

#### **CSR Awards**

#### Ninth CSR Awards

The Company established the CSR Awards to make honorable recognition of the outstanding social contribution activities and the environmental preservation activities of Furukawa Electric group companies. The CSR Award winning companies are devising their activities and continuously contributing to society every day.

#### **Social Contribution Award**

#### Furukawa New Leaf Co., Ltd.

Furukawa New Leaf Co., Ltd. Hiratsuka Branch office provides the opportunities for employment experiences for students in the neighboring school for handicapped person and support education school. Focusing on high school second and third graders, we enroll one student for one to two weeks. The student engages in cleanup activities with our employees, while communicating with seniors employed from the school and receiving guidance on the work methods. Thus, a place to actually experience the daily life as a social occupant is provided.

In the six years, from fiscal 2012 to fiscal 2017, total 46 students had the experience.

In the first work experience, spending time with people in different ages is accompanied by huge anxiety and stress, it is a valuable experience for the students aiming to work.





Work experience of cleaning activities

#### **Environmental Preservation Award**

#### The Furukawa Battery Co., Ltd.

With the global consensus on the climate change measures and the goal setting, the interest in the global environment is increasing more and more. The storage batteries are indispensable for the environmentally friendly vehicles. The Furukawa Battery Co., Ltd. co-sponsors World Econo Move (WEM), which is an energy saving race for the electric vehicles, as a part of efforts towards the environmental activities.

WEM is a competition being held since 1995. It is an energy conservation race competing for a driving distance within a certain time using the same battery for the convention (made by Furukawa Battery) supplied by the host. Through this co-sponsorship, we wish the people in wide range of generation to be continuously interested in the global environment.



Thailand Competition (August 2007 in Bangkok)

Start in Chiba Competition (Nihon Automobile College, October 2010 in Narita)



Awards ceremony in Akita competition (May 2017 in Ogata Village)

Furukawa Battery members in Indonesia team (May 2018 in Ogata Village)



# Activities in each region

Activity topics

Furukawa Electric Group conducts various activities in each region.

## Nurturing future generations

- Supported and cooperated on work experience for schoolchildren of all ages
  - Furukawa Electric (Chiba Works, Nikko Works, Yokohama Works)
  - Furukawa Sangyo Kaisha
  - Furukawa Electric Power Systems
  - Furukawa Logistics



Social experience learning by Nikko Junior High school (Nikko Works, Furukawa Electric)



Factory tour by the local elementary school (Chiba Works, Furukawa Electric, Furukawa Logistics)

- Supported private sector training for teachers
  - Furukawa Electric (Hiratsuka Works)

## Living in harmony with the natural environment

- Participated in local environment beautification campaign
  - Furukawa Electric (Chiba Works, Nikko Works, Hiratsuka Works, Mie Works, Copper Tube Division, Copper Foil Division)
  - NTEC
     Okano Electric Wire
     TOTOKU Electric
  - Furukawa Automotive Systems
     Furukawa Sangyo Kaisha
  - Furukawa Precision Engineering
     Furukawa Techno Material
  - Furukawa Electric Ecotec
     Furukawa Electric Industrial Cable
  - Furukawa Logistics
     Furukawa Magnet Wire
  - Riken Electric Wire
     Furukawa Nikko Power Generation

## Living side by side with local communities

- Supporting and working with NPOs and special-needs schools
  - Furukawa Electric (Nikko Works, Copper Foil Division)
  - Furukawa Sangyo Kaisha



Regional exchange volunteer meeting with NPO Habataki (Copper Foil Division, Furukawa Electric)

- Cooperated with the patrol in the region
  - Furukawa Electric Power Systems
  - Furukawa Logistics
- Held a fishing event
  - Furukawa Nikko Power Generation

## Promotion sports and culture

- Participated in, sponsored, and provided a venue for sporting events
  - Furukawa Electric (Nikko Works, Hiratsuka Works, Mie Works, Copper Tube Division)
  - Furukawa Automotive Systems
     Furukawa Sangyo Kaisha
  - Furukawa Electric Power Systems
  - Foam Kasei
     Furukawa Nikko Power Generation
- Hosted, participated in, and supported festivals
  - Furukawa Electric (Nikko Works, Hiratsuka Works, Mie Works, Copper Foil Division)

  - Furukawa Electric Power Systems
  - Furukawa Magnet Wire
     Miharu Communications
  - Furukawa Nikko Power Generation



Watarase drainage basin "Clean Operation" (Furukawa Logistics)



Miho pond parkland "Removal of Sicyos angulatus" (TOTOKU Electric)



Cutting grass in neighboring children's playground together with Hosoo Resident's Association (Furukawa Precision Engineering)

#### Conducted beautification activities outside premises

- Furukawa Electric (Chiba Works, Nikko Works, Hiratsuka Works, Mie Works, Yokohama Works, Copper Tube Division, Copper Foil Division)
- NTEC
   TOTOKU Electric
- Furukawa Automotive Systems
- Furukawa Electric Industrial Cable
- Furukawa Logistics
   Furukawa Magnet Wire

### Other activities

#### Donation to the Kumamoto earthquake

Furukawa Electric (Yokohama Works)

#### Donated and raised funds for charities

- Furukawa Electric (Nikko Works, Yokohama Works)
- Miharu Communications
- Furukawa Nikko Power Generation

#### Donated blood

- Furukawa Electric (Chiba Works, Hiratsuka Works, Yokohama Works, Copper Foil Division)
- Furukawa Precision Engineering
- Furukawa Logistics
   Furukawa Magnet Wire

#### Conducted factory tours for employees' families

- Furukawa Electric (Hiratsuka Works)
- Furukawa Automotive Systems



"Open Office" for employee families (Furukawa Automotive Systems)

#### Supported the restoration of the Tohoku region

- Furukawa Electric (Chiba Works, Hiratsuka Works)
- Furukawa Sangyo Kaisha

#### **Challenges and Future Policy**

Furukawa Electric's works, branch offices, and Group companies are implementing community-based activities with ingenuity. We will continue investigating programs and other measures which can apply our unique company characteristics in accordance with the Furukawa Electric Group Basic Policy on Social Contribution Activities.

## Environment

#### **Environmental Management**

#### Furukawa Electric Group Basic Environmental Policy

#### Basic Philosophy

We, the employees of the Furukawa Electric Group, recognize that conservation of the global environment is a serious issue confronting the international community, and we pledge to contribute to a sustainable future for the world through technological innovation that utilizes our strength in advanced materials.

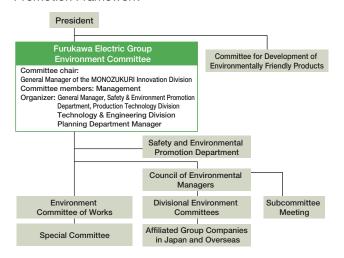
#### **Action Guidelines**

- 1. We shall comply with environmental laws and regulations as well as the demands of our customers and others, setting ever higher environmental targets as we continuously improve our global environmental conservation efforts.
- 2. We shall strive to develop products that are friendly to the Earth, and create new environmental businesses.
- 3. We shall strive to reduce environmental risk by incorporating anti-climate change and resource conservation/recycling considerations, as well as a reduction in the use of environmental impact-causing substances, across the entire product lifecycle.
- 4. We shall evaluate the ecological impact of all of our businesses, and strive for the conservation of biodiversity and sustainable use of resources.
- 5. We will seek harmony with the natural environment and local communities through dialogue with our stakeholders.

#### **Environmental Management Organization**

Furukawa Electric Group promotes environmental activities based on the basic environmental philosophy. In April 2013, we underwent organizational restructuring, transitioning to a strategic business unit system. We also named our highest-level advisory body related to the environmental management; the Furukawa Electric Group Environment Committee and promoted the environmental management. The "Council of Environmental Managers" was set up under the Committee in order to promote the smooth development of the decision making in the environmental management and a variety of special committees were consolidated and merged.

#### **Promotion Framework**



#### **Environmental Education**

## Environmental Education System and Environmental Education Programs

Furukawa Electric Group is engaged in a variety of environmental education activities in order to raise environmental awareness among its employees and help them to gain information necessary to conduct the environmental activities of Furukawa Electric Group.

From fiscal 2016, we have been proceeding to train the ISO14001: 2015 version of the internal environmental auditors, in fiscal 2017 37 employees attended the classes for the newly appointed ISO14001 internal environmental auditors. Also, in order to notify the qualified staffs about the revised contents covering the entire Furukawa Electric, a total of 98 internal environmental auditors participated in training courses at each site, including 35 at the Copper Foil Division, 32 at the Nikko Works and 31 at the Chiba Works.

Environmental training is also implemented on an ongoing basis as part of training for staff, such as newly-appointed section managers and middle-ranking Monozukuri staff.

#### Environmental activity award system

Since fiscal 2010, Furukawa Electric Group has been presenting environmental activities awards in the following three fields with the aims of improving the environmental

awareness and raising the level of the environmental activities, "the sales promotion activities for the environ mentally friendly products", "the global warming prevention activities" and "Furukawa Electric Group environmental activities". The award system was combined into a single category in fiscal 2014 under the "environmental contribution awards". In fiscal 2017, one Excellent Award and two Effort Awards were awarded at the "MONOZKURI presentation" in early July. The project chosen for the Excellent Award was the Waste Reduction Activity which achieved a great resulting in the waste emission by the domestic group being reduced by about 20%.

#### **Environmental Accounting**

Furukawa Electric Group has introduced environmental accounting and works hard to promote efficient and effective environmental activities through the quantitative identification

of environmental conservation costs and effects.

Collation is implemented in reference to the Ministry of the Environment's "Environmental Accounting Guidelines 2005" and covers Furukawa Electric Co., Ltd. and 21 domestic group companies.

The costs of environmental conservation activities in fiscal 2017 were 2.70 billion yen in expenses and 1.40 billion yen in investments. This represents a 0.18 billion yen fall in expenses and a 0.40 billion yen increase in investments against the previous fiscal year.

Please see P.59 for details of the companies included in the scope of data collation. Please see below for the collated results of environmental accounting.

CSR http://www.furukawa.co.jp/en/csr/

#### Environmental education programs

Category of educational training	Content	New recruits	General employees	Mid-career employees	Newly appointed section managers	Management
Education for new recruits (once a year, mandatory)	General environmental conservation activities	Training for new recruits				
EMS activities (as needed, mandatory)	Environmental Policy and purpose, goals and general knowledge pertaining to the environment	<b>——</b>				
ISO14001-related education (two-day course)(twice a year, voluntary)	Requirements of ISO standards, environment regulations, procedures for internal environment audits, various drills		-			
One-day brushup course (once a year, voluntary)	Trends in environmental regulations, various drills to brush up auditing skills					
	Environmentally considerate design		<del></del>		$\rightarrow$	
Environmental subjects (as needed, voluntary)	Environmental regulations		<del></del>			$\longrightarrow$
(ao noodod, voidinaly)	Control of chemical substances contained in products		<del></del>			
Consolidated environmental management seminars	Seminars by experts on priority issues					$\longleftrightarrow$

Message from the General Managers



We will actively use the renewable energy and promote the environmentally friendly manufacturing

#### Tsutomu Fujinuma

General Manager, Safety & Environment Promotion Department, MONOZUKURI Innovation Division

After the Paris Agreement which is considered the framework of the climate change measures, the activity on the greenhouse gas reduction is accelerated globally, and the significant reduction of the environmental burdens is urgently required. The Nikko Works operates a hydroelectric power generation at Furukawa Nikko Power Generation Inc. and the clean energy has been used for to manufacture products including the copper products. We will continue to promote the active use of other renewable energies including a photovoltaic power generation as well. Furthermore, in order to enhance the manufacturing capability, we

believe that the promotion of the manufacturing with less environmental impact is also important based on the reconsideration of the energy balance and the material balance of the material and the waste. In fiscal 2017, we have greatly reduced waste.

We will work with our colleagues around the world to develop products that contribute to the environment and create environmentally friendly products.

We will continue our efforts to earn the trust of our stakeholders.

#### **Material Flow**

#### Environmental Impact of the Furukawa Electric Group in Fiscal 2017

We tallied data for Furukawa Electric, 34 Group companies in Japan, and 54 Group companies overseas—a total of 89 companies.

Siam Furukawa Co., an overseas group company, was added to the aggregation of fiscal 2017. The greenhouse gas emissions and the energy consumption were retroactively adjusted to the base year.

Please refer to page 59 for a list of all applicable companies.

## **INPUT**

Category	Domestic	Overseas	Unit
Raw materials			
Copper Aluminum Iron Other metals Glass Plastic	177.8 6.7 2.2 5.3 – 33.2	180.4 39.3 9.7 0.9 3.8 41.7	1000t 1000t 1000t 1000t 1000t 1000t

Energy 7,685 8,566 TJ 534.8 743.0 GWh Electricity (purchased electricity) Electricity 109.5 GWh (hydroelectric electricity) Electricity (solar electricity) 21.6 657.3 MWh 5,914 5,142 1000 m<sup>3</sup> City gas LPG 3.6 1000 t 18.6 5,036 kl Heavy fuel oil A 930 + Kerosene + Light oil

Water	10,362	2,651	1000 m <sup>3</sup>
Industrial water	7,016	69	1000 m <sup>3</sup>
Groundwater	2,677	322	1000 m <sup>3</sup>
Tap water	670	2,250	1000 m <sup>3</sup>

Chemical substance	S		
Volume handled (note 1)	49.1	_	1000t
Packaging (note 2)			
Cardboard + Wood + Paper	2.0	8.7	1000t
Plastic	0.1	0.4	1000t

Furukawa Electric
7 works,
34 Group companies
in Japan
and

54 Group companies overseas





## **OUTPUT**

Category	Domestic	Overseas	Unit
Waste (note 3)			
Total waste generated (note 4)	28.1	17.4	1000t
Final waste disposal Recycling amount	0.4 26.8	12.0 5.2	1000t 1000t

Atmospheric emissions					
CO <sub>2</sub> SF <sub>6</sub>	353 85	460 -	1000t-CO <sub>2</sub>		
SOx	1	_	t		
NOx	55	_	t		
Soot	4	_	t		

Chemical substances			
Volume emitted	200	-	t
Volume transferred	343	-	t

Wastewater	9,494	1,715	1000 m <sup>3</sup>
Public waterways Rivers Sea Other Sewer	8,754 7,789 949 17 740	417 108 0 309 1,298	1000 m <sup>3</sup> 1000 m <sup>3</sup> 1000 m <sup>3</sup> 1000 m <sup>3</sup>
BOD COD SS	32 33 38	- - -	t t t
Volume of water	1,113	37,121	m³

recycled and reused

(note 1) PRTR-listed substances

(note 2) Cardboard, wood, paper, and plastic used in product shipping

(note 3) Including valuable resources (Japan)

(note 4) Emissions off-site

#### **Targets and Performance of Environmental Conservation Activities**

Achieved		Partially achieved	<b>2</b>	Not achieved
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A - All day		Furukawa Electric Group (Domestic and overseas)				
	Activity		Targets for fiscal 2017	Fiscal 2017 results	Evaluation	Target for fiscal 2018
	Reduction of greenhouse gas emissions (Scope1&2) (note 1)	2013	Domestic : 4% or more	reduced 17.9%	•	Domestic: 5% or more  Improve ratio of renewable energy for total electric energy in Japan: 1% or more
		2015	Overseas : 2% or more (greenhouse gas emission per sales)	reduced 12.4%	•	Overseas : 3% or more (greenhouse gas emission per sales)
	Reduce greenhouse gas emissions (Scope3) (note 2)		We plan to set targets by fiscal 2018.			
	Reduce production energy	2013	Domestic: 8% or more (production energy per sales)	reduced 16.4%	•	Domestic : 10% or more (production energy per sales)
1		2015	overseas : 2% or more (production energy per sales)	reduced 9.1%	•	overseas : 3% or more (production energy per sales)
	Reduce transportation energy	2015	Domestic: 2% or more (transportation energy per ton-kilometers)	reduced 3.7%	•	Domestic: 3% or more (transportation energy per ton-kilometers)
	Reduce office energy	2015	Domestic : 2% or more (energy per floor area in office)	reduced 6.1%	•	This item was integrated into production energy.
	Reduce total waste	2015	Domestic : 2% or more (volume per sales)	reduced 25.6%	•	Domestic : 3% or more (volume per sales)
	Improvement of zero emission ratio		Domestic : 0.3% or less	0.03%	•	Domestic : 0.3% or less
	Reduce water withdrawal	2015	Domestic and overseas : 2% or more (volume per sales)	Domestic : reduced 13.5% Overseas : reduced 7.4%	•	Domestic and overseas : 3% or more (volume per sales)
II	Improvement sales of environmentally friendly products		Sales ratio: 35% or more	32.4%	<b>②</b>	Sales ratio : 40% or more
	Contribution of products to avoided environmental impact		70,000 ton-CO2 or more	107,000 ton-CO <sub>2</sub>	•	80,000 ton-CO <sub>2</sub> or more
	CDP (note 3) SCORE UP (Climate Change)		Score B or more	Score C	<b>②</b>	Score B or more
III	Prevention of environmental accidents		Number of accidents : Zero Number of small accidents : 3 or less	accidents 2 small accidents 2	<b>②</b>	Number of accidents : Zero Number of small accidents : 3 or less

(note 1, 2) Scope 1: Direct emissions from business sites through the use of fossil fuels, etc.
Scope 2: Indirect emissions through the use of electricity, steam and heat supplied from outside of business sites
Scope 3: Other emissions include indirect emissions such as purchased products and services, business trips, commuting, upstream transport.

(note 3) CDP: CDP is an organization formed from institutional investors for the purpose of managing a project requiring companies to disclose their strategies for climate change and the specific amount of greenhouse gases they generate.

#### Activities Targets and Performance in Fiscal 2017

Furukawa Electric Group sets out environmental conservation activities targets for each fiscal year in accordance with the three-yearly mid-term environmental targets. In fiscal 2017, we carried out initiatives to achieve the targets in the middle year of the three-year plan.

As a climate change measurement, the integrating and the consolidating of the manufacturing sites of the various products were implemented through the business structure reformation, achieving 2.3% of reduction in CO<sub>2</sub> emissions for the domestic and overseas group compared to fiscal 2015.

#### **Activity Targets in Fiscal 2018**

In fiscal 2018, which is the last year of the three-year medium term environmental plan, we will thoroughly implement initiatives on a Group-wide basis to achieve the targets. We will aim to improve our CDP climate change score as a form of the external evaluation and will take action to reduce emissions of chlorofluorocarbon and other greenhouse gases through CO<sub>2</sub> reduction measures as a part of the climate change measurement activities.

From fiscal 2018, the improvement of the renewable energy ratio was added to our efforts. At Furukawa Nikko Power Generation Inc. possesses a hydroelectric power generation and we will make efforts to maximize its usage.

#### Midium and Long Term Targets

Furukawa Electric Group has identified three items (the greenhouse gas measures, the efficient use of the resources, and the biodiversity conservation), and will design the medium to long-term targets by 2020.

The medium to long term target of the climate change measures is aiming at 50% or more reduction in greenhouse gas emissions by 2050, referring to the Intergovernmental Panel on Climate Change, The Fifth Assessment Report (IPCC AR5), and we are formulating the concrete medium to long term reduction plans to reach this goal. Also, since fiscal 2017, We are discussing the medium to long term scenario analysis, the concrete measures and the methodologies and we are compiling plans in conscious of the Science Based Target (SBT) (note 4).

(note 4) SBT: To formulate reduction targets consistent with scientific knowledge.

#### **Environmentally Friendly Products**

## Environmentally Friendly Products and the e-Friendly Accreditation System

Furukawa Electric Group certifies and registers as environmentally friendly products those products with improved performance compared to existing products in the categories of materials and parts purchasing and manufacture, use, distribution and disposal.



The e-friendly mark

We have created the "e-Friendly" environmental mark to identify such environmentally friendly products. This mark is placed on those products.

#### Categories of Environmentally Friendly Products

Furukawa Electric Group's environmentally friendly products belong to one of four categories described below.

#### Environmentally friendly product categories

Category	Content		
Prevention of global warming	Products with functions that help in the reduction of emissions as well as the absorption and stabilizing of greenhouse gases.		
Zero emission	Products made from recycled materials, products designed with easyto-recycle components, products made from materials or with design facilitating volume reduction for lowering waste volume, products designed to share common components with other products or products designed as common components.		
Elimination of materials that have an impact on the environment	Products that do not lead to an increase in the use of ozone-depletive substances during the manufacturing process, do not contain harmful substances above regulatory limits and do not generate harmful substances above these limits during use or disposal.		
Resource savings	Products that result in overall energy savings by such means as reducing the use of raw materials and components as well as scarce resources, featuring enhanced longevity, allowing easier product and component maintenance, and reducing the use for resources in packaging.		

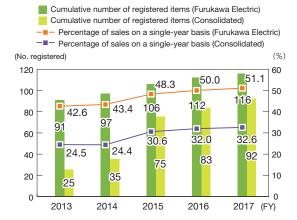
Environmentally Friendly Products

http://www.furukawa.co.jp/csr/environment/

#### **Expanding Environmentally Friendly Products**

We are working to increase our overall percentage of environmentally friendly products. We set targets based on percentage of sales, and confirm our progress and success on this basis.

#### Environmentally friendly products as a percentage of sales

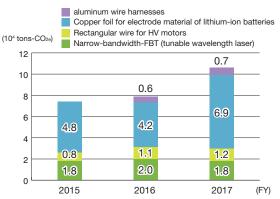


## Efforts to Contribute to the Environmental Impact Reduction by the Products

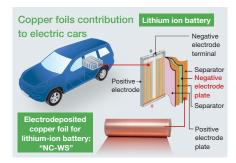
Furukawa Electric Group is working to visualize the reduction amount of CO<sub>2</sub> emission at the final stage of the usage after our components are installed in the customer's products, based on the calculation result of the CO<sub>2</sub> emissions "visualization" of the main products by utilizing the Life Cycle Assessment (LCA). In the fiscal 2017 estimation, the new addition of the aluminum harnesses to the three main products of the copper foils, the rectangular magnet wires and the semiconductor lasers, based on the number of the products sold mainly in the domestic market, the estimated total reduction amount was approximately 110,000 tons CO<sub>2</sub>/year.

Taking into account the strengthening of the vehicle electrification regulation of the automotive field where the demands of the climate change measures are strong in the global market, Furukawa Electric Group will work on expanding the sales of our products and to expand the environmentally friendly products and will challenge global environmental issues through our products.

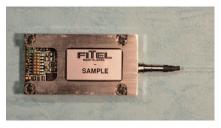
#### Contribution of products avoided CO2 emissions



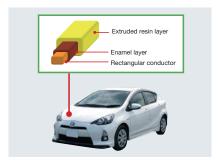
## Reduction of CO<sub>2</sub> emissions using copper foil for lithium-ion batteries in electric vehicles.



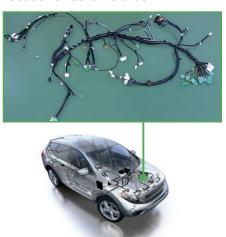
Reduction of CO<sub>2</sub> emissions by the narrow beam linewidth and high power compact Integrated Tunable Laser Assembly (ITLA).



Reduction of CO<sub>2</sub> emissions by the HV rectangular wire for the drive motor in electric vehicles.



Reduction of CO<sub>2</sub> emissions by aluminum harnesses for automobiles.



#### Climate change measures

#### Efforts to Reduce Greenhouse Gas Emissions

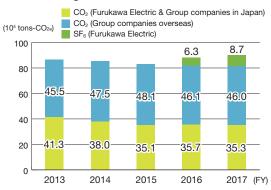
Furukawa Electric Group's greenhouse gas emissions are mainly CO<sub>2</sub> by combustion.

 $CO_2$  emissions of Furukawa Electric domestic Group in fiscal 2017 were 353,000 tons  $CO_2$ /year, decreased by 1.2% in comparison with fiscal 2016. Although this was a decrease of 19.7% in comparison with fiscal 2000 (the same level of  $CO_2$  emissions of Furukawa Electric Group in fiscal 1990).  $CO_2$  emissions of Furukawa Electric overseas group were 460,000 tons  $CO_2$ /year, a decrease of 0.1% in comparison with fiscal 2016.

Mie Factory plans to change to LNG with less CO<sub>2</sub> emissions than LPG from fiscal 2019.

Furukawa Electric Group plan to change energy with less CO<sub>2</sub> emissions.

#### Greenhouse gas emissions



(note) For the overseas CO₂ emission coefficient, the coefficient for each country according to the IEA (International Energy Agency) is used for purchased electricity, while the Japanese emission coefficient is used otherwise. Emissions of greenhouse gases other than CO₂ are converted to CO₂ equivalent emissions using Global Warming Potential (GWP).

Furukawa Electric added  $SF_6$  emissions from October 2016. Because we added part of the business of VISCAS Co., Ltd.



Hydroelectric power of Furukawa Nikko Power Generation Inc. (Hosoo Power Plant)

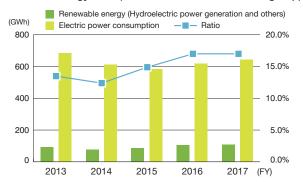
#### Use of the Renewable Energy

Furukawa Nikko Power Generation Inc. of Furukawa Electric Group possesses the four power plants and is supplying the hydroelectric power. It covers 100% of the power used in Nikko Works and the copper strips are manufactured using the hydroelectric power.

Xin Furukawa Metal (Wuxi) in Furukawa Electric overseas group, has been using photovoltaic power generation since September 2017.

In fiscal 2017, the ratio of the renewable energy was 17.0% in Furukawa Electric domestic group. We will promote the use of renewable energy from fiscal 2018.

#### Renewable energy ratio (Furukawa Electric domestic group)



#### Efforts on Energy Saving in Factories

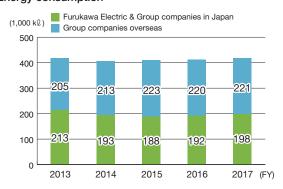
Furukawa Electric Group's energy usage rate was about 20% for fuel and about 80% for electricity.

In particular, we achieved energy saving in the manufacturing process with high energy usage ratio.

We replaced conventional equipment with more efficient production process and higher efficiency equipment.

We implemented measures such as heat insulation of the high temperature section of equipment considering energy balance.

#### **Energy consumption**

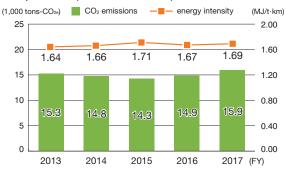


#### **Initiatives in Logistics**

The transportation amount in Furukawa Electric Group was 237million ton-kilometers during fiscal 2017. Among this amount, the Company transported 140 million ton-

kilometers which was increased by 14.2% in comparison with fiscal 2015, and the CO<sub>2</sub> emissions were increased by 12.6% which is 16,100 tons-CO<sub>2</sub>. The specific consumption showed a 1.1% of reduction in comparison with fiscal 2015. We will continue to promote modal shift, increase loading ratios and encourage the joint shipping.

## CO<sub>2</sub> emissions and energy intensity related to transportation (Furukawa Electric)

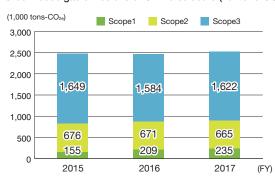


#### Measures to Disclose Environmental Information

Furukawa Electric Group has been answering to enquiries from CDP, which is representing our institutional investors, on CDP climate change since fiscal 2008 and on CDP water since fiscal 2013. In fiscal 2017, our CDP climate change score was C and CDP water score was B.

As a response to the customers utilizing the CDP supply chain program, in order to maintain and improve the CDP scores, we will continue to expand the environmental information disclosure contents and make the reliability higher. We also continue our participation in the environmental information disclosure infrastructure development project of the Ministry of the Environment and continue our collaboration with The Japanese Electric Wire & Cable Makers' Association and the Japan Copper and Brass Association.

#### Greenhouse gas emissions of CDP disclosure (103 tons-CO2e /year)



In order to improve the reliability of environmental data, Furukawa Electric Group conducted independent verification by a third party.

In addition to Scope 1, Scope 2, the greenhouse gas emissions targeted part of the category of Scope 3.



Verification Statement of Greenhouse Gas Assertions

#### **Reducing Waste**

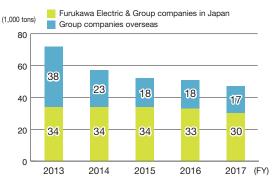
#### Initiatives in the Waste Reduction

In fiscal 1993 Furukawa Electric Group started the efforts to increase the waste recycling, and since fiscal 2001 the zero emissions activities have been promoted.

In fiscal 2014, the activities aiming at the total waste output reduction, including the valuable resources were started. In fiscal 2017, we achieved the reduction of 25.6%, against 2% of the reduction in per sales unit compared to the domestic group target for fiscal 2015.

We will continue our efforts to the effective use and the recycling of the resources including the raw materials aiming at the sustainable resource flow.

#### Total amount of waste matter generated



#### **Water Resources**

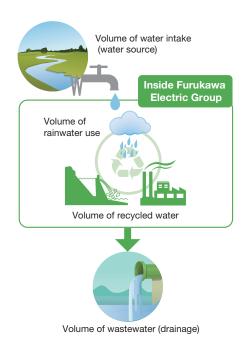
#### **Effective Utilization of Water**

Since fiscal 2013, Furukawa Electric Group has promoted effective water utilization as one of the activities targets and making efforts to grasp the amounts of the

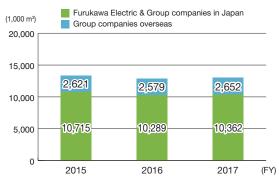
(note) Valuable resources are included in total waste generated for Japan only.

water intake and wastewater for each site. Since fiscal 2015, we have taken action for the reduction of the water intake amount per sales unit. In fiscal 2017, the water intake amount per sales unit of Furukawa Electric domestic group was 2,100 m³/100 million yen, decreased by 13.5% compared with fiscal 2015. The reason is that we grasped the water intake at Nikko Works. For Furukawa Electric overseas group, the water intake per sales unit was reduced by 8.3% compared with fiscal 2015. Furukawa Electric Group will continue to make efforts for water saving and recycling and for the management of the water quality, the water intake, and the wastewater volumes.

In order to release information on water resource management for the CDP supply chain program, the risk assessment including water has been implemented in every year in the major sites of Furukawa Electric Group, and improvement is progressing with incorporating it in the Business Continuity Plan (BCP).



#### Water usage



#### **Chemical Substance Management**

#### **Green Activities**

#### Response to Customer Requests

Furukawa Electric Group has participated in JAMP (note 1) since 2009, and is implementing simultaneous environmental examinations based on the latest information from the JAMP management target substance list related to management of chemical substances contained in products. We also monitor trends in laws and regulations covering the chemical substances contained in products and compile and update data as it becomes available, allowing us to respond promptly to customer requests.

## Response to Overseas Regulations and Management of Chemical Substances Contained in Products

Furukawa Electric Group establishes a management system for chemical substances contained in products for major operational bases and affiliated companies, strengthens the environmental product regulations and grasps the environmental risk that should be lowered, and implements measures depending on their importance.

Regarding the Registration, Evaluation, Authorization and Restriction of CHemicals (REACH) compliance, which is the environmental products regulation in EU, in fiscal 2017, the environmental inspection was implemented on 181 substances up to 18th Substance of Very High Concern (SVHC) REACH. In order to respond to the customer's request, we will proceed to shift to the Chemical information SHaring and Exchange under Reporting Partnership in supply chain (chemSHERPA) which is the information transmission scheme of chemical substances contained in products.

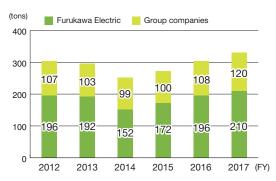
#### **Green Procurement Activities**

Items that will be used in our products are purchased adequately based on the Green Procurement Guidelines of our operational division, by evaluating the suppliers' system on the management of chemical substances contained in products and its management status as well as by confirming the data of chemical substances contained in products.

#### **Chemical Substance Management Activities**

Furukawa Electric Group undertakes voluntary initiatives to reduce emissions of harmful chemical substances. In particular, we make every effort to actively reduce emissions of volatile organic compounds (VOC), one cause of photochemical smog. In fiscal 2017, the emission amount of Furukawa Electric domestic group was increased by 9% compared with fiscal 2012. We will continue our efforts to reduce the usage amount of the targeted substances along with the suppression of the emissions from the production processes and others.

## Emissions of volatile organic compounds (Group Companies in Japan)



(note) Volatile organic compounds are the 118 substances specified by The Japanese Electric Wire & Cable Makers' Association (January 2012 edition).

#### **Appropriate Management of Chemical Substances**

At Furukawa Electric Group, we confirm the properties and applicable laws and regulations regarding all chemical substances we use during the manufacturing process on their Safety Data Sheets (SDSs) and administrate them. We also monitor the usage volume of chemical substances listed in the PRTR Law (note 2).

(note 1) JAMP: Joint Article Management Promotion-consortium (note 2) Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

#### **Environmental Risk Management**

#### Preventing Soil and Groundwater Pollution

Furukawa Electric Group conducts regular inspections of facilities and equipment that handle specific toxic substances to prevent the pollution of soil and groundwater. We reduce the risk of pollution through measures to prevent leaks of specific toxic substances and underground seepage, as well as through ongoing efforts to switch to substitute substances.

#### **PCB Management**

Furukawa Electric Group identifies the volume of highconcentration PCB-containing equipment at Furukawa Electric Co., Ltd.'s works and at the bases of our group companies, and carries out appropriate storage and management. We have been gradually disposing of this equipment in accordance with a plan set out by the Japan Environmental Storage & Safety Corporation. We are conducting the analysis and the surveys of the equipment that have the potential to contain a low concentration PCB, and those found to be the low concentration PCB contained equipment shall be properly kept, managed and disposed of while making consideration for storage-related risks. Furthermore, we will proceed the disposal at an early stage according to the equipment updating schedule.

## Compliance with Environmental Laws and Other Regulations

Furukawa Electric Group regularly confirms environmental laws and other regulations to determine items requiring compliance. We ensure compliance in a number of ways, such as by conducting on-site patrols to check the state of compliance. We follow official journals and other sources of information to stay updated on revisions to environmental legislation and ensure that our response is thorough.

We maintain voluntary control limits and manage operations appropriately to ensure compliance with the Air Pollution Control Law and the Water Pollution Control Law.

In fiscal 2017, in order to prevent environmental accidents, we conducted the self-diagnosis by the "Environmental accident management level check", in addition to recognizing the past environmental accidents and abnormalities. We will continue to appropriately manage the hazardous chemical substances.

We also conduct annual checks for conceivable, clear environmental impact to prevent environmental accidents or prevent widespread impact in the event of an accident. According to our survey on the status of our regulatory compliance, we were not in material violation of any regulations.

Please see the URL below for our response to the asbestos problem, and a list of PRTR compatible materials.

CSR

http://www.furukawa.co.jp/en/csr/risk/

#### **Biodiversity Conservation**

#### **Biodiversity Conservation Initiatives**

Furukawa Electric Group has included biodiversity conservation measures in our Basic Environment Policy. We have formulated and are applying Furukawa Electric Group comprehensive guidelines in relation to initiatives aimed at protecting biodiversity.

While registering with the JBIB (Japan Business Initiative for Biodiversity) and gaining a better understanding, our Group company Furukawa Research, Inc. started the cultivation activity of Pulsatilla cernua designated as an Endangered Species II (note 1), on a premise of Yokohama Works. In fiscal 2016, the plant was provided to Hirastuka Works and Chiba Works and the cultivation activities are also implemented.

(note 1) Endangered Species II is a category of species for which the danger of extinction is becoming more serious.

#### Cultivation activity of Pulsatilla cernua





Hiratsuka Works

Chiba Works



Yokohama Works

## Furukawa Electric Group Biodiversity Conservation Guidelines

- 1. Evaluate the effects that our business activities have on the ecosystem, and minimize the harmful effects while maximizing the beneficial ones
- To sustainably use resources and conserve biodiversity, consider more than ever the need to carry out measures against climate change, conserve resources, recycle and reduce environmentally hazardous substances
- 3. Carry out activities in collaboration with local communities to conserve biodiversity

## Third-Party Opinion



Takehiko Mizukami
Fellow, Business Ethic Research Center (BERC)
Vice chairman, Japan CSV Business Development Organization

Tokyo Institute of Technology and graduate school completed, Harvard University Kennedy School completed.

After being in charge of major air policies such as the airline deregulation, Japan-U.S. civil aviation talks at the former Ministry of Transport (presently Ministry of Land, Infrastructure, Transport and Tourism), Mr. Mizukami was mainly engaged in business strategy planning project focusing on the manufacturing industry at Arthur D. Little Japan Inc. a management consulting company. Joint article author: Hikaru Kobayashi, "Green growth and innovation: creating shared value", Manabu Akaike, "CSV Management", Blog "CSV/Shared value management theory"

Based on the information described in "Furukawa Electric Sustainability Report 2018" I would like to present the third party opinion on the Company's CSR efforts from the stand point of a CSR expert.

The Company is developing CSR activities according to Furukawa Electric Group CSR basic policy revised in 2011. In the CSR policy, it is stipulated that the business activities in harmony with the society and the global environments shall be carried out in compliance with domestic and foreign laws, social norms and ethics. On the other hand, currently, the Company does not always promote CSR activities and information disclosure in a form explicitly based on international guidelines.

In the Top Message, it is declared that ESG management is being promoted in various ways based on the basic philosophy of Furukawa Electric Group, and I understand that necessary efforts are carried out in practical ways, however, in the days when global and wide range of investors are interested in ESG, it is desirable to work on CSR in an easy understandable manner based on the common platform of a language which is global and to continue communication. I think that this point should be re-considered.

In this report, "Fun Lab" and "Efforts to strengthen corporate governance" are regarded as special features. The Company intends to promote ESG management based on the robust governance, here, it can be appreciated to bring the corporate governance, in which Japanese companies are considered to be weak, to the front of communication.

Regarding concrete CSR activities, I think that dealing with the Paris Agreement and SDGs are required in the future. In light of the Paris Agreement, it will be necessary to fully examine what opportunities and risks exist in the relation between the climate change and the business of the Company, and it will be required to establish a long term vision. With respect to SDGs, as shown in the Top Message, we will be required to deal in such a manner as "ensure sustainable consumption and production patterns" including the viewpoint of stable procurement of raw materials based on a company which has a strong core expertise in materials.

There are various activities regarding corporate response to social issues. I expect that the Company will continue to have a higher sensitivity to these activities and to further enhance CSR management in a manner integrated within the business.

#### List of all applicable companies

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#### Occupational Health and Safety

#### Scope of the frequency rate of accidents resulting in time off work

#### 36 Group companies in Japan

- 1 NTEC Ltd.
- 2 FCM Co., Ltd.
- 3 Okano Electric Wire Co., Ltd.
- Okumura Metals Co., Ltd.
- KANZACC Co., Ltd.
- 6 Shodensha Co., Ltd.
- Seiwa Giken Inc. 7
- 8 TOTOKU Flectric Co., Ltd.
- 9 Foam Kasei Co., Ltd.
- 10 Furukawa Automotive Systems Inc.
- 11 Furukawa S and D Co., Ltd.
- 12 Furukawa Elecom Co., Ltd.
- 13 Furukawa Sangyo Kaisha, Ltd.

- 14 Furukawa Communication and Broadcasting Co., Ltd.
- 15 Furukawa Industrial Plastics Co., Ltd.
- 16 Furukawa Precision Engineering Co., Ltd.
- 17 Furukawa Techno Material Co., Ltd.
- 18 Furukawa Research Inc.
- 19 Furukawa Electric Advanced Engineering Co., Ltd.
- 20 Furukawa Flectric Ecotec Co., Ltd.
- 21 Furukawa Electric Industrial Cable Co., Ltd.
- 22 Furukawa Electric Power Systems Co., Ltd.
- 23 The Furukawa Battery Co., Ltd.
- 24 Furukawa Nikko Power Generation Inc.
- 25 Furukawa New Leaf Co., Ltd.

- 26 Furukawa Network Solution Corp.
- 27 Furukawa FITEL Optical Device Co., Ltd.
- 28 The Furukawa Finance and Business Support Co., Ltd.
- 29 Furukawa Logistics Corp.
- 30 Furukawa Magnet Wire Co., Ltd.
- 31 Furukawa UACJ Memory Disk Co., Ltd.
- 32 Furukawa Life Service Inc.
- 33 Miharu Communications Inc.
- 34 Myojodenki Co., Ltd.
- 35 Yokohama Drum Manufacturing Co., Ltd.
- 36 Riken Electric Wire Co., Ltd.

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#### **Environmental Management** Scope of the environmental management

#### 34 Group companies in Japan

- 1 NTEC Ltd.
- 2 FCM Co., Ltd.
- 3 Okano Electric Wire Co., Ltd.
- 4 Okumura Metals Co., Ltd.
- 5 KANZACC Co., Ltd.
- 6 Shodensha Co., Ltd.
- Seiwa Giken Inc.
- 8 TOTOKU Electric Co., Ltd.
- 9 FITEC Corp.
- 10 Furukawa Automotive Systems Inc.
- 11 Furukawa Sangyo Kaisha, Ltd.
- 12 Furukawa Communication and Broadcasting Co., Ltd.

- 13 Furukawa Industrial Plastics Co., Ltd.
- 14 Furukawa Precision Engineering Co.,Ltd.
- 15 Furukawa Techno Material Co., Ltd.
- 16 Furukawa Electric Advanced Engineering Co., Ltd.
- 17 Furukawa Electric Ecotec Co., Ltd.
- 18 Furukawa Electric Industrial Cable Co., Ltd.
- 19 Furukawa Electric Power Systems Co., Ltd.
- 20 The Furukawa Battery Co., Ltd.
- 21 Furukawa Logistics Corp.
- 22 Furukawa Magnet Wire Co., Ltd.
- 23 Furukawa Life Service Inc.
- 24 Miharu Communications Inc.
- 25 Riken Electric Wire Co., Ltd.

- 26 Furukawa Network Solution Corp.
- 27 The Furukawa Finance and Business Support Co., Ltd.
- 28 Furukawa New Leaf Co., Ltd.
- 29 Furukawa Research Inc.
- 30 Foam Kasei Co., Ltd.
- 31 Furukawa Nikko Power Generation Inc.
- 32 Furukawa Elecom Co., Ltd.
- 33 Myojodenki Co., Ltd.
- 34 Furukawa FITEL Optical Device Co., Ltd.

#### 54 Group companies overseas

- Shenyang Furukawa Cable Co., Ltd.
- Suzhou Furukawa Power Optic Cable Co., Ltd.
- P.T. Tembaga Mulia Semanan Tbk.
- Trocellen GmbH
- Polifoam Plastic Processing Co., Ltd.
- HT Italia Holding S.r.l.
- Trocellen Italy S.p.A.
- 8 Trocellen S.E.A. Sdn Bhd
- Furukawa Electric LatAm S.A.
- Furukawa Industrial S.A. Sucursal Argentina Furukawa Cabos e Acessorios Ltda. 11
- OFS Fitel LLC
- 12
- OFS Fitel Denmark Aps 13 OFS FITEL Deutschland GmbH 14
- 15 Thai Fiber Optics Co., Ltd.
- Bangkok Telecom Co., Ltd.
- 17 P. T. Furukawa Optical Solutions Indonesia
- Furukawa FITEL (Thailand) Co., Ltd. 18
- Furukawa FITEL Optical Products (Shanghai) Co., Ltd. 19
- Thai Furukawa Unicomm Engineering Co., Ltd.
- FE Magnet Wire (Malaysia) Sdn. Bhd.
- Taiwan Furukawa Magnet Wire Co., Ltd.
- Taiwan Furukawa Electric Co., Ltd. Furukawa AVC Electronics (Suzhou) Co., Ltd.
- Furukawa Automotive Systems (Thailand) Co., Ltd. 25
- Furukawa Wiring Systems Mexico, S.A. de C.V. P.T. Furukawa Automotive Systems Indonesia

- Furukawa Electric (Shenzhen) Co., Ltd.
- Furukawa Automotive Systems Vietnam Inc.
- Furukawa Electric Autoparts Philippines Inc.
- 31 Permintex Furukawa Autoparts Malaysia Sdn. Bhd.
- 32 Furukawa Electric Autoparts Central Europe, s.r.o.
- 33 Furukawa Automotive Parts (Vietnam) Inc.
- 34 Furukawa Automotive Parts (Dong Guan) Ltd.
- 35 Furukawa Auto Parts (Huizhou) Co. Ltd. Furukawa Mexico S.A. De C.V.
- 37 American Furukawa, Inc.
- Tianjin Jinhe Electric Engineering Co., Ltd. 38
- 39 Furukawa Automotive Systems Lima Philippines, Inc. 40
- Wuhan Furukawa Automotive Systems Co., Ltd. 41 Chongqing Changhua Automobile Harness Co., Ltd.
- 42 Furukawa Precision (Thailand) Co., Ltd.
- Xin Furukawa Metal (Wuxi) Co., Ltd. 44 Furukawa Metal (Thailand) Public Co., Ltd.
- 45 Furukawa Electric Copper Foil Taiwan Co., Ltd.
- 46 Furukawa Circuit Foil Taiwan Corporation
- 47 Furukawa Electric Institute of Technology Ltd. 48 SuperPower Inc.
- 49 Furukawa Electric Europe Ltd.
- 50 Furukawa Electric Singapore Pte. Ltd.
- 51 Furukawa Shanghai, Ltd.
- 52 Furukawa (Thailand) Co., Ltd.
- 53 Furukawa Electric Hong Kong Ltd.
- 54 Siam Furukawa Co., Ltd.

Furukawa Electric and Furukawa Electric Group companies in Japan engaged in the production activities acquired ISO14001 certification pertaining to environmental management. The construction of environmental management systems according to standards such as ISO14001 is proceeding in overseas Group companies as well, with 70% of overseas Group companies successfully certified.

#### Page. 49

#### **Environmental Management**

#### Scope of the environmental accounting

- 1 FCM Co., Ltd.
- 21 Group companies in Japan 2 Okano Electric Wire Co., Ltd.
- Okumura Metals Co., Ltd. KANZACC Co., Ltd.
- 5 Shodensha Co., Ltd. 6 Seiwa Giken Inc.
- TOTOKU Electric Co, Ltd.
- 8 NTEC Co, Ltd.

- 9 Furukawa Automotive Systems Inc.
- 10 Furukawa Communication and Broadcasting Co., Ltd.
- 11 Furukawa Industrial Plastics Co., Ltd.
- 12 Furukawa Precision Engineering Co., Ltd. 13 Furukawa Techno Material Co., Ltd.
- 14 Furukawa Electric Advanced Engineering Co., Ltd.
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- 16 Furukawa Electric Power Systems Co., Ltd.
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- 18 Furukawa Magnet Wire Co., Ltd. 19 Miharu Communications Inc.
- 20 Riken Electric Wire Co., Ltd. 21 Furukawa Sangyo Kaisha, Ltd.

# FURUKAWA ELECTRIC CO., LTD. http://www.furukawa.co.jp/en/