



FURUKAWA BATTERY

# REPORT 2015

To contribute to the realization of a rich and sustainable society

# FOR SOCIETY

# FOR MOTORIZED

## FB battery using technology that is the first of its kind in the world

Lithium-ion battery with immense praise and performance, as power supply of satellites which requires extremely high reliability. This lithium-ion battery is mounted in “Hayabusa 2” asteroid explorer.



Storage battery  
for a satellite

Illustration by Akihiro Ikeshita



# FOR DISASTER

Considerably improved charging performance and life performance by adding capacitor function to conventional battery technology  
Near future battery that can draw out maximum performance of vehicles, mainly stop and start system.

ION

ECHNO IS  
UltraBattery



and contributes to development of society and new era

FOR SPACE

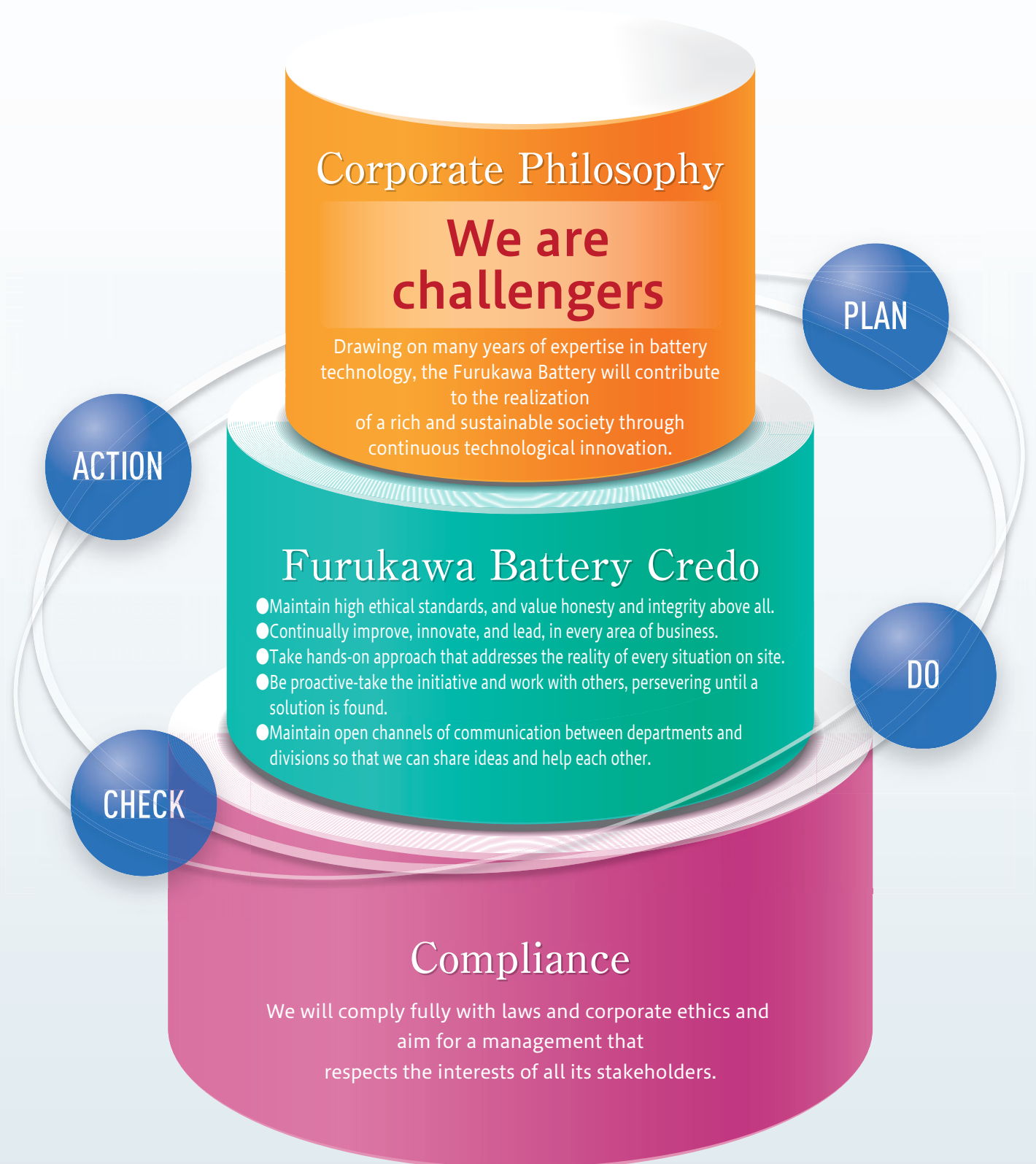
Magnesium-air fuel cell "MgBOX" for emergencies can generate electricity by filling water or sea water.  
The fuel cell with large capacity and long storage time that can supply the electric power to many portable devices only by filling water in case of emergency.

Very useful in case of emergency!



MgBOX

# Philosophy of Furukawa Battery



# FURUKAWA BATTERY REPORT 2015

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### ■ Editorial policy

Furukawa Battery manufactures and sells batteries that are designed to store energy and then use it when required. We are committed to producing environmentally friendly products, as a provider of energy supply systems that form an essential part of people's everyday lives. We have edited this report with the aim of concisely outlining our initiatives based on our targets, results and activities, as well as specific examples.

While editing this report, we have made all possible effort to produce a report that adheres to the frameworks of the "G3 Sustainability Reporting Guidelines" of the Global Reporting Initiative and the "Environmental Reporting Guidelines (Year 2012)" of the Ministry of the Environment (Japan Government). As a part of the Furukawa Battery Group's efforts to address the 7 core subjects of social responsibility outlined by ISO 26000, we created the following marks.



### ■ Organizations covered by this report

This report covers The Furukawa Battery Co., Ltd. and all of its consolidated subsidiaries. Environmental data relates to Furukawa Battery's Iwaki and Imaichi Plants.

### ■ Reporting period

Fiscal 2014 (April 2014 – March 2015)

### ■ Date of publication

August 2015

(Next report scheduled to be published in June 2016. Previous report published in August 2014)

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This report has been compiled using the latest information at the time of editing and includes some information prior to fiscal 2014. Please bear in mind that forecasts and other forward-looking statements are subject to change. Actual results may vary due to any number of reasons.

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Using our originally developed, advanced and we at Furukawa Battery will do our level best as an environmentally friendly futuristic society.

# TOP MESS

## Economic environment surrounding us

### Steady implement of growth strategy by "selection and concentration"

It is now the seventh year that we established "Dynamic Innovation 2020," (final target; sales of 98 billion yen, operating income of 9 billion yen on consolidated basis), the long-term management vision to provide the framework for sustainable growth.

General election was held in the end of last year, and consequently the government entered the second stage. Outlook of Japanese economy in this year, however, is gloomy to feel the economic recovery due to continuous weakening of yen and postponement of planned consumption tax hike in spite of recent measures to boost the economy and overcome deflation.

Positive signs of recovery are emerging in electric utility industry as the results of major companies got to be stable owing to low price of crude oil, etc. How to recover the loss from steep rise in lead price due to weak yen is a major issue to be addressed for the company.

Long-term management vision, "Dynamic Innovation 2020," was set exactly to address such global economic environment, and we must achieve this with our all efforts of the whole company.

This year is a pivotal year to move on from the first phase of establishing the basis to the second phase of launching, anticipate and take measures with a sense of urgency not to be out of date.

## Toward sustainable growth

### A pivotal year to move on to the second phase

Fiscal 2015 is the last year of Medium-Term Management Plan (Fiscal 2013 – Fiscal 2015). With a sense of urgency, each division is making an early start toward their respective basic policies and key measures, while switching to a growth track at the same time.

### The last year of the Medium-Term Management Plan (Fiscal 2013 – Fiscal 2015)

(disclosed in July 2013, reviewed and confirmed as rolling plan in June 2014)

#### ●Basic Policies

1. Take responsibility in business operation and gain continuous reliance from stakeholders in order to contribute to society and environment
2. Implement investments and key measures remembering the starting point as a challenger
3. Deploy management resources based on "selection and concentration" strategy and take initiatives for the effective operation

#### ●Key measures

1. Increase the number of overseas production base and expand commercial rights (automobile, industry)
2. Secure income in domestic market (integrate and rationalize production bases)
3. Reform our corporate culture to address globalization (rapid response capacity, changing capacity, and ability to overcome failure)
4. Increase in capital to expand business
5. Create and implement new business

#### ●Business Objectives

Achieve the following target (consolidated / fiscal year ending in March 2016)

Net sales	Over 59.4 billion yen
Operating income (amount / ratio)	Over 3.8 billion yen / Over 6.4%
ROA (operating income base)	Over 8.3% *Return on total assets
Equity ratio	Over 40%
Interest-bearing debt	Under 8.7 billion yen
Overseas sales ratio	Over 36%
D/E ratio	Under 0.46 *Debt-to-equity ratio

# cutting-edge technology "challengers" to realize

Katsutoshi Tokuyama, President

徳山 勝敏

# AGE



## Key objectives for fiscal 2015

### Six Group-wide Initiatives

The Group take the following six initiatives in fiscal 2015.

#### Key objectives and measures in 2015

##### Group-wide Initiatives

##### A. Initiatives for the safety and the environment

1. Implement safety basic policy such as compliance of defined rules and build comfortable and safe workplace to create a zero-accident, comfortable workplace
2. Promote quality management system to achieve zero serious claim and activate small group movement

##### B. Compliance

Realize full compliance, prevent incidents and minimize loss through promotion of risk control

##### C. Streamlining and profitability

1. Concentrate management resources through "selection and concentration" strategy
  - Streamlining manufacturing and organization, and improving operating ratio to reduce cost through promotion of activities to improve the whole group management efficiency
2. Promote streamlining of the Group business and strengthen purchasing power through management of procurement risks

##### D. Strengthen corporation within Furukawa Electric Group

- Share personnel, etc. through promotion of "One Furukawa" activities

##### E. Energize intermediary departments

1. Boost training and professional development through strategic deployment of personnel to strengthen the underlying capabilities for competition and growth
2. Timely supply services to each division including overseas business division for effective operation
3. Systematically secure personnel through streamlining of organization, introduction of rotation plans, diversified employee working conditions, and strategic increase

##### F. Reduce expenses, etc.

Follow "selection and concentration" strategy to plan and implement expenses budget to rigorously pursue streamlining

## Key objectives by business division

### Take specific actions with speed

The common key objectives in each division are the followings; Maximize profits by taking all measures following the targets in Mid and Long-term Plan; Accelerate promotion of reducing costs and improving product quality.

In automobile department in business division, we aim at increasing sales volume of the business for automobile by starting equipment and business that are subject of Fukushima restoration subsidy. And also we aim at securing profits by expanding sales in market according to plan for reconstruction and starting businesses.

In industry department, we aim at securing profits (ordinary income rate of 9.8%) by factory renovation of Imaichi industry, strengthening alkaline and power supply systems business, and enhancing initiatives in replacement field.

In overseas department, we achieve reinforcement of Siam Furukawa Co., Ltd. in Thailand, net sales expansion of a new company in Indonesia, and increase of consolidated overseas sales ratio (from 34.5% to over 36%).

In sales divisions, we strengthen credit control while improve sales efficiency and optimize sales personnel by integrated system of manufacturing and sales, and corporation with affiliates. Also we maximize operating income through exploring a new market.

In equipment and production technology divisions, we steadily and continuously operate equipment for Fukushima restoration subsidy and dramatically improve cost variance by improving productivity of UB\* facilities. In addition, we promote advancing Iwaki Plant as the mother plant of batteries for automobiles and making the Imaichi Plant the mother plant of industry storage batteries.

In R&D divisions, we formulate and implement themes per each component development and commercialization development, establish lead fundamental technology, and promote development of high reliability industrial lithium ion batteries to prepare introducing them on market. Also, we work harder together to capture needs from market to realize creating new products (expanding Magnesium-air fuel cell into new field).

In Head Office divisions, we enhance our abilities of planning, imagination, making proposals, collecting and analyzing information, and communication skills as well for efficient operation of the whole company, while secure investment and personnel toward globalization, and establish structure for stronger organization.

Business division and other divisions formulate management policies and quality management policies with target achievement plan (measures and action plan) and implement them by taking specific actions with speed based on the company management policy and budget.

※UB...UltraBattery

# Products

# Furukawa Battery's products

In transportation systems such as automobiles, trains and ships, our products are used various fields in which companies are now dependent on advanced IT systems, and also

## Wind power generation



Storage batteries for renewable energy

## Shinkansen trains



Alkaline storage batteries for railway cars

## Large-scale buildings



Column batteries

Fixed lead-acid power storage batteries for new energy systems



# serve society by labouring in the background.

as the energy to actually make these systems go. Our products also provide the energy for batteries in reserve to support the highly reliable power supply for space development. In fact, the technology of Furukawa Battery can be found in all aspects of life.

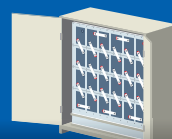


## Satellites



Storage battery for a satellite

## Public facilities



Lead-acid storage battery

## Building

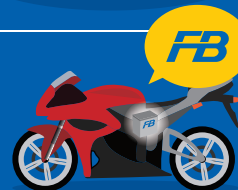


DC power systems

## Vehicles and motorcycles

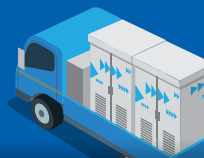


Batteries for automobiles



Batteries for motorcycles

## Stadium, etc.



Mobile power supply vehicles

## Shelter, etc.



Magnesium air battery

# New Products

We introduce our new products which can



Alkaline storage batteries supplied to E7 series and W7 series Hokuriku Shinkansen train

## 9M100

**NEW**

We released alkaline storage batteries with improved maintenance performance and they were adopted by many clients. Recently, we have completed 9M100 and they have been adopted in E7series trains and supplied to East Japan Railway Company, and also been adopted in W7 series trains and supplied to West Japan Railway Company. The adopted storage batteries were developed for Shinkansen trains and these new MT series are different from conventional lineup.

### Key Features

- **Reduced frequency of water refill**  
The design optimized for rolling stock and the newly developed plates have significantly reduced water consumption during use, so water refill work is not necessary for a long period.
- **Immune to power supply variation**  
This battery is immune to power supply variations specific to rolling stock, making it possible to maintain the charge.
- **Easier maintenance and inspection**  
This battery has a structure in which no metal parts are exposed and with fewer terminals, offering easier and safer maintenance and inspection.
- **Easier cleaning**  
Easier cleaning owing to less gaps in vent plug.
- **No need for electrolyte replacement**  
The electrolyte does not deteriorate, eliminating the need for troublesome electrolyte replacement.
- **High performance and reliability**  
This battery has high durability and the use of high-performance plates provides excellent high-rate discharge and low-temperature discharge characteristics.



Magnesium-air fuel cell

## MgBOX

**NEW**

At the time of a disaster, one of the most serious problem is battery consumption in a portable device. The Furukawa Battery is located in the stricken area of the great east Japan earthquake, and we learned what was really essential in that situation. From this experience, we have developed the power source which can supply electric power easily for many portable devices, by installing them in shelters with Toppan Printing Co., Ltd.

The magnesium air battery "MgBOX" for emergencies has large capacity and long storage time. It is able to start power generation only by filling water in order to easily supply electric power and charge many portable devices.

### Key Features

- Generate electricity by filling water or sea water.
- Most suitable for charging of USB devices such as smartphones, etc.
- Large-capacity enough to charge a smartphone for maximum 30 times
- Equipped with two output terminals of the USB type
- World's first magnesium-air fuel cell which uses paper container
- Easy to dispose after use because it is made of paper
- Environmental conscious specification with no CO<sub>2</sub> nor noise generated during power generation
- Steady ON-OFF control action is available with newly developed reset switch (patent pending)
- Fuel cell which uses cheap oxygen reduction catalyst without rare metals

Battery specification	Operating time : 5 days (Maximum)/Output energy : 300Wh/Size : 233×226×226 mm/Weight : Approx. 1.6 kg (Before filling water) / Approx. 3.6 kg (After filling water)
USB-BOX specification	Output voltage : DC 5.0 V/Maximum current : 1.2 A

contribute to the development of society and technology to pave the way for next generation.



## Industrial UltraBattery *UB-50-12*

**NEW**

UB-50-12, small capacity monoblock type, has been added to hybrid type lead-acid storage battery (UltraBattery) series, which combines asymmetric capacitor and lead-acid storage battery. The principal use is to address various cycle use application such as a source of emergency electricity in accordance with Business Continuity Plan (BCP), vehicle-loaded mobile power source, solar photo-voltaic power systems, and energy storage system responding to reducing and shifting of peak demand.

### Key Features

- **High recharging efficiency**  
Asymmetrical capacitor has been integrated into lead-acid storage battery to increase conductivity, and it provides high capacity characteristic capable of charging a large current (maximum 0.5C<sub>10</sub>A), which could not be achieved by conventional lead-acid storage batteries.
- **Reducing recharging frequency**  
Recharging frequency can be reduced to 1/4 compared to the conventional lead-acid storage batteries owing to less dispersion in cell voltage when systematically operated. Improvement in energy efficiency of storage battery system can be expected.
- **Superior cycle life characteristic in PSOC state (more than 3,000 cycles\*)**  
Superior cycle life characteristic compared to the conventional product owing to less frequency of sulfation (accumulation of inactive lead sulfate) even under the tough conditions of partial state of charge (PSOC).

\* Under recommended operating conditions by the Company

Battery for idling-stop vehicle  
(ECHNO IS UltraBattery)  
Brand-new package

**RENEWAL**

## *ECHNO IS UltraBattery*

Adopted world's first UltraBattery technology (capacitor Hybrid), patent granted. ECHNO IS UltraBattery is the industry's first Lead acid batteries having both merits of Lead acid batteries and capacitors, by hybridizing them in electrode level. Capacitor function enables high efficiency of charging and supports idling-stop vehicles.

### Key Features

#### ● Compensation period

For normal vehicles : 36 months or 100,000 km (Compensation period expanded compared to conventional product).

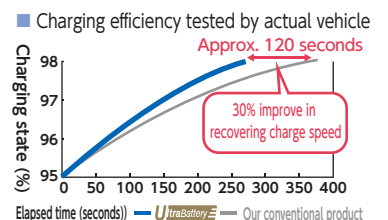
※According to our own research in products for idling-stop vehicles as of June, 2015.

For idling-stop vehicles : 36 months or 60,000km (whichever comes first after purchase)

The longest compensation period set by Japanese manufacturers

#### ECO 1 UltraBattery can get to recover full charge condition quickly

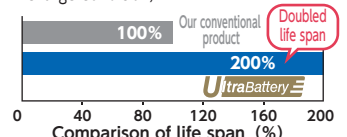
Improved charge acceptability enables UltraBattery to recover full charge condition quickly. The speed of recovering charge is improved by 30% compared to conventional product.



#### ECO 2 Longer life span of batteries

Suppressing sulfation enables doubled life span compared to conventional product.

■ Life span characteristic under tough test conditions  
※Dynamic Charge Acceptance (DCA) test (Estimated the use under 80% state of charge condition).



#### ● Package design

We decided the color of M-42/B20L and M-42R/B20R to pink with gentle impression to attract attention of female users who often drive light vehicles.

# FOR FUTURE

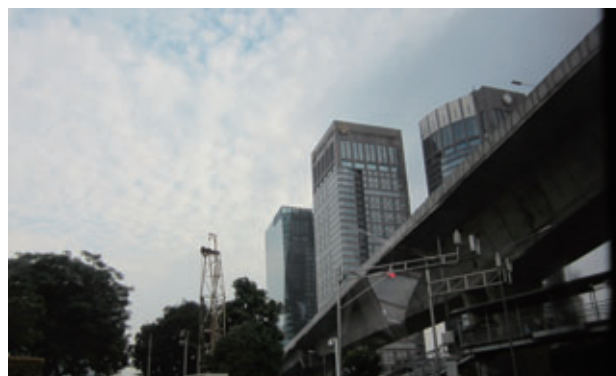
## → Global Business Development

Recently Japanese automobile manufacturers relocated their production bases to foreign countries and increased their production capacities. In response to this, many parts manufacturers are promoting overseas transfer of production and increasing production capacities as well.

Furukawa Battery established production base of batteries for automobiles and motorcycles in Thailand and Indonesia in 1992 and 2013 respectively at the aim of sales expansion in Southeast Asia and the achievement of our long-term management vision, "Dynamic Innovation 2020." We take initiatives for improving productivity and creating stable quality based on our technology and experience in Japan while developing global human resources.

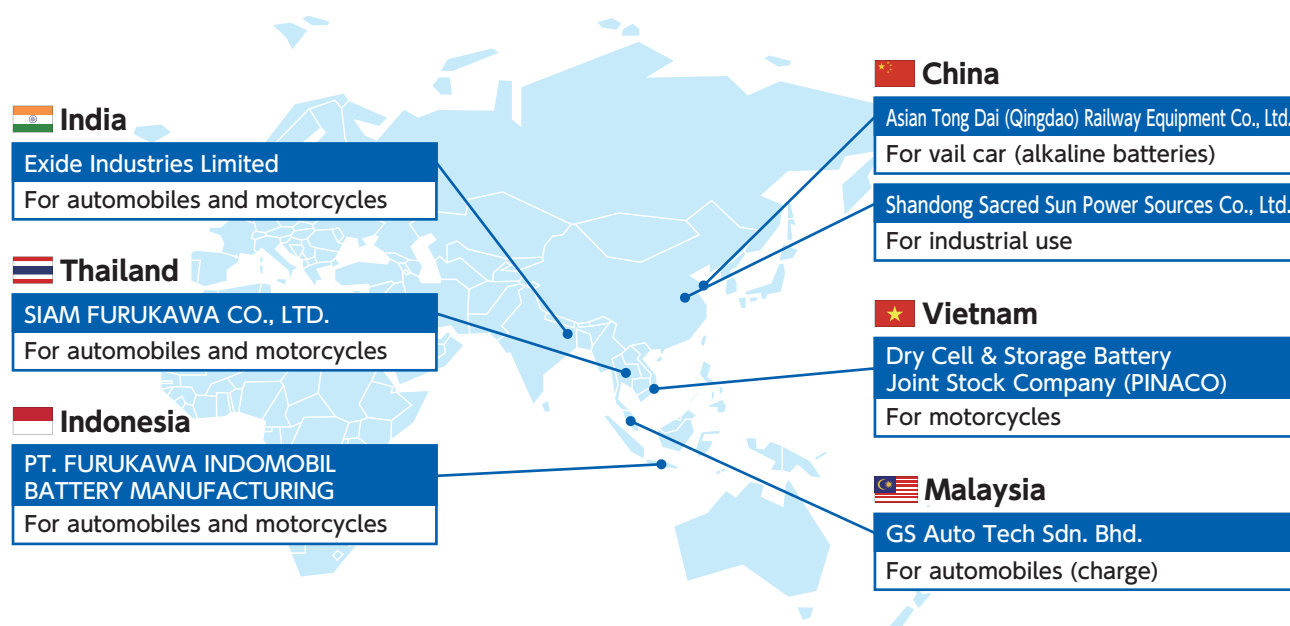
In addition, we promote our overseas business operation being conscious of safety, health, and environment as we do in Japan.

In the meantime, we provide technical support to Southeast Asia, India, and China as to batteries for automobiles or industry. We dispatch technical experts to provide support to meet the demand from each companies.



A town in Indonesia

## ■ Technical Supported Companies



## ■ The completion ceremony of the new plant was held in Indonesia

The completion ceremony was held on February 5, 2015 for the new plant of PT. FURUKAWA INDOMOBIL BATTERY MANUFACTURING, jointly established with Indonesian Salim Group. Saleh Husin, SE, M. Si. Minister of Ministry of Industry (the third from the left in the picture), and H. Dedi Mulyadi, S. H. Governor of Purwakarta Province (the forth from the left) were participated in the ceremony, and ribbon cutting ceremony was also held. Many guests and the press were participated as well and celebrated the completion of the new plant. The plant is in mass production now, and batteries manufactured there are sold in various regions in Indonesia. Please expect further development in Indonesian business in the future.



Ribbon cutting ceremony



New plant

### ■ Message from President Moue

President Moue, SIAM FURUKAWA CO., LTD.



Siam Furukawa has reached its 23th year in January this year. I'd like to express my gratitude for all of your support and cooperation until now.

The company was established as ASSOCIATED BATTERY MANUFACTURER CO., LTD. (ABM) as one of the company of UK's Chloride Group in 1970. In 1984, one of Thai Royal family business, Siam Cement Group (SCG), which later become our local partner, purchased the company. Later, it was newly started as a joint venture company with Furukawa Battery in 1992, and became a fully-owned subsidiary of Furukawa Battery in 2011.

At that time, the plant was located in Min Buri, Bangkok, then relocated

to a new plant in Hemaraj Saraburi Industrial Land in 1997, as the number of houses built was increasing in the surrounding area as the Thai economy grew.

The production volume of batteries for both automobiles and motorcycles is now over five times compared to the old plant and we enhance the production capability when necessary. Major distribution channels are OEM, aftermarket in Thailand, and exports. Our export market of batteries for automobiles extends to Southeast Asia, Middle East, even to Africa and South America.

We have started the company with two Japanese staff, but now increased to seven. All of us are making great efforts with Thai staff in foreign culture.

In addition, we focus on CSR activities as well. We received "CSR-DIV Award" in a fourth consecutive year, and aiming at level 5, the highest ranking of this award, we continue activities including activities in neighborhood communities.

In conclusion, as one of local company in Thailand, all of us will work hard aiming at continuous growth in order to contribute to Thai employee and their family, also to Kingdom of Thailand with the motto of all of us are "FB Family".

## → Appeal of MgBOX

MgBOX is assumed to be used in emergency such as in the case of disaster. Long storage time is not sufficient feature to provide electricity with security in emergency. We have developed MgBOX based on our own experience of the Great East Japan Earthquake.

We introduce here such as how to use MgBOX, experiments performed to provide electricity with security, and appeals of MgBOX which are not well known yet.

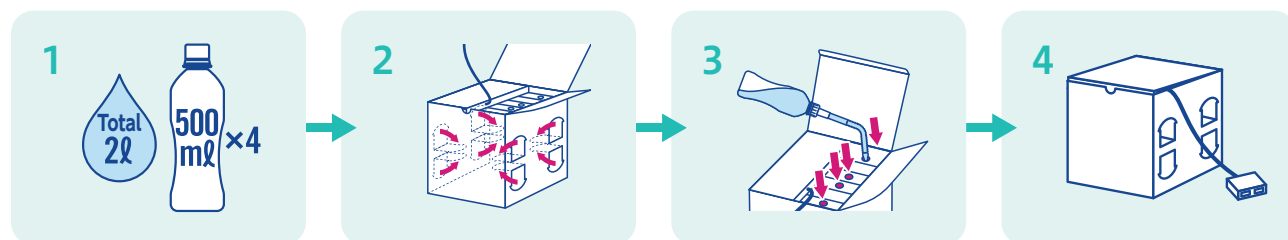


### Appealing point 1

## How to use MgBOX

MgBOX does not contain electrolyte inside when sold to enable long storage time. It generates electricity only by filling water whenever necessary.

Easy 4 step to use even for elderly person or children. Everyone can use MgBOX easily and safely, this is one of appealing points of MgBOX.



1 Prepare 2 l of water (or sea water) and 500 ml empty plastic bottle.

2 Push 8 perforations on the sides until these make right angles with the sides.

3 Put water injection fixture tip in 4 water fillers and pour 500 ml water for each filler.

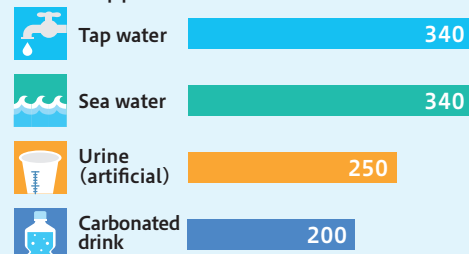
4 Close covers after pouring. Wait approx. 3 minutes to use it.

### Appealing point 2

## Water applicable to MgBOX is...

Tap water is not only applicable water to MgBOX. Sea water, river water, even water in bathtub is enough to be used. Can water other than tap water really be applicable to MgBOX...? Then experiments were performed to verify the difference of power generation when water other than tap water was used for MgBOX.

### ● Power generation amount (Wh, approximate value)



### [Results]

As you can see in the above graph, using sea water can generate roughly as the same amount of power generation as using tap water. On the other hand, using carbonated drinks or (artificial) urine generates less amount of power generation, but still, it revealed that even water other than tap water can provide power with security.

### Appealing point 3

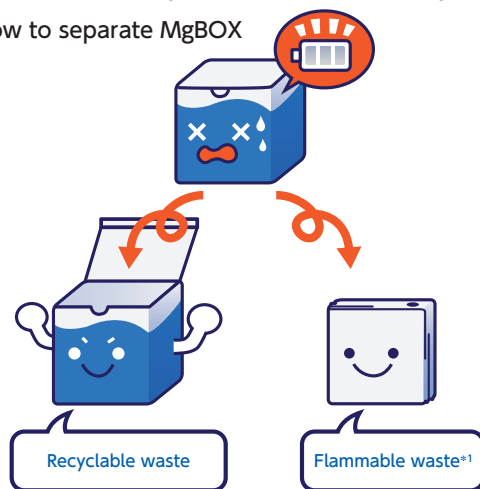
## Disposal of MgBOX

The third appealing point of MgBOX is easy disposal. User can dispose it as flammable waste\*1 after taking it to pieces. Batteries for automobiles, nickel-cadmium battery, nickel hydrogen battery, lithium-ion battery and etc. are so difficult to treat for municipality that user need to dispose them according to the disposal process defined by manufacturers of these batteries. Many regions continue to collect dry cell in special process from the past. Not using toxic substances and adoption of paper container enable disposal of MgBOX in ordinary procedure.

In the meantime, we made explanations about disposal of MgBOX to municipalities which accept its disposal. Before these explanations we received guidance from Iwaki City, Fukushima Prefecture, where our development plant locates, and also sent security experiment report on DVD to about 860 municipalities and also responded to opinions and questions from them.

As mentioned above, MgBOX is a product which considers environment at the all stages from development and design to after use.

### ● How to separate MgBOX



\*1 It depends on each municipality.

### Appealing point 4

## METI Minister Awards at Japan Packaging Competition in 2015

We received METI Minister Awards, highest rank award, at the 54th Japan Packaging Competition (JPC exhibition) which was sponsored by Japan Federation of Printing Industries (chairman; Toshiaki Inagi).

This competition started in 1962, and it is a product packaging exhibition with the longest history in major printing industry where excellence of commercial packages of products in market is competed. Up to now, we don't have many products with appeal to general consumers. However, we splendidly received a finest award, METI Minister Awards at our first challenge.



At the award ceremony



### Package design

Generally speaking, design of package requires originality and creativity as it is a communication tool from companies to consumers and has a role to send information precisely about such as convenience, functionality, weight, size, disposal method, and design.

MgBOX is a product which was jointly developed with TOPPAN PRINTING CO., LTD. Their designer did a great job and at the same time exchange among different industries was confirmed to be effective.



# FOR QUALITY

To be a company trusted for high quality

We strive to provide "quality that is trusted" to meet the needs of customers and society

## Quality improvement initiatives

### Examples of quality initiatives

#### ⇒ Initiative toward integration of management system

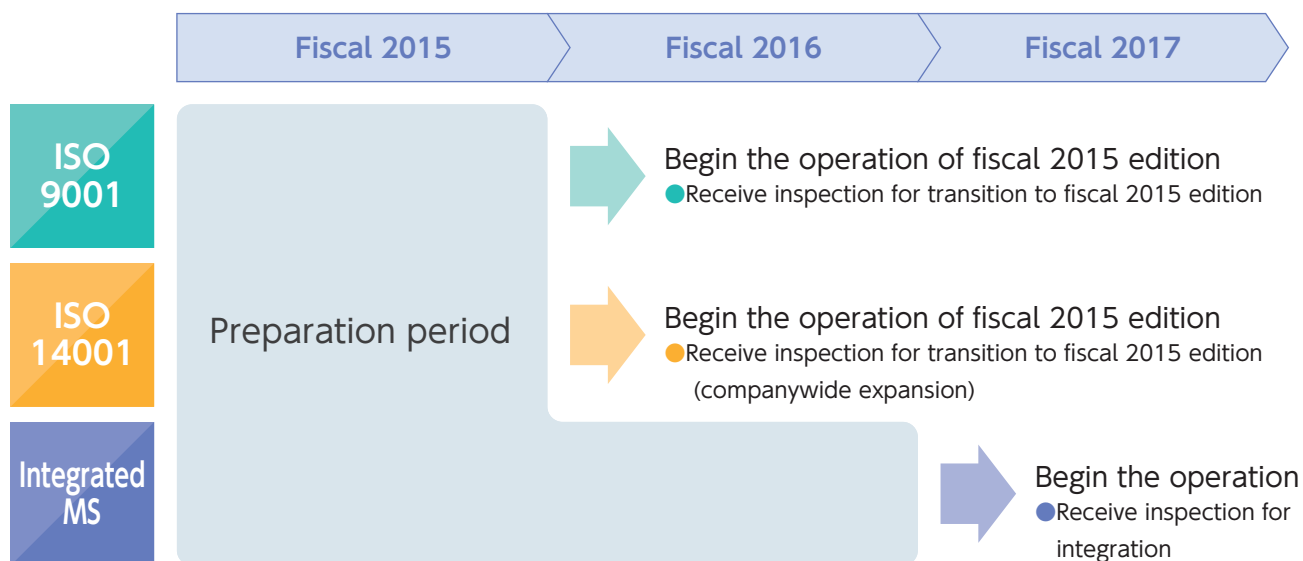
We gained quality management system (ISO9001) and environment management system (ISO14001) certification. Now we promote integration of the above both management system aiming at the improvement of performance and efficiency of operation, and cost reduction.

Integration enables various issues to be addressed based on unified structure, so the system is expected to become

easier to understand for employee and also easier to use for management.

In addition, toward this integration, we will expand the registration of ISO14001 which Iwaki and Imaichi Plant gained to the whole company. We will work harder than ever on the establishment of "management system which leads directly to the achievement of management objectives" (useful system).

#### ■ Schedule (long-term plan)



#### ⇒ Mutual auditing between departments

In fiscal 2013, as a one measure to reduce quality failure, workplace quality audits were conducted by having the Automobile Battery Division and the Industrial Battery Division mutually visiting each other's workplaces to verify corrective and preventive measures have been taken regarding prior incidents of failure.

The aim of the mutual auditing is for divisions to extract "suspect" phenomenon that they do not understand and mutually exchange opinions between the divisions.

In 2014 activity, the follow-up of 2013 activity was implemented and it was confirmed that all the necessary measures are taken in every projects. We will enhance preventive measures as well as regular patrol on manufacturing procedure.



Scene of mutual auditing between departments

## ⇒ Companywide QC circle \*competition

We held the 2014 companywide QC circle competition at Iwaki Plant. At the competition, 8 circles that came out on top in each block competition and 5 circles invited from affiliates and other companies, provided presentations. During the review after the award ceremony, our president gave a motivating speech saying, "Listening to today's discussions, I get the impression that the level of each circle is rising each year and also the activity is expanding. I feel your strong will to solve and improve familiar issues. QC circle never comes to the end. I hope to be here and see your wonderful presentations next year."

Through our QC circle activities, we are striving to improve the quality of our products and the quality of our sales.

\*QC circle...QC is an abbreviation for Quality Control. The circle refers to the activity of groups formed at the same workplace to improve quality.



At the award ceremony

## Connecting with the stakeholders who use our products

As we always put the customer first, we strive to provide products and services that will keep our customers satisfied. Part of our slogan is "services that guarantee satisfaction" and "reliable quality." With that in mind, we work as a team to maintain and improve quality standards to the satisfaction of our customers, and are committed to developing new products in order to contribute to society.

We take measures on quality assurance by ensuring each division, including Research and Development,

Production Technology, Purchasing, and Sales each fulfills their respective responsibilities. To get customers to appreciate our technical development capabilities and the features of our products, so that we can build long lasting, strong trusting relationships, we publish a technical research journal called FB Technical News. This is just one of the ways in which we actively and continuously provide information, along with exhibitions, product catalogs and our website.

## Product safety information

We release safety information for the products we manufacture on our website as a chemical substance safety data sheet (SDS).

We comply with Globally Harmonized System (GHS), and the JIS Z7253, in relation to chemical classification and labeling.

We also create and provide SDS for our storage battery products to meet customer requests.



Scene of management

## Introduction of Battery Advisor System

In fiscal 2014, we started the Battery Advisor System seminar.

We conducted seminars at 43 locations mainly at our clients across Japan, and consequently 930 people became advisors.

In the seminar's contents, there are basic knowledge of batteries for automobiles, recent trend of vehicles, and especially knowledge of products such as batteries for stop and start system cars and hybrid vehicles. It covers wide range and great deal of knowledge.

Furthermore, the seminar lasts three hours with advisor certification examination after the lecture. In spite of such a hard content, every participants attended the seminar enthusiastically and a lot of them passed the examination as well.

We provide tools such as certification cards or posters to let customers notified that "the store has Battery Advisor." These will lead for distributors to raise awareness of sales and improve the knowledge of the products, while for general consumers to feel secure to buy batteries from advisors.

At the beginning, we started to introduce this system looking for "the ideal system." Clients' responses such as Q&A or results of questionnaires after the seminar gradually revealed "the ideal system."

1. Content of the lecture itself should be matched to the demand of each client
2. Accurate advice should be provided to worries or troubles about batteries

In the end of the fiscal 2014, we made several discussions with Sales Engineering Section as to how to utilize what we learned through this year's activities in fiscal 2015. As a result, we decided to add following two contents to the Battery Advisor system seminar in fiscal 2015 and part of batteries for motorcycles to general seminar.

1. Start advanced course and individual credit-based system for repeat participants
2. Start optional course of sales part  
(Scheduled to be started in July, 2015)  
\*Separately introduce to general seminar of part of batteries for motorcycles

We would like to meet the real demand from customers.



At the seminar

## Outstanding Good Governance Award 2014

Siam Furukawa received the Outstanding Good Governance Award 2014 from Governor of Saraburi Province.

Ministry of Commerce gives this award to promote faithful and fair business operation to consumers and citizens. In 2014, five companies in Saraburi Province including Siam Furukawa received this award.

We will strive to continue sound corporate governance into the future.



At the award ceremony

## Consecutively, awarded Outstanding Award of Labour Relations and Welfare

Recognized for outstanding labour relations and welfare, Siam Furukawa received "Outstanding Award of Labour Relations and Welfare 2014" from the Department of Labour Protection and Welfare in Thailand.

In 2014, 604 companies received this award, among them, Siam Furukawa received it for the 9th consecutive year from 2006.

We will strive to continue outstanding labour relations into the future.



Commemorative photo with the employee who received the award

## CSR-DIW Continuous Award from Ministry of Industry for the 4th consecutive year

In recognition of efforts in CSR activities, Siam Furukawa was awarded the "CSR-DIW Continuous Award 2014" from the Department of Industrial Works, Ministry of Industry in Thailand.

272 companies received this award, and among them, Siam Furukawa received it for the fourth consecutive year from 2011.

We continue to adopt Level 4 out of five levels in 2015, and focus on activities for such as energy saving in electricity and gas aiming at "Green Culture."



Award



Employee who received the award



# FOR SOCIETY & ENVIRONMENT

To be a company that contributes to

While strengthening ties with local communities we work to preserve the global environment

## Contributions to the global environment

### Outline of our environmental policy

Our production facilities are located in beautiful natural surroundings in Fukushima and Tochigi prefectures. As well as complying with environmental legislation and agreements with the local authorities, we also carry out environmental preservation activities focusing on the following key points.

#### Harnessing storage battery technology to promote environmentally friendly, efficient energy use

- 1 Saving energy to prevent global warming**
- 2 Reducing waste and promoting recycling to make effective use of resources and minimize environmental impact**
- 3 Promoting the effective use and recycling of key raw materials (lead, sulfuric acid and caustic soda) in order to conserve resources and protect the environment**
- 4 Developing products with fewer environmental contaminants in order to minimize environmental impact**

#### INPUT



##### Supplies/raw materials\*1

Metals 35,400 t  
Chemicals 9,000 t



##### Water

Tap water 64,974 t  
Industrial water 188,057 t  
Groundwater 281,566 t



##### Energy

Electricity (purchased power) 66,796.0 MWh  
LPG 2,274.1 t  
Bunker A oil 136.9 kl  
Kerosene 62.8 kl  
Light oil 6.4 kl  
Gasoline 43.0 kl



##### Chemicals\*2

Volume handled 205.3 t



#### OUTPUT



##### Waste

Total waste 611.2 t  
Sent to landfill 16.4 t  
Recycled 594.8 t



##### Atmospheric environmental impact

SOx 0.21 t  
NOx 1.30 t  
Dust 0.09 t



##### Greenhouse gases

Power\*3 37,657.3 t-CO<sub>2</sub>  
Fuel 7,548.0 t-CO<sub>2</sub>  
Total 45,205.3 t-CO<sub>2</sub>



##### Chemicals

Emissions 2.2 t  
Transferred 108.7 t



##### Water

Wastewater 149,511 t  
BOD 0.44 t  
SS 0.10 t



##### Recycling



\*1: Main raw materials used to manufacture storage batteries

\*2: Chemicals specified under the PRTR Act, with the exception of lead, cadmium, nickel and compounds thereof

\*3: Power to CO<sub>2</sub> conversion factors are based on annual figures from individual power companies

\*4: Estimated volume of products shipped in fiscal 2014

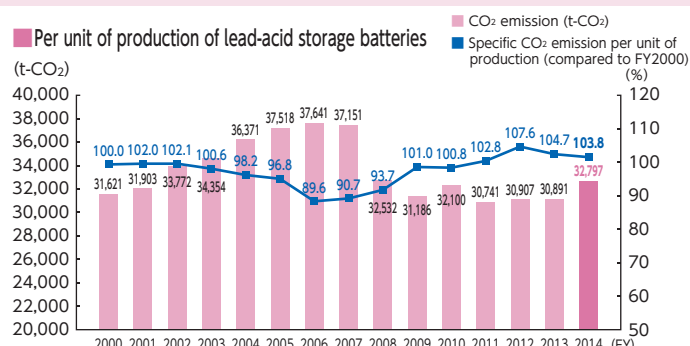
## Trends of CO<sub>2</sub> emissions

### Per unit of production of lead-acid storage batteries

We reduced CO<sub>2</sub> emissions by 3.7% in fiscal 2014, which was on par with the levels in fiscal 2000.

Specific CO<sub>2</sub> emissions per unit of production of lead-acid storage batteries increased by 3.8% compared to fiscal 2000.

\*The above figures are based on a power to CO<sub>2</sub> conversion factor of 0.378 (kg-CO<sub>2</sub>/kWh), to enable comparison between fiscal years.

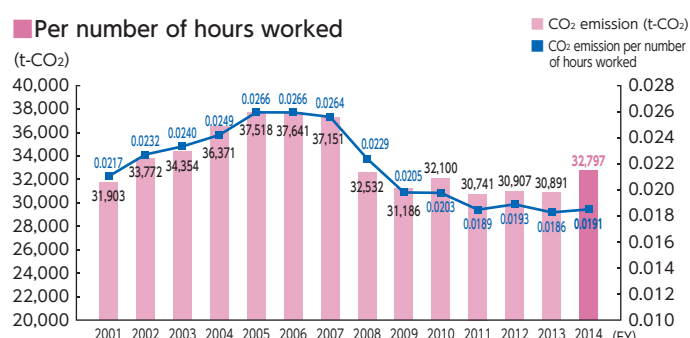


### [Reference]

### Per number of hours worked

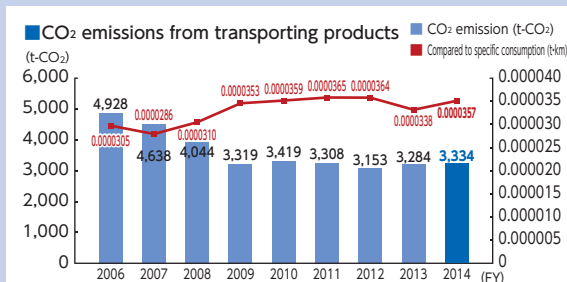
Although we have always measured emissions per unit of production, we are looking for a more suitable unit to use, in light of increased energy consumption and personnel in non-production divisions. As part of a new trial, we have been monitoring CO<sub>2</sub> emissions per number of hours worked by our employees since fiscal 2009, as outlined on the right.

\*The above figures are based on a power to CO<sub>2</sub> conversion factor of 0.378 (kg-CO<sub>2</sub>/kWh), to enable comparison between fiscal years.



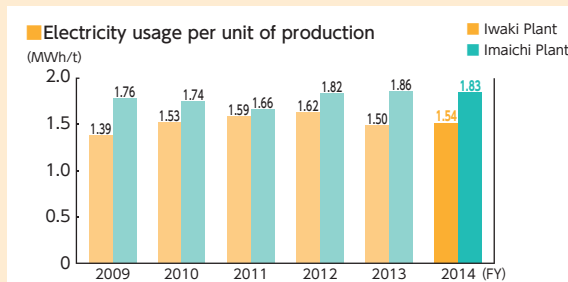
## Improving transport efficiency

Although we reduced CO<sub>2</sub> emissions by approximately 32% in fiscal 2014, compared to fiscal 2006, specific emissions increased by approximately 17% per unit (compared to fiscal 2006). Emissions have remained level since fiscal 2009. We are nonetheless determined to keep on increasing transport efficiency in the future.



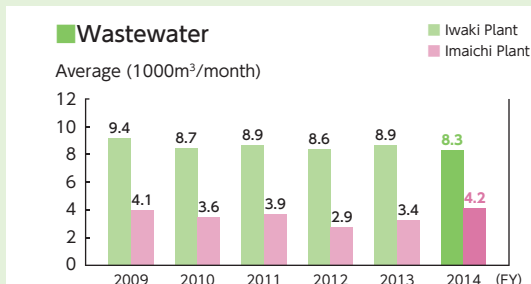
## Electricity usage (per unit of production)

Electricity usage per unit of production in fiscal 2014 increased approx. 0.5% compared to fiscal 2013. We will continue to take measures to increase productivity and promote energy saving into the future.



## Wastewater

Wastewater levels at all sites were maintained within figures agreed with the relevant local authorities. We also maintained minimum wastewater levels at all sites.



## Waste

We recycled 97.3% of all waste in fiscal 2014. We are committed to recycling and will continue to reduce the volume of waste we generate in the future.



## Environmentally friendly initiatives at the departmental level

We can achieve greater results in terms of environmental friendliness by bringing together detailed initiatives in each department. This section lists a number of example initiatives carried out by individual departments in fiscal 2014.

Site	Category	Initiatives	Department responsible
Imaichi Plant	Environment	Waste water volume reduction due to improved process-wastewater recycling technology	Production Technology & Engineering Department
		Improving yield	
		Reducing defects, improving process operating rates	Production Technology & Engineering Department/Production Department
		Changing melting furnace to electric heater	Equipment Department & Engineering Department/ Equipment Department
		Inspection of air leak	
		Converting mercury lamps and fluorescent lights to LED lights	
		Stop of operation of cooling tower in holidays and nights	Equipment Department
		Energy savings by renewal of transformers	
		Continuing to request and monitor environmental activities by suppliers	Purchasing Department
		Combining loads from multiple suppliers, and increasing the efficiency of collection schedules and routes	
		Checking environmental initiatives as part of subcontractor audits	Power Source Production Department
		Developing and expanding products subject to RoHS	
		Extending and promoting non-usage of environmentally harmful substances	
		Improving the efficiency of power supply systems	
Iwaki Plant	Environment	Waste water volume reduction due to improved process-wastewater recycling technology	Production Technology & Engineering Department
		Yield improvement activities (reduction of waste lead and renewal of inspection technology)	
		Reducing wastewater by saving water at scrubber	
		Energy saving at forming step (setting up TCS heater and warming cover)	
		Expanding the use of red lead (reducing charging electricity)	Production Technology & Engineering Department/ Production Department
		Reducing defects, improving process operating rates	
		Preparing and addressing mass production for new products	
		Trial of a storage battery system and operating 20 kW solar panels at the Iwaki Plant	UB Business Department
		UltraBattery adopted by new-car manufacturers (Delivery started in March 2014)	
		Launch new model for commercial UltraBattery	Alkaline Battery Department
		Commercialization of battery for Shinkansen trains (Delivery completed batteries for Hokuriku Shinkansen trains)	
		Reduction and effective re-use of process waste liquid (Effective use of waste in the process)	Development Department
		Commercialization of electricity storage system using lithium-ion batteries	
		Development of magnesium-air battery	Research Department
		Development of next-generation cell	
		Energy saving activities by converting to LED lighting	Equipment Department
		Installing and operating 753.2 kW solar panels	
	Community Involvement and Development	Conducting joint research with Fukushima National College of Technology	UB Business Department
		Conducting joint trials with Iwaki Photovoltaic Power Plant business union and Iwaki Meisei University	
		Cooperation with verification research provided by College of Engineering, Nihon University (Koriyama)	
		Conducting joint research with Tokyo Metropolitan University	Research Department
		Conducting joint research with Ibaraki University	
		Kyushu Bureau of METI Strategic infrastructural technology advanced support project (SAPOIN project)	

## Emissions and transfers of substances subject to PRTR Act

The following figures were taken in fiscal 2014 in accordance with the PRTR Act (Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof). We will continue to work on reducing emissions in the future.

Facility	Chemical	Total emissions (kg/year)	Total transferred (kg/year)
Iwaki Plant	Antimony and compounds	0.0	17.0
	Cadmium	1.0	3,417.0
	Ferric chloride	0.0	0.0
	Cobalt and compounds	0.0	86.0
	Lead compounds	5.0	3,933.0
	Nickel	2.0	3,873.0
	Nickel compounds	2.0	2,825.2
	Arsenic and inorganic compounds	0.0	2.0

Facility	Chemical	Total emissions (kg/year)	Total transferred
Imaichi Plant	Antimony and compounds	1.0	0.0
	Ferric chloride	0.0	0.0
	Toluene	2,161.0	0.0
	Lead compounds	62.0	167.0
	Arsenic and inorganic compounds	0.0	0.0
	Methylnaphthalene	8.0	0.0

\* Emissions...Substances emitted into the air or public waters  
Transferred...Subcontracted waste treatment

## Environmental accounting

### Environmental preservation costs for fiscal 2014

(Unit: Thousand yen)

Category		Details	Investment	Costs
Business area costs	Preventing pollution	Costs relating to the prevention of air pollution and water contamination	171,318	142,754
	Preserving the global environment	Costs relating to saving energy	53,385	9,390
	Recycling resources	Costs relating to waste disposal	0	44,400
Upstream/downstream costs		Costs relating to environmental preservation, aimed at minimizing environmental impact associated with our main business activities, at the procurement stages or after products have been shipped	0	0
Management activity costs		Costs relating to the maintenance of environmental management systems, environmental education for employees, and tree-planting activities onsite and in the local area	0	5,280
R&D costs		Costs relating to research and development, including products that help to preserve the environment	0	0
Social activity costs		Costs relating to off-site environmental improvement measures, including protecting the natural environment, planting trees, making areas more beautiful and preserving the landscape	0	0
Environmental remediation costs		Costs relating to the restoration of the natural environment	0	0
Total			224,703	201,824

\* Investment...Capital investment during fiscal 2014

Costs... Includes the cost of maintaining and managing equipment used as part of environmental measures, related personnel costs and depreciation

## Managing chemicals contained in our products

Our company's environment promotion department and materials department have been visiting major raw material manufacturers to hold discussions and information exchange on process confirmation procedures and hazardous substances contained in products.

We are cooperating in the confirmation and auditing activities performed by our customers concerning the status of control of hazardous substances in products. We are committed to effectively managing hazardous chemicals contained in all of our products.

We also manage chemicals contained in our products and provide information in accordance with legislation such as the Waste Electrical and Electronic Equipment (WEEE) Directive and the Restriction of Hazardous Substances (RoHS) Directive, particularly in Europe.

Article 6, Paragraph 1 of the WEEE Directive (2002/96/EC) requires companies to remove and separately dispose of any materials that could potentially have a negative impact on the environment from collected electrical or electronic equipment, before proceeding with any further treatment.

As batteries are included in the list of relevant materials, as specified in Annex II, this means that the disposal of batteries once they have been removed is subject to the Battery Directive.

The revised RoHS Directive (2011/65/EU) meanwhile clearly states that the Battery Directive takes precedence. The following extract is from Paragraph (14) of the preamble.

(14) This Directive should apply without prejudice to Union legislation on safety and health requirements and specific Union waste management legislation, in particular Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and Regulation (EC) No 850/2004.

Batteries are also exempted from the RoHS Directive under Paragraph (29) of the preamble to the new Battery Directive (2006/66/EC) issued on September 26, 2006, as stated below.

(29) Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment does not apply to batteries and accumulators used in electrical and electronic equipment.

With this mind, we make every effort to provide information on the basis that batteries are not subject to the RoHS Directive.

The Battery Association of Japan (BAJ) has published a paper setting out a similar position on its website.

<http://www.baj.or.jp/recycle/recycle09.html>

## New Iwaki Plant and new environmental facility



Solar panels on the roof of the Plant (Photo by Futaba Consultant Co., Ltd.)

Iwaki Plant has introduced production facility of new batteries for automobiles and started its operation utilizing the "Fukushima Business Investment Subsidy for Revitalization of Industries" and the "Subsidy for Domestic Location Promotion Projects" which were provided as a support system for companies to promote restoration and revitalization in Fukushima Prefecture that suffered widespread damage from the Great East Japan Earthquake and the Nuclear Power Disaster.

At the new plant line, we have strived to create comfortable workplace than ever. Mainly, on the work environment front, we adopted basically enclosure type sanitary facilities of local exhaust ventilation to take make-up






air effectively in each facility and achieved reducing energy loss at ventilation.

In 2013, we completed construction of a new recharging factory for automotive batteries. We installed south-facing solar photovoltaic panels with a power generation capacity of about 100 kW on the roof. On clear-sky days, the power generated from the solar panels covers part of the power used by the factory. In addition, we installed another 753.2 kW solar panels on other factory roof in December 2014, and started to selling electricity. We will continue to contribute to the society through the environmental load reduction activities such as endeavoring to spread environment-friendly renewable energy.

## Targets and results

In fiscal 2014, we carried out activities based on the following environmental targets.

 :Achieved  :Not achieved

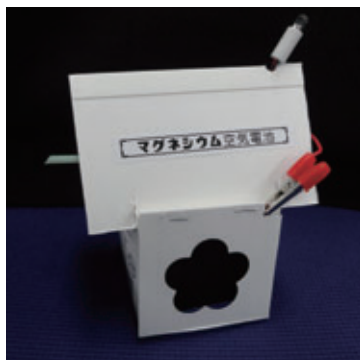
Policy	Targets (FY2014)	Summary of results	Assessment
Saving resources and recycling	Reduction of lead waste rate over 1% from the previous year	About 13% reduction of lead waste per unit of production	
	Recycling (including heat recovery) at least 95% of total waste	97.3% of total waste recycled in fiscal 2014	
Prevention of global warming	1% of electric power consumption rate in fiscal 2013	About 0.5% deteriorated from the previous year per unit of production	
	1% of CO <sub>2</sub> emissions per unit of production in fiscal 2013	About 0.86% decreased from the previous year per unit of production	
Eco-design activity	Commercialization of the products which support environmental load reduction More than 7 cases per year	8 products which support environmental load reduction have been developed	

## Education programs



Believing it is our mission as a storage battery manufacturer to develop human resources who can effectively utilize future energy, we have established education programs and provide ongoing support for the education of students and children who represent the next generation.

The environment promotion department started an ongoing program in fiscal 2012 to visit elementary schools and hold environmental classes. In fiscal 2014, we hold classes in three elementary schools in the city for 4th to 6th grade students. During the lesson, we showed the students various batteries and arranged a talk on "ways we will be able to use renewable energy in the future" and "global warming." At the end of the lesson, we also gave them a feel of the



shape of future energy through a practical workshop using a mini wind-power generator kit, while thinking about the merit and demerit of wind power generation.

In fiscal 2015, our fourth year of the program, we will enhance and refresh the class content. The



theme will be "what kind of products are environment-friendly?" In class, we will plan to let students make magnesium-air fuel cell, which we launch in

December 2014, using milk carton. After the cell completed, we will use cartoons to explain easily how electric current flows, etc. We will be glad if this class will be a chance for children who don't like science to be interested in and fond of science. The target is assumed to be 5th and 6th grade elementary school student. We would like to hold this environmental classes in elementary schools as many as possible.

UB Business Department accepted 3 students as interns in 2014. In this program, we provided not only knowledge about batteries but also occasion to think what really working means for them through some workshops and actual business operations.

We will proactively promote these kinds of educational activities to provide occasion to learn for as many students and children as possible.

### VOICE "After taking charge of internship program"

In four months internship program, students worked on one theme. I expected for students to learn not only this theme, but also various things such as difference between working adults and students or processes of work, etc., and utilize this experience for their study and job hunting from now on. I learned a lot myself such as difficulty in teaching and importance of communication. It was a valuable experience for myself.

UB Business Department  
**Atsushi Sato**



## Contributions to local communities

### Donated MgBOX to local authorities

Furukawa Battery donated MgBOX to Iwaki City and Nikko City.

We expect to make the best use of MgBOX for disaster prevention initiatives by local authorities among increasing awareness of disaster prevention.



Donated MgBOX to Iwaki City  
Mayor Shimizu (the first from the left)  
(Photo courtesy of Fukushima Minpo)



Donated MgBOX to Nikko City  
(Photo courtesy of Tokyo Shimbun)

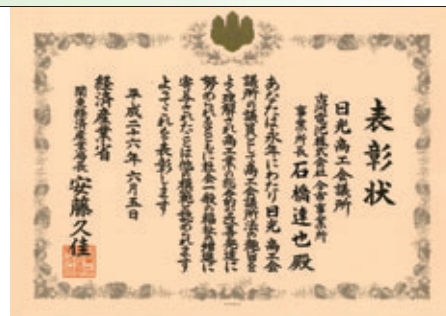
### Sending a positive message from Tochigi to the rest of Japan! Co-sponsoring Eco-Mori Fair 2014

Every year at our Imaichi Plant, we co-sponsor Eco-Mori Fair, an event organized by Tochigi Prefecture with the aim of raising awareness regarding environmental preservation and forestation.



### Awarded by Chief of Kanto Bureau of Economy, Trade and Industry

Imaichi Plant has been a member of Nikko Chamber of Commerce and Industry from 1982, and selected to be a regular member from 2013. We were recognized for our contributions such as maintaining employment for a long time for development of local economy in Nikko, contribution to local employment measures as Deputy Chairman of Industrial Department of Chamber of Commerce and Industry, and contribution to development of local companies as Chairman of Attracting Firms Coordinating Committee sponsored by Nikko City.



Award

### Employee lectured at "Iwaki Kokorozashi Jyuku"

Furukawa Battery participated in 3rd Iwaki Global Academy, "Iwaki Kokorozashi Jyuku" held on August 23 as a lecturer.

"Iwaki Kokorozashi Jyuku" is a program to foster global human resources involving in reconstruction for the future of Iwaki City.

62 middle and high-school students participated the program and 7 employees from our R&D Divisions separated one by one to each students' team and told their dream as researchers and technical experts such as about "batteries they plan to develop." After the lecture, each team of students and lecturers made presentations as an output, and it was a full of dream and hope into the future.

After the review, students saw and touched lithium-ion batteries for satellites, and the program became really lively.

We will proactively promote these kinds of educational activities.



At the lecture

## 20<sup>th</sup> competition for low-energy electric vehicles (WEM : World Econo Move)

### ➔ Overview of the competition for low-energy electric vehicles



Winning team and top teams for each category at Ogata Village At Solar Sports Line

This is 20<sup>th</sup> competition since the first competition was held for low-energy electric vehicles (2 hours' run).

The record of using same amount

of electrical energy in the same running time is deemed to be a development of energy saving device (electric vehicle). The further the distance extends, the faster it goes, so the more attention need to be paid to

safety measures. We held World Econo Move at Ogata Village to raise the awareness of electricity. This is a competition for low-energy electric vehicles that compete for the furthest distance in 2 hours, each using 100 Wh battery that is supplied by the competition organizer. The current champion team record is approx. twice as far as the initial year. This is because participants tackled the issues related to electricity seriously.

So far, electricity has been thought to be provided limitlessly. However, even surplus power at nights is poor now, the way of thinking that we need to control and monitor supply and demand of electricity will take root. Energy management system (EMS) which visualize electricity usage and control generators and storage batteries will rapidly spread as well.

### ➔ World Econo Move

Electric vehicle low-energy races are conducted at various locations, and a total of 5 Rounds were held in 2014. Each competition sets its points, and the Grand Prix Ceremony is held at Tokai University's Takanawa Campus as part of a seminar on making electric vehicles such as solar cars.



Scene of the final race

## Sponsoring various sports



H.C. Tochigi Nikko Icebucks, the first championship win (Photo courtesy of H.C. Tochigi Nikko Icebucks)



Game of Tochigi Soccer Club

We are a sponsor partner of the "Waku Dream Seats" and invite children to matches of the ice-hockey team the H.C. Tochigi Nikko Icebucks. And the H.C. Tochigi Nikko Icebucks won 82nd All Japan Ice hockey Championship for the first time.

The team's first championship win in 16 years! Brilliant achievement in 52 years' team's history from Furukawa Electric Ice-hockey Team.

In addition to this, Furukawa Battery is an official partner of Tochigi Soccer Club, and also assisting sponsor of Japan Professional Football League JEF United Ichihara Chiba. Also we support sports for citizen such as Iwaki Sunshine Marathon and Nikko Highway Marathon. We continue to support them for regional sports development.

## Sponsor of the 2014 Yokohama ITU World Triathlon

We sponsored the 2014 Yokohama ITU World Triathlon that was held between May 17 and 18, 2014 to support the vitality of sports in Yokohama, where Head Office is located.

In Yamashita Park where starting and finish lines located, there was an EXPO area. And there many attended including Iwaki City and our employee as volunteers in a support booth set for three consecutive years for the Great East Japan Restoration to help for visitors to have a cheerful time.



The scene of the race © Satoshi TAKASAKI/JTU



Volunteers



We will strictly comply with laws and corporate ethics and continue to take up the challenge of achieving future growth

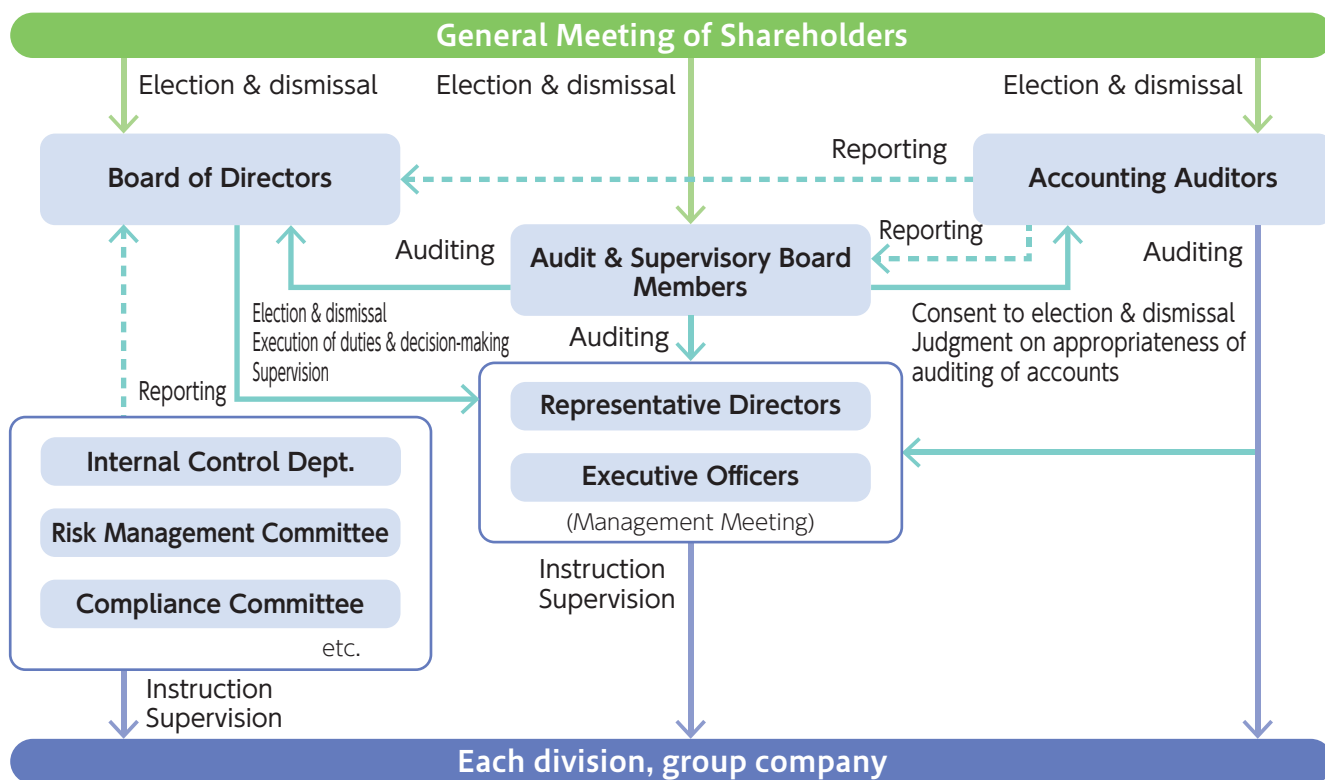
## System to fulfill corporate responsibility

### Corporate Governance

#### ⇒ System of Corporate Governance

In June 2012, we introduced the executive officer system to improve the speed and efficiency of management. We separated the management oversight functions from the business execution functions, positioned the Board of Directors as the institution to make management decisions and supervise the execution of duties, separating these functions from the business execution functions. The Company operates a system under which management decisions are made with sufficient deliberation at meetings of the Board of Directors, which are held regularly once a month and attended by eleven directors

including two outside directors and four audit and supervisory board members including three outside auditors. It also operates a system under which an extraordinary meeting of the board of directors can be convened whenever necessary to deal with any issues. To enhance the audit function, we have in place a system under which we appoint audit assistants to support the auditing duties of audit and supervisory board members. We hold management meetings and business liaison meetings attended by directors, executive officers and full-time auditors to improve the speed and efficiency of execution of duties.



#### ⇒ Internal Control

We established Internal Control Basic Rules for the purpose of pursuing efficiency and effectiveness in the business operation of the Furukawa Battery Group, compliance with relevant laws and ordinances, ensuring the reliability of financial reporting, seeking to preserve assets, and helping maintain and

enhance corporate value.

We also established institutions such as the Internal Control Department, the Risk Management Committee and the Compliance Committee for the same purpose, and are working to put internal controls in place.

#### ⇒ Basic Policy on the Elimination of Antisocial Forces

Furukawa Electric Co., Ltd. has set forth the Furukawa Electric Group CSR Code of Conduct as a code of conduct for its group companies. This code clearly specifies that Group companies should adopt a resolute approach to antisocial forces.

Furukawa Battery's Board of Directors determined that Furukawa Battery shall adopt a resolute approach to any antisocial forces that threaten the safety and order of society, and its Compliance Rules stipulate it as compliance conduct guidelines.

# Ensuring compliance of corporate ethics

## Fair procurement

### → Promoting CSR procurement in cooperation with suppliers

We form strong partnerships with our suppliers and procure raw materials, parts, equipment and other supplies in accordance with the following basic

procurement policy, to ensure that both sides develop together in a fair and healthy environment and fulfill their social responsibilities.

### → Basic policy on CSR procurement

- (1) We comply with laws and regulations, and public morals.
- (2) We place importance on mutual understanding and a trusting relationships based on good partnerships with all suppliers.
- (3) We always deal with all suppliers equally and fairly.
- (4) When selecting suppliers or products to be procured, we do so by evaluating the quality of the material, price, reliability of management, technological development

capability and environmental considerations, and by following the appropriate procedures.

- (5) We sincerely work to meet the requirements of our suppliers and provide them with information required for the deal.

At the same time, we strictly manage and keep confidentially any confidential business information that we requested and received from the supplier.

#### ■ Procurement guidelines

##### Social responsibility

- We aim to help create a genuinely fulfilled, sustainable society through our procurement activities.
- We engage in procurement activities based on respect for human rights, working conditions, health and safety.
- We promote environmentally friendly procurement.
- We implement social contribution initiatives aimed at living in harmony with society.

##### Fair procurement

- We select suppliers fairly, in accordance with reasonable criteria based on free competition, including the quality of the goods supplied, price, delivery date, corporate stability, technical development capabilities, manufacturing and supply capabilities, and environmental initiatives.
- We give suppliers the opportunity to compete on a level playing field, no matter where in the world they are based.



##### Legal compliance / ethics

- We make sure that our procurement activities comply with the spirit of the law and social norms.
- We will never disclose confidential information obtained from suppliers during the course of our procurement activities. Similarly, we will never infringe on intellectual property or other third-party rights.
- We do not engage in reciprocal trading, aimed at selling our own products and services, as part of our procurement activities.
- We do not accept hospitality, gifts, money or other tokens provided by suppliers with the aim of securing an unfair advantage.

### → Green procurement

Acknowledging our responsibility to contribute to the creation a recycling society, we actively promote green procurement, which entails procuring raw materials and components that have a small burden on the environment. In addition to components and semi-finished goods such as modules, the scope of our green procurement policy also strictly prohibits the use of CFCs and substitute CFCs such as that contained in

some adhesive tapes and adhesives, not just respect to the content of the components themselves, but also to indirect materials and the manufacturing process.

Also, aiming for thorough procurement control, we submit a green procurement inspection sheet created to our specifications to all suppliers upon receiving delivery of components, etc.

## Education about transaction with subcontractors

We implement employee education about subcontract transaction to establish sound relationship with subcontractors through fair transaction based on compliance. In 2014, Iwaki Plant implemented education for new

employee and Imaichi Plant invited outside lecturer for 45 employee of related departments to thoroughly notify them of the contents of Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors.

## Complying with the Furukawa Electric Group CSR Code of Conduct

One of the Furukawa Battery Group's Management Principles is to "live up to the expectation and trust invested in us by society, with fairness and integrity." To put that into practice, our Group Credo states that each and every one of our employees and executives must "maintain high ethical standards, and value honesty and integrity above all."

To enable us to carry out corporate activities in accordance with those ideals, we have set out and comply with the Furukawa Electric Group CSR Code of Conduct, as a set of basic guidelines telling employees and executives how they should behave from the

standpoint of corporate social responsibility (CSR).

We conduct follow-up activities on a regular basis, by asking all employees to review their performance based on the "Furukawa Electric Group CSR Code of Conduct" each year, and then giving them the opportunity to discuss the results with their head of department. We are committed to working as a team here at the Furukawa Battery Group, so that we can create open workplaces based on a constant awareness of compliance, and ensure that each and every one of our employees is living up to the serious expectations of our stakeholders.

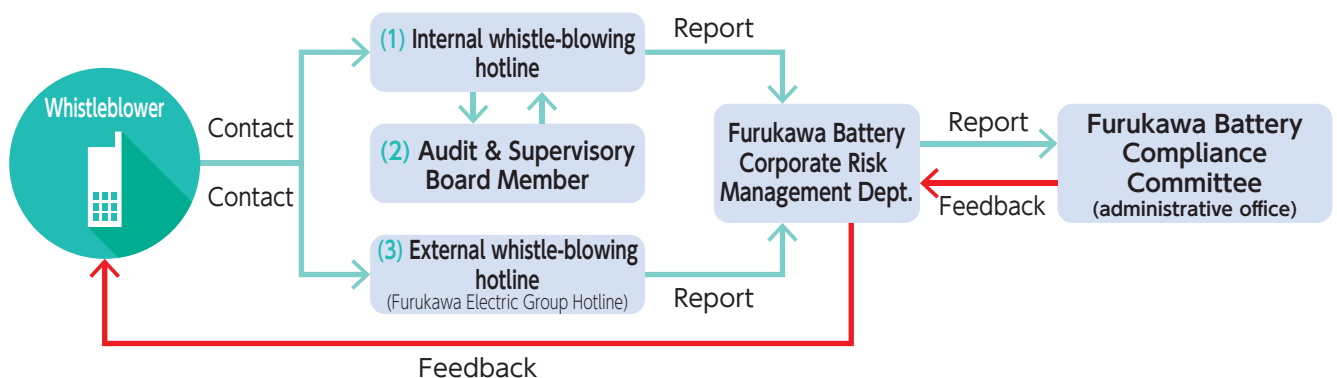
## Establishing a whistle-blowing contact system

In an effort to prevent compliance violations, we have established a system that enables employees and executives to report violations, or suspected violations, within Furukawa Battery or any group company directly to the Compliance Committee.

We offer three separate points of contact; (1) an internal whistle-blowing hotline, (2) anonymous contact with a full-time Audit &

Supervisory Board Member, or (3) an external whistle-blowing hotline enabling employees to report violations anonymously (Furukawa Electric Group Hotline).

Information from all three sources is then collected by the Corporate Risk Management Dept., enabling us to respond to incidents as soon as they are reported, whilst also taking sufficient care to protect the whistleblower.



## Information security system

Furukawa battery group has set the basic information security policy and plays the important role in social responsibility by implementing proper information management and utilization in accordance with the policy.

We have also established an information security management system and formulated an information security risk management plan, so that we can actively implement information security measures in line with social changes.

### ⇒ Example of security measures

#### ■ PC management

We have introduced virus countermeasure software to each client PC. In addition, we have established information asset management system to comprehend PC's situation of utilization. We are working on compliance in accordance with information security policy and manage software, hardware, and license effectively.



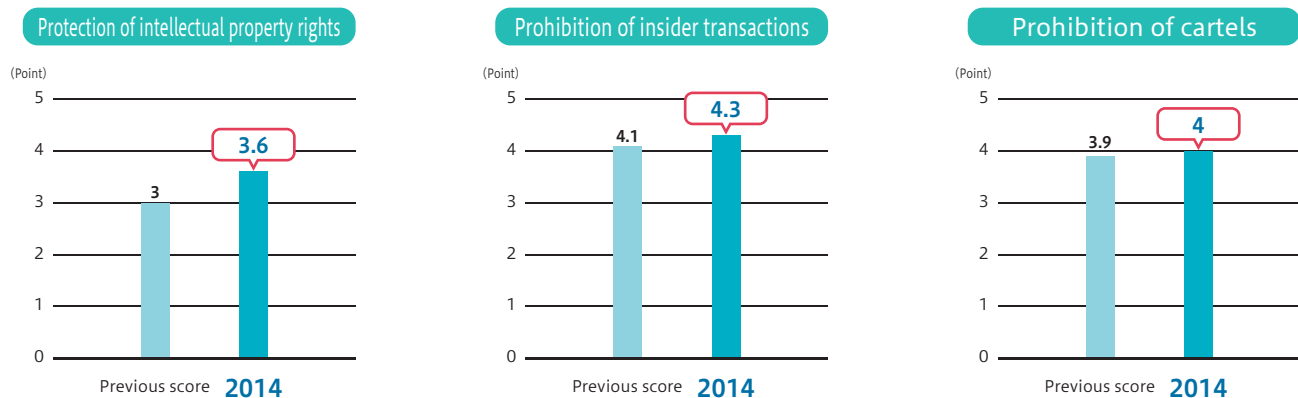
At information security seminar

## Compliance awareness survey

We conduct compliance awareness survey every two years and assess how employee has general perception of compliance through seminars and notifications so far and to know future issues to be strengthened. Based on the previous survey, we implemented seminars as to copyright and bribery in 2013, and the result of 2014

survey showed slight improvement in awareness (see the graph). The survey so far only conducted to employees accessible to the web. We have extended the scope of the survey to all the employee of the Group by receiving response of the survey in paper. We will continue to conduct regular survey to enhance compliance.

### → Degree of penetration of compliance awareness



## Participating in industry shows



Our booth at the exhibition

From February 25 to 27, 2015, we took part in the International Rechargeable Battery Expo (Battery Japan) at Tokyo Big Sight. Based on the concept of "realizing environment-friendly society," we exhibited our products such as UltraBattery, and MgBOX, magnesium air fuel, to Storage Battery System Area, Power Generator Area, Emergency Power Supply Area, and New Technology Area and we strove to promote our research and development into our company's storage battery technology to visitors.

## Selected for the Calendar Exhibition

2015 Calendar "Cars far away" (American edition) from Furukawa Battery was selected for "66th National Calendar Exhibition" sponsored by Japan Federation of Printing Industries and Japan Printing News Co., Ltd, out of more than 700 calendars.

We selected best classic cars owned in Japan and adopted illustrations newly drawn by Eri Nakada, young illustrator, and made this original calendar with corporation of Motor car Museum of Japan and Japan Classic Car Association.

The first edition was English cars edition, the second was Italian cars, and the third, selected this year, was American cars.



Award



# FOR PEOPLE

Motivated employees are our strength

We aim for a constant betterment of workplace environment with our motivated employees

## Initiatives to boost human resources

### Basic philosophy on human resource development

In 2014, we established Employment and Education Group in Human Resources and General Affairs

Department to prepare the structure for more specialized human resources education.

#### ■ Training conducted in fiscal 2014

Newly appointed manager training

New employee follow-up training

Third-year employee training

New employee training

Second-year employee training



At the New employee training in fiscal 2014

#### ⇒ Continuity for the future

As stated in our long-term management vision, we will continue to train and foster our human resources

by positioning it as our company's most important investment.

#### ⇒ Education Office's guiding principles

We established the Education Office's guiding principles based on our company's corporate philosophy: "Drawing on many years of expertise in battery technology, the Furukawa Battery will contribute to the realization of a rich and sustainable society through continuous technological innovation." Specifically, our guiding principle for education is "we are challengers." We provide our employees with the support they need to improve their individual

skills, through training courses for instance. We have put in place an educational framework that enables every employee to contribute to the company's growth with a strong desire to take on new challenges and a broad outlook. We improve our training courses every year, to enable employees to acquire the skills they need based on vocational qualifications and recommendations, and continue to raise awareness and motivation with regard to goals and targets.

### Employment policy and recruitment activities

We make every effort to provide long-term stable employment, by creating working environments and mechanisms to ensure that employees feel motivated and can do their jobs with confidence. To cope with the employment-related problems due to aging society and dwindling

birthrates in Japan, we offer a variety of different working styles every year depending on current conditions, ranging from graduate and mid-career recruitment to disability employment, reemployment of retired workers, assignment to other Group companies and temporary employment.

#### ⇒ Recruitment of new graduates - the leaders of the next generation

As a member of the Furukawa Electric Group, we participate in the Furukawa Electric Group Forum. We also visit individual universities to give presentations on the company and make a concerted effort to secure human resources. We recruit individuals based on their personal qualities, regardless of nationality, and place a particular emphasis on interviews. In fiscal 2014 as one of the social contribution activities, Imaichi Plant and Iwaki Plant accepted interns.

#### ⇒ Mid-career recruitment with an emphasis on ability

In an increasingly globalized world, we need human resources with advanced expertise. We recruit individuals with experience and expertise across a wide range of professions. In fiscal 2014 we employed two Indonesian as full-time worker in response to the establishment of PT. FURUKAWA INDOMOBIL BATTERY MANUFACTURING in Indonesia in 2013.

(As of the end of March 2015)

■ Employment figures	Total/Average		Total/Average
Employees	887	Graduate recruits (FY2014)	21
Average age	41.4	Mid-career recruits (FY 2014)	23 (+ 2 transfer)
Average length of service	15.8 years		

## Support systems for a diverse range of working styles

We respect our employees' individual lifestyle choices and provide a range of support systems to enable them

to strike a work-life balance, between their job and their private life.

### ⇒ Accrued leave system

If employees have any days of annual leave remaining at the end of the year, they can carry them over up to 25 days, for a maximum period of five years. They can then use accrued leave if they need to care for or look after a family member, or undergo treatment for personal injury or illness. In fiscal 2013, we enhanced the scope of the system to include self-enhancement leave and volunteer leave.

### ⇒ Continuing employment contract system

If employees wish to continue employment after reaching retirement age (60 years old), they may sign a continued employment contract with the company. Although they have to meet certain conditions from the second year onwards, it is possible for employees to work through to the age of 65. We also organize "silver seminars" for employees who are approaching retirement age, to give them a chance to think about planning their lives after retirement.

### ⇒ Improving support systems

We have introduced a number of systems to help employees caring for children or family members to strike a balance between their job and their care responsibilities, including our childcare and family care leave systems, reduced working hours, and

nursing care leave. Although these support systems have all been set out in accordance with the law, we are continuing to explore ways of improving our systems in fiscal 2015, so that we can provide employees with an even more pleasant working environment.

#### ■ Summary of support systems

	System	Details
Child care	Childcare leave	• Available to employees with a child aged up to one year old (or up to one year and six months in certain circumstances)
	Reduced working hours	• Option to reduce working hours, providing that the employee still works for six hours a day • Available for preschool children only
	Child nursing care leave	• Leave to provide nursing care for a sick or injured child (preschool children only, five days a year) Up to ten days a year if there are two or more children
Family care	Family care leave of absence	• Up to one calendar year for each family member requiring care
	Reduced working hours	• Option to reduce working hours, providing that the employee still works for six hours a day • Up to one calendar year for each family member requiring care
	Family care leave	• Leave to provide care for a family member requiring care (five days a year) • Up to ten days a year if there are two or more family members requiring care

### ⇒ General business owner action plans

Furukawa Battery have established, filed, published and notified general business owner action plans for all the employee to be able to fully demonstrate their abilities by creating a safe and comfortable work environment where they can work and raise their children at the same time based on

next generation nurturing support measures promotion law.

The specific measures are posted at the website by Ministry of Health, Labour and Welfare. (<http://www.ryouritsu.jp/>) We will strive to achieve the target by taking measures in action plans.

#### VOICE Childcare leave system User's comments

Several months ago, I visited customers, but now, I am really busy every day as a new mother, and my life has drastically changed to child-centered life after the birth. I can watch my child's remarkable growth taking my sufficient time to child-rearing using childcare leave system. I am really grateful to my colleagues who have been supporting me before the birth and this system. When I come back to work, I want to do my job effectively while caring my child at the same time and try to give results in limited time. In the future I would be happy if my child would say to me "I love my working mother."

Industrial Machinery  
Division 1  
**Yuka Kato**



## Cooperation to vocational training at special education schools

At Imaichi Plant, we accept trainee as one of the vocational training at special education schools making and implementing the training plan according to the leaning level of students. This activity was introduced in public relations of Tochigi Prefectural Board of Education and training at the workplace was broadcasted by Tochigi TV.

Local companies' business is introduced to students as a school activity at special education schools and we have been supporting it in terms of welfare and employment. We will continue to provide work or materials to schools in discussions with teachers in charge of training.



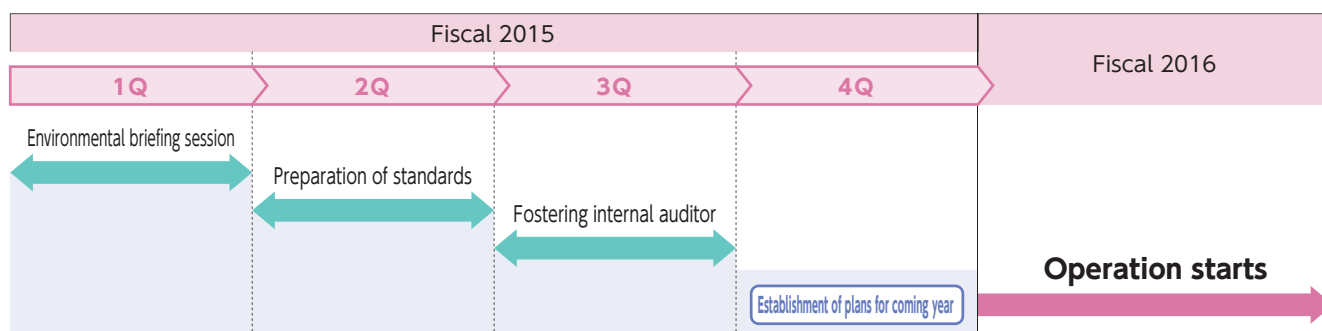
Scene of packaging electrolyte for export

## Initiatives to expand ISO14001 outside certification

We obtained ISO14001 (Environment management system) at our production base, Iwaki Plant and Imaichi Plant. Recently, however, we are working on the products which can contribute world environment as a companywide initiative, and departments other than production division are also deeply involved especially for the products such as

downsizing and lightening products, batteries for idle-stop cars and accessory for hybrid cars. In response to the revision of ISO standards, we will change the scope of registration to match with the scope of ISO9001 (Quality management system) while integrating the both system and aim to manage them effectively.

### ➔ Schedule



# Initiatives to create a better workplace

## Company-wide health and safety activities

To ensure work environment where every one of our employees can work safely, we are promoting this activity under the slogan "Put safety first, keep rules and ensure zero accidents."

Every year, we set out a company-wide policy on health and

safety activities where we define the key priorities and set targets. We strive to improve workplace environment by reading safety slogan aloud together every day led by President himself.

### ●FY2015 company-wide policy on health and safety activities

#### 1. Basic policy

Build a culture that puts safety above all and create safe, comfortable and pleasant workplaces

#### 2. Key priorities

- (1) Achieve fundamental safety to reduce risks
- (2) Educate and raise awareness toward safe worker
- (3) Improve working environment and manage and maintain it
- (4) Notify safety and health standard and operate its structure
- (5) Maintain and improve employee's health

### → Structurally reinforcing health and safety

We hold Central Health & Safety Committee having President as Chairman twice a year and discuss about company policy and companywide measures addressing safety and health. In addition, labor leaders patrol factory twice a year. Plant Directors (Health and Safety Officers) hold Health and Safety Committee every month and implement follow-up of health

and safety activities. Furthermore, each plant hold Divisional Health & Safety Meeting every month.

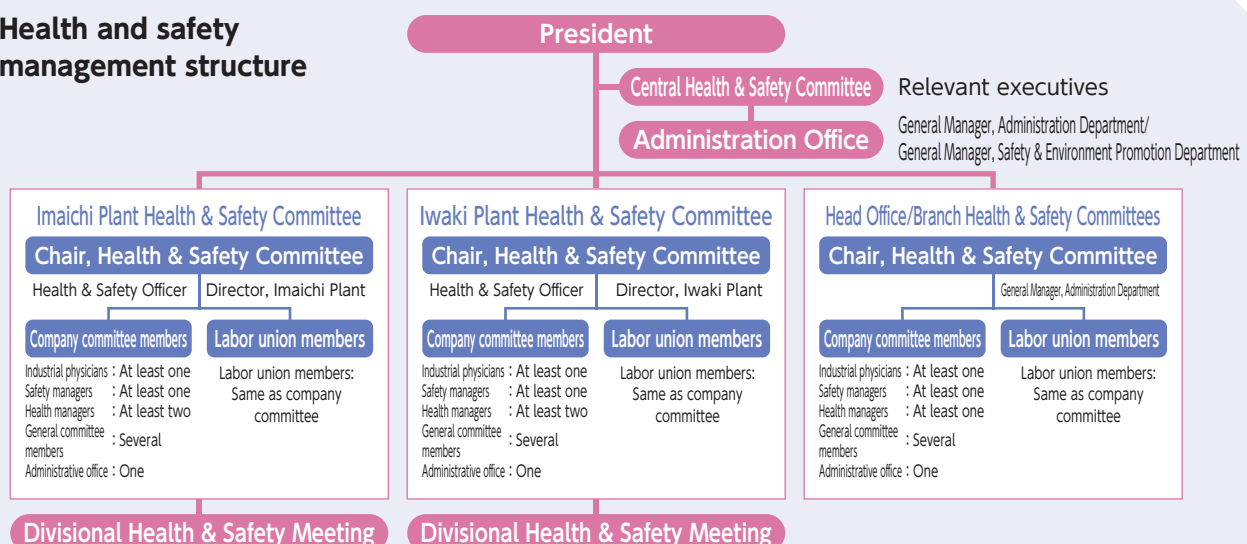
In addition, Manufacturing, Facility and Environment Divisions collaborate to make comfortable workplace without mask by reviewing local exhaust ventilation or duct hood.

### → Initiatives to achieve zero accidents

Aiming to realize zero serious workplace accidents, we implement risk assessment not only of new facility but also of existing facility to specify and reduce risks. Furthermore, we have begun renewal of

operation manual to address safety issues. In addition, we implement safety measures such as KY activities to find risk resources in workplace, getting all employees to submit "near-miss" reports.

### ●Health and safety management structure



## Mutual trust between labor and management

With the exception of managerial staff, retired workers (with continuing employment contracts), and employees on fixed-term contracts, all employees at Furukawa Battery belong to a labor union. Communication between labor and management is crucial in order to facilitate business management, expand the company's operations and improve working conditions. That is why we organize central management briefings twice a year, to provide explanations on subjects such as our business plans and results. We also organize divisional labor-management meetings at the divisional level, to go through monthly profit and loss figures, as well as monthly Labor-Management Subcommittee meetings to resolve issues. Labor-management health and safety patrols meanwhile take place at each of our sites twice a year. We continue to provide opportunities for dialog, so that we can keep on improving mutual trust between labor and management at every level.



Health and safety patrol

## Participated in greening activity with local children



Group photo of greening activity participants



At the scene of planting seeds using slingshots

Siam Furukawa participated in greening activity in nearby forest after visiting water generation plant at Lamtakhong Dam in Nakhon Ratchasima Province in May 2014. About 50 employees participated, planted 75 trees and 750 seeds using slingshots to forest under a cliff. The company is planning to participate in such local activities to have further relationship with local community.

## Supported English education at local elementary school

Siam Furukawa held English classes at local elementary school to support English education for children. Our employees taught English at Sunmaka Boknoisamakkee elementary school near the company on Saturdays to 19 students from 4th to 6th grade from June to October, 2014.



At the class

Through this class, students improved their English to be able to introduce themselves in English and we invited them to our company in November and gave them completion certificate.

We are very glad to be able to contribute to English education at local elementary school. We will continue these supports to contribute to local society.



Group photo at presentation of completion certificate

## Maintaining relations with the company after retirement

We run the Furukawa Battery OB Society for former employees who have retired. The society holds an annual meeting in October every year at three areas of Yokohama, Nikko, and Iwaki. At the meeting we confirm the situation of OB and celebrate their longevity, and look through the society's financial reports, etc. The annual meeting is followed by a reception, during which members can get to know one another better and get the latest information on the company.



Furukawa Battery OB Society Annual Meeting 2014 at Iwaki

## ▶ Comments from colleagues in the workplace

### VOICE Ensuring our equipment be functional in the case of emergency

Ryou Umeno is a freshman who is mainly in charge of inspection. He goes to various places such as buildings, factories, and hospitals to inspect storage battery systems. Storage battery system is regarded as very important, and it should work when commercial power supply is down due to power failure or fire, etc. Regular maintenance inspection is necessary for the normal backup operation in the case of emergency. At the inspection, performance measurement of rectifiers and batteries is implemented and in case of any failure inspected, he recommends repair or renewal of facilities to make sure that facilities can be used in perfect condition.

Construction Management Division,  
Construction Department, Kansai Construction Group  
**Ryou Umeno**



At the inspection

### VOICE In order to complete the mission

I am on a long-term business trip to PT. FURUKAWA INDOMOBILE BATTERY MANUFACTURING (FIBM), Indonesian subsidiary established in December 2013 to support Materials Department.

My mission is to support procurement of materials. In addition to that, I am in charge of establishment of business flow and cooperation and adjustment between Japan and Thai subsidiary. Sometimes I get confused because it is my first experience to establish a factory from the very beginning outside Japan, but I strive to solve daily issues cooperating with local staff. I will do my support work with my full effort for FIBM factory getting on track early and "FB" becoming popular too here in Indonesia.

Purchasing Department  
**Goro Wakita**



Commemorative photo with local staff at the company new plant

# Financial Highlights

## → Five-Year Consolidated Financial Highlights

In the storage batteries industry, the environment surrounding storage batteries has changed greatly, with intensifying competition to achieve greater fuel economy in automobiles and rising expectation for renewable energies due to attempts to tackle global environmental problems and the problems resulting from the nuclear accident and other factors. In this environment, the Furukawa Battery Group is responding to the intensifying competition to achieve greater fuel economy in automobiles by constructing a new building for charging automobile batteries in the Iwaki Plant, and introducing new equipment in order to improve performance and quality and improve production efficiency. Regarding renewable energy, we are proceeding with the development of cycle-use lead-acid storage batteries for use in industry, in order to meet the requirements of the role expected of storage batteries. Furthermore, from December 2014, we commenced sales of the Magnesium Air Battery

“MgBOX” for Emergencies that we jointly developed with Toppan Printing Co., Ltd., the first in the world to be made with a paper container.

In addition, we have furthered the Group's overseas expansion by starting production and sales in the automobile battery production company and sales company that we established last year in Indonesia as joint ventures with an INDOMOBIL Group company.

### 【Dividend for Current and Next Fiscal Years】

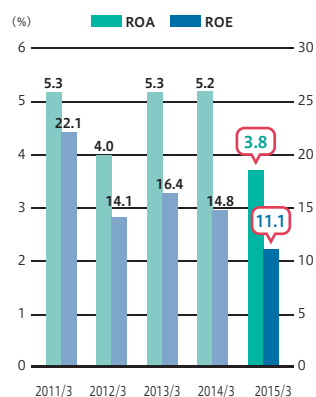
We plan to increase the year-end dividend by one yen per share from the previous year to 7 yen per share for the fiscal year that ended in March 2015 to express our appreciation to the shareholders for their support. For the fiscal year ending in March 2016, although the operating environment is expected to remain challenging, we plan to pay a year-end dividend of 8 yen per share.

### ●The Furukawa Battery Co., Ltd. and its consolidated subsidiaries

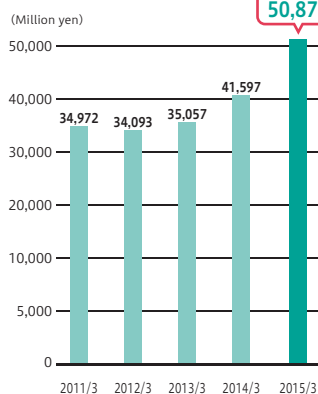
(Fiscal years ended March 31) Unit: Million yen

	FY2011	FY2012	FY2013	FY2014	FY2015
Sales	43,204	42,064	44,380	49,556	53,903
Operating income	3,385	2,494	2,731	2,673	2,441
Ordinary income	3,364	2,604	2,870	2,882	2,702
Current net income	1,843	1,365	1,847	1,990	1,756
Capital investment	1,429	1,789	1,896	5,533	8,805
Depreciation expense	1,661	1,661	1,705	1,620	1,789
Research and development expense	1,120	1,547	1,518	1,504	1,548
Cash flow for business operations	4,652	628	3,606	3,702	3,844
Cash flow for investment activities	-1,717	-1,699	-1,974	-5,737	-9,081
Cash flow for financing activities	-2,583	-674	-1,131	2,246	4,354
Total assets	34,972	34,093	35,057	41,597	50,879
Interest-bearing debt	7,212	6,815	5,992	8,583	12,320
Equity capital	9,195	10,170	12,360	14,558	17,087
Equity capital ratio	26.3%	29.8%	35.3%	35.0%	33.6%

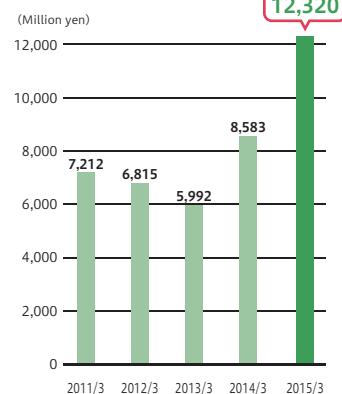
### Return on Total Assets (ROA) / Return on Equity (ROE)



### Total assets




### Interest-bearing debt

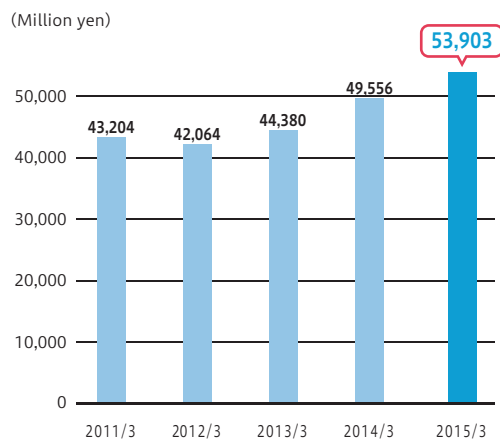


\*1 Total assets and interest-bearing liabilities increased due to starting production and sales in the automobile battery production company and sales company that we established last year in Indonesia as joint ventures with an INDOMOBIL Group company.


## Sales

**53,903 million yen**  
(8.8% increase) 

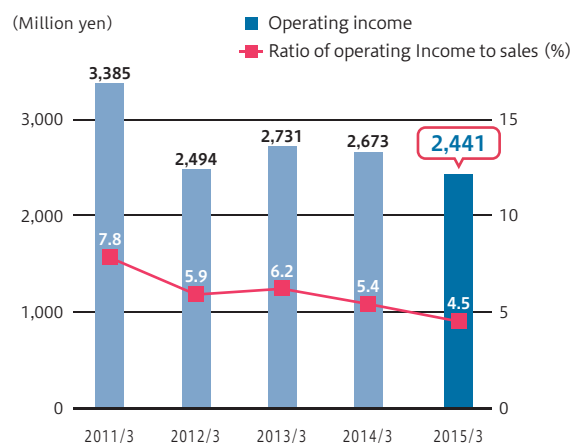
Consolidated sales increased by 4,347 million yen, or 8.8%, to 53,903 million yen. Continuing on from the previous year, there were strong sales, mainly at our overseas subsidiaries, of automobile-use batteries as well as strong overseas sales of industrial batteries for railways.



## Operating Income / Ratio to Sales (%)

**2,441 million yen**  
(8.7% decrease) 

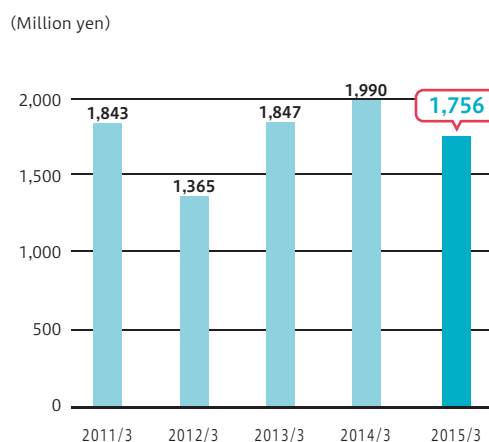
Rising prices for lead, the Group's main raw material, and an increase in depreciation and amortization drove up the cost of goods sold and there were increases in promotion and advertising expenses primarily due to increases in overseas sales. As a result, operating income decreased from 2,673 million yen to 2,441 million yen.



## Current Net Income

**1,756 million yen**  
(11.7% decrease) 

We recorded the granting of 2,615 million yen as a subsidy related to Fukushima Prefecture's "Gambaro! Project to Support Fukushima Industrial Recovery and Location of Companies in Fukushima" under extraordinary income (State subsidy) and moreover directly deducted the said state subsidy from the acquisition cost of buildings and machinery, equipment, etc., recording 2,612 million yen as "loss on reduction of noncurrent assets." After the deduction of taxes, net income was 1,756 million yen, compared with 1,990 million yen one year earlier.



## [Amount of capital investment]

Capital investment increased mainly due to construction of a new building for charging automobile batteries in the Iwaki Plant, and introduction of new equipment and starting production and sales in the automobile battery production company and sales company that we established last year in Indonesia.

\*2 We project that interest-bearing liabilities reduces by about 2.6 billion yen, equivalent amount of the subsidy in next fiscal year.

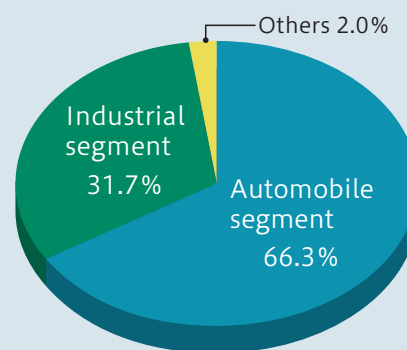
# Financial Highlights

## ➔ Results in each segment

The headquarters of business operations are at the Furukawa Battery head office and there are separate organizational units to oversee operations for specific products and services. Each unit establishes comprehensive strategies for Japan and other countries for its products and services and performs operations based on these strategies.

Consequently, business segments are based on products and services in accordance with these administrative units. Operations are divided into two reportable segments: automobile and industrial.

### ● Breakdown of Consolidated Sales

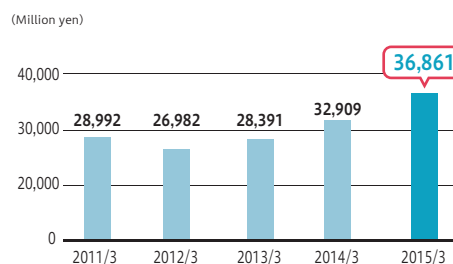


### Automobile segment

Manufacture and sale of storage batteries for automobiles and motorcycles

sales **36,861** million yen (12.0% increase) ↗

Sales increased by 3,951 million yen, or 12.0%, to 36,861 million yen and segment income decreased by 198 million yen, or 16.9%, to 972 million yen. This was mainly because there was large growth in overseas sales of replacement batteries and domestic sales of batteries for new cars but the cost of goods sold increased due to rising prices for lead, the main raw material for batteries, and an increase in depreciation and amortization.

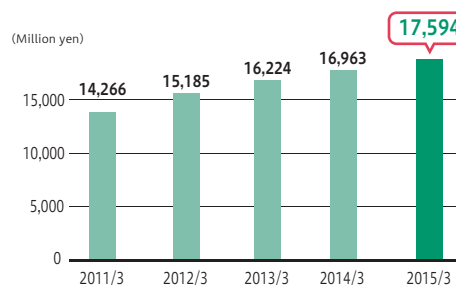


### Industrial segment

Manufacture and sale of storage batteries for the operation of equipment, UPS (uninterruptible power system) and other products

sales **17,594** million yen (3.7% increase) ↗

Sales increased by 631 million yen, or 3.7%, to 17,594 million yen and segment income increased by 22 million yen, or 1.7%, to 1,363 million yen. Continuing on from the previous year, growth was attributable mainly to large growth in sales of alkaline batteries for railway use, which contributed to profit and loss.



## ➔ Overseas Sales

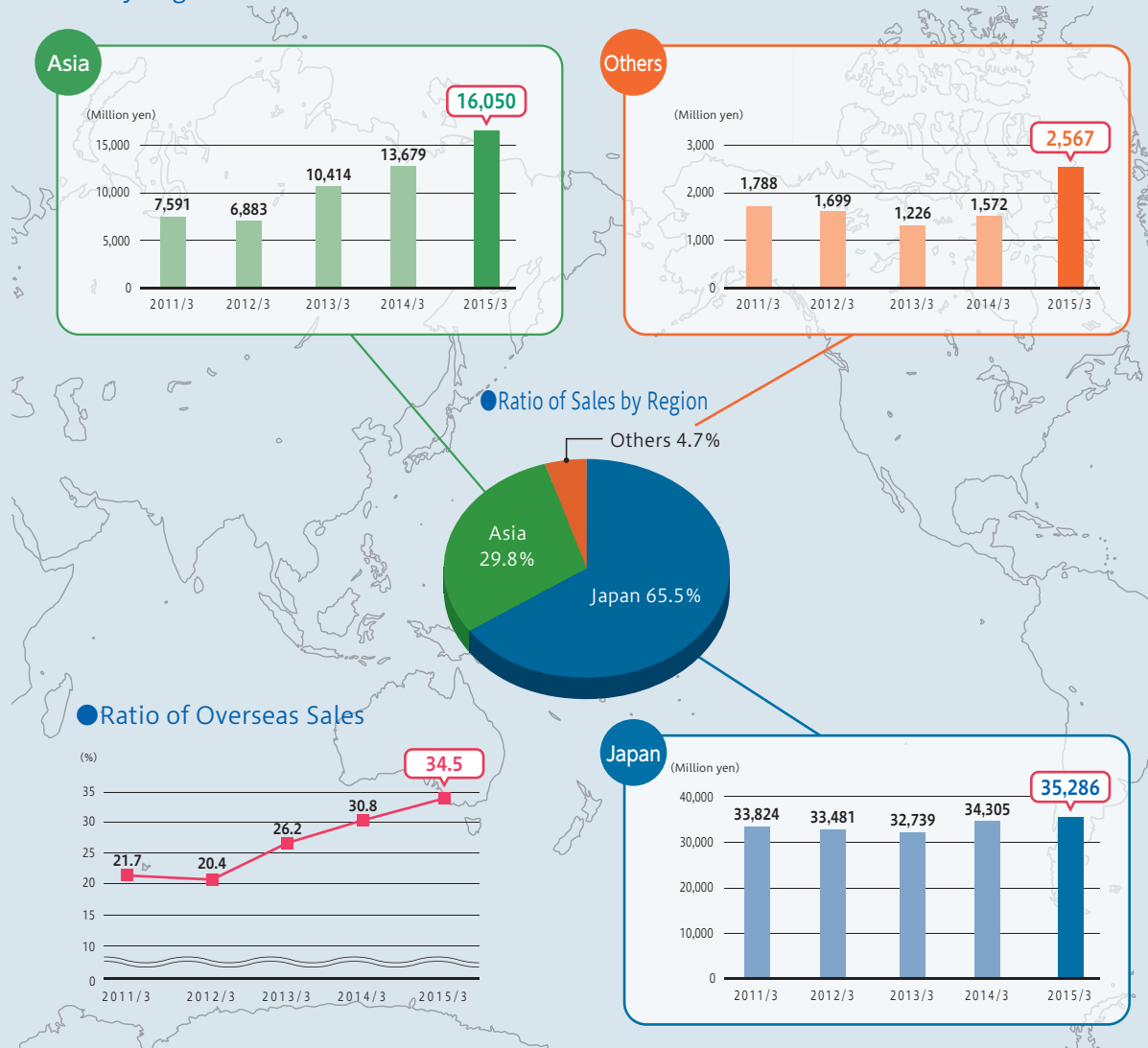
Overseas sales were 18,617 million yen. Our overseas sales are generated by lead-acid batteries for automobiles and motorcycles which are sold in non-Japanese regions. The batteries are produced by our overseas subsidiary, Siam Furukawa and us, Furukawa Battery.

### ● Overseas Sales / Ratio of Overseas Sales

Unit : Million yen

	FY2011	FY2012	FY2013	FY2014	FY2015
Sales	43,204	42,064	44,380	49,556	<b>53,903</b>
Sales by region					
Japan	33,824	33,481	32,739	34,305	<b>35,286</b>
Asia	7,591	6,883	10,414	13,679	<b>16,050</b>
Others	1,788	1,699	1,226	1,572	<b>2,567</b>
Ratio of overseas sales	21.7%	20.4%	26.2%	30.8%	<b>34.5%</b>

### ● Sales by Region



# Profile of Furukawa Battery

Helping to create a better society through technology and products people can trust

## ➔ Corporate Profile

Corporate Name The Furukawa Battery Co., Ltd.

Head Office Hoshikawa SF Building, 2-4-1 Hoshikawa,  
Hodogaya-Ku, Yokohama City, Kanagawa,  
240-0006 Japan

Established September 1, 1950  
(Spun off from Furukawa Electric Co., Ltd.)

President Katsutoshi Tokuyama

Paid-in Capital 1.64 billion JPY (As of March 31 2015)

Number of Employees 2,188 [Consolidated],  
887 [Non-Consolidated]  
(As of March 31, 2015)

### ●Major Products

#### Lead-Acid Storage Batteries:

For automobiles, motorcycles, electric powered vehicles, trains, aircrafts, ships, emergency lighting, telephone switchboards, information devices, uninterruptible power supplies (UPS), security systems, new energy power, power storage systems

#### Alkaline Storage Batteries:

For measurement instruments, space satellites, fire alarms, emergency broadcast systems, shutters, aircrafts, railway cars, etc.

#### Power Supply Systems:

DC power supply systems, AC uninterruptible power supply systems (UPS), inverters, etc.

#### Other Items:

Converters, battery chargers, storage battery diagnosis apparatus, battery testers, MgBOX, electrical work, telecommunications work, and others

## ➔ Group Companies

### ●Automobile battery sales

Furukawa Battery Marketing Co., Ltd.  
Niigata Furukawa Battery Co., Ltd.

### ●Automobile battery production and sales

SIAM FURUKAWA CO., LTD.  
(Thailand)  
PT. FURUKAWA  
INDOMOBIL BATTERY  
MANUFACTURING (Indonesia)

### ●Others

Daiichi Giken Kogyo Co., Ltd.  
HD Holdings Co., Ltd.  
FB Finance Co., Ltd.  
FB Package Co., Ltd.

## Business Continuity Plan (BCP)

### BCP basic policy

#### 1. Perspective of human safety

We put disaster countermeasures in place to ensure the safety of employees, other workers of our company, their families, visitors, and other people.

#### 2. Perspective of business continuity

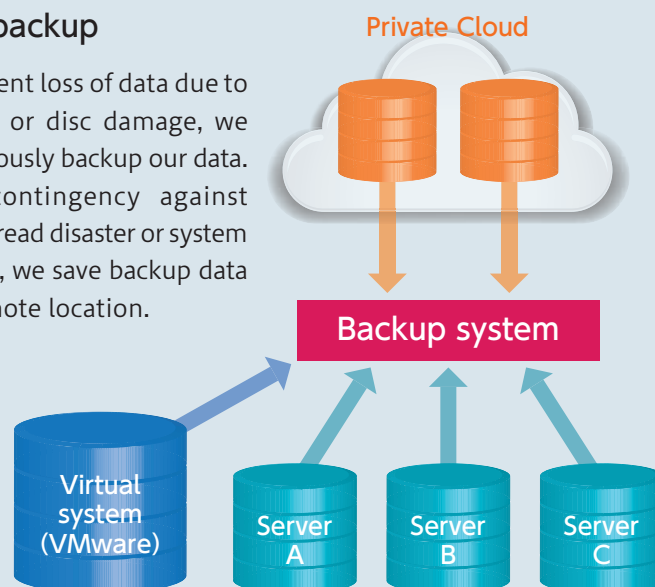
We ensure our company is resilient to damage to ensure we can recover from a disaster quickly to continue the business and meet the needs of our customers.

#### 3. Other perspectives

We place an emphasis on the local residents and the local self-governing bodies as part of restoration efforts.

### Data backup

To prevent loss of data due to disaster or disc damage, we continuously backup our data. As a contingency against wide-spread disaster or system damage, we save backup data at a remote location.





**●FB Plant**  
1066-22 Harigai Aza Kayaba,  
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321-2331 JAPAN  
Phone : +81-288-26-8061  
Fax : +81-288-26-8089



**●Imaichi Plant**  
597 Otorozawa Aza Uehara,  
Nikko City, Tochigi Prefecture  
321-2336 JAPAN  
Phone : +81-288-22-3111  
Fax : +81-288-22-3114

**Nikko**

**Head Office  
and Plants**

**Iwaki**



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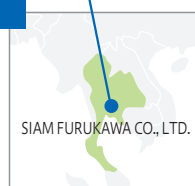
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**Indonesia**



**●PT. FURUKAWA  
INDOMOBIL BATTERY MANUFACTURING**  
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**Thailand**



**●SIAM FURUKAWA CO., LTD.**  
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## ➔ History

**1914** Furukawa Electric Co., Ltd. established its battery factory in Amagasaki City, Hyogo Prefecture, and started production of lead-acid batteries.

**1937** Relocated the battery plant to Hodogayaku, Yokohama City for business expansion.

**1950** Spun off from Furukawa Electric Co., Ltd. and founded as The Furukawa Battery Co., Ltd.

**1970** Completed an automobile battery plant in Imaichi City (now Nikko City), Tochigi Prefecture.

**1978** Completed an automobile battery plant in Iwaki City, Fukushima Prefecture.

**1986** Constructed FB Plant (Nikko).

**1995** Obtained ISO 9001 certification.

**1999** Obtained ISO 14001 certification (Iwaki & Imaichi Plants).

**2001** Completed company-wide certification under ISO 9001 (2000).

**2002** Additionally acquired shares of Siam Furukawa Co., Ltd. to make it a subsidiary.

**2003** Successfully developed the world's first lithium-ion battery for space application, which was installed in the "Hayabusa" asteroid explorer.

**2010** Provided the "Akatsuki" Venus climate orbiter with a lithium-ion battery. Received a certificate of commendation from the Ministry of Education, Culture, Sports, Science and Technology, for the development of batteries installed on board "Hayabusa," the compact planetary exploration craft that has achieved the world-first bringing samples back to earth from an asteroid.

**2011** Obtained the highest environmental rating from the Development Bank of Japan, the first time that rating has been awarded in the lead-acid battery industry. Launched long-life control valve-regulated stationary lead-acid cycle-service battery (FCP Series).

**2012** Launched battery for vehicles with idle-stop system (ECHNO IS) and battery for hybrid vehicles (ECHNO HV).

**2013** Adopted and launched capacitor-hybrid lead-acid storage battery, UltraBattery, for cycle-service control-valve-regulated lead-acid battery (UB-1000) and battery for hybrid vehicles with idle-stop systems (ECHNO IS series).

**2013** Established PT. FURUKAWA INDOMOBIL BATTERY MANUFACTURING in Indonesia. At Iwaki Plant, carry out the facilities reinforcement of the automotive lead-acid storage battery factory for Fukushima revival and competitiveness reinforcement, and July, 2014 operation start.

**2014** World's first magnesium-air fuel cell which uses paper container has been developed with TOPPAN PRINTING CO., LTD. and released. In December, MgBOX has been launched. "Hayabusa 2", asteroid explorer was launched with our lithium-ion battery.

**2015** PT. FURUKAWA INDOMOBIL BATTERY MANUFACTURING completed its lead-acid storage battery for automobiles manufacturing plant in Republic of Indonesia. Five sales companies was integrated to newly found Furukawa Battery Sales Co., Ltd.



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