





Kobe Steel Group Integrated Report 2019

# Changing & Creating















# **KOBELCO**

# The Kobe Steel Group's Promise to Stakeholders

The Kobe Steel Group has created the Core Values of KOBELCO, which expresses its commitments to stakeholders as a corporate philosophy, as well as the Six Pledges of KOBELCO Men and Women, which defines a code of conduct for Group employees as they fulfill the Core Values of KOBELCO.

Based on the Core Values of KOBELCO and the Six Pledges of KOBELCO Men and Women,
Kobe Steel is making every effort to restore trust with its customers, business partners,
and other stakeholders while striving for sustainable corporate value enhancement
through contributions to society and the environment.



The core values are the commitments of the Kobe Steel Group to society and express the values shared by the entire Kobe Steel Group.

- We provide technologies, products and services that win the trust and confidence of our customers we serve and the society in which we live.
- We value each employee and support his and her growth on an individual basis, while creating a cooperative and harmonious environment.
- Through continuous and innovative changes, we create new values for the society of which we are a member.



We, the men and women of KOBELCO, in the spirit of honoring the Core Values of KOBELCO, make the following Six Pledges:



# Heightened Sense of Ethics and Professionalism

We not only follow the laws, corporate rules and societal norms, but also conduct our corporate activity in a fair and sound manner with the highest sense of ethics and professionalism.



# Contribution to the Society by Providing Superior Products and Services

Guided by our "Quality Charter," we provide safe, sound, and innovative products and services to our customers, and thereby ensure customer satisfaction and contribute to the advancement of the society.

# **Quality Charter**

The KOBELCO Group will comply with all laws, public standards, and customer specifications, and make continuous efforts to improve quality, with the goal of providing Trusted Quality in our products and services.



# Establishing a Comfortable but Challenging Work Environment

We provide a safe and comfortable work environment, and we value each employee's character, personality and diversity, and provide each employee with a challenging work experience so as to allow each employee to use his and her fullest capability.



# Living in Harmony with Local Community

We make efforts to be a good "corporate citizen" in each local community which serves as the base for our group.



# Contribution to a Sustainable Environment

We aim to build a richer and more sustainable world, and we conduct environmentally friendly manufacturing and contribute to the betterment of the natural environment through our technologies, products and services.



# Respect for Each Stakeholder

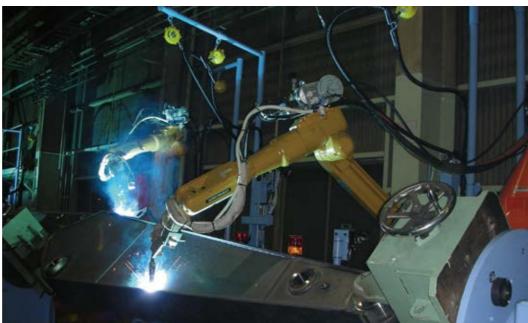
We respect all of our stakeholders, including customers, business associates, employees and shareholders, as our colleagues and build good and sound relationships with all of them.













Looking at the Next

100

Years

# **Sustaining Growth While Resolving Social Issues**

The Kobe Steel Group aims to achieve sustainable growth together with society by establishing three core business areas in materials, machinery, and electric power while resolving social issues.











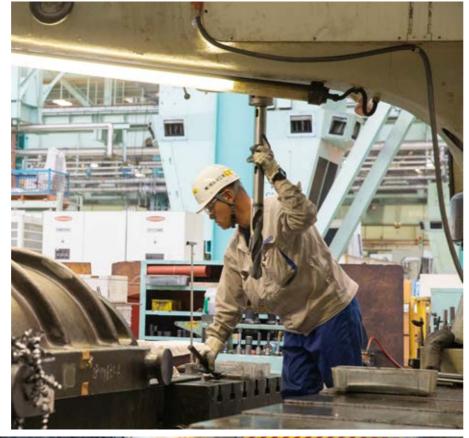
Coexisting with
Local Communities
and Contributing to
the Environment
and Society

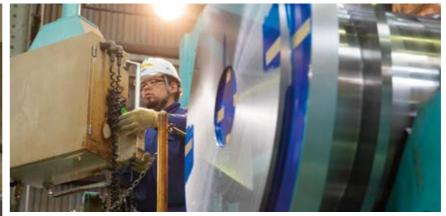
The Kobe Steel Group helps reduce CO<sub>2</sub> emissions through a variety of approaches. Together with the local communities in which it conducts business, the Group provides distinctive technologies, products, and services that contribute to the environment and society.





Our Unique and Diverse
Human Resources Are
the Wellspring of
Corporate Value

































# To Our Stakeholders

The Kobe Steel Group is keen to show stakeholders how it is changing and what lies ahead through carrying out measures to prevent a recurrence of the misconduct, reforming its corporate culture, and strengthening its profitability and business foundation.

In Integrated Report 2018, I said "I am determined to make every effort to regain the trust of all our stakeholders and earn their confidence that Kobe Steel has truly changed." Kobe Steel is taking various steps to restore the trust that was lost due to the quality misconduct,\* including efforts to increase the awareness of each and every Group employee and reform our corporate culture, as well as implementing measures to prevent a recurrence of the misconduct. In order to increase employee awareness and reform the corporate culture, I continue to focus my energy on talking directly to Group employees to instill the meaning of the Core Values of KOBELCO, our corporate philosophy, and the Six Pledges of KOBELCO Men and Women, our code of conduct for realizing these core values. I intend for Kobe Steel to break away from the mind-set that led to the misconduct. I am also striving to instill a desire for change and a healthy sense of crisis in the Company.

While implementing these measures to restore trust, it is crucial for the Kobe Steel Group to not let any growth opportunities slip by in the meantime. From fiscal 2016 through fiscal 2018, the Kobe Steel Group successfully consolidated upstream processes in the steel business and put in motion two new projects in the electric power business under the Medium-Term Management Plan in order to attain KOBELCO VISION "G+," its medium- to long-term business vision that aims to establish a business enterprise consisting of the three core business areas of materials, machinery, and electric power. However, it came to light that some issues are still in need of attention, including profitability and monozukuri capabilities. In the "Rolling" of the Medium-Term Management Plan through fiscal 2020, which was announced in May 2019, Kobe Steel is taking proper steps to address these lingering issues, in addition to advancing its medium- to long-term growth strategy centered on reducing the weight of automobiles.

For Integrated Report 2019, we have updated the content of our measures to prevent a recurrence of the misconduct, as well as showing how Kobe Steel is changing and what lies ahead by strengthening its profitability and business foundation. The Kobe Steel Group aims to sustain growth by harnessing its comprehensive capabilities arising from its wide range of technologies, products, and services, as well as its diverse human resources. Through our business activities, we contribute in our own distinctive way to the environment and society. Kobe Steel aims to restore trust by advancing sustainability management that can contribute to realizing a low-carbon society and the United Nations' Sustainable Development Goals (SDGs).

Dialogue with stakeholders is essential to the development of the Kobe Steel Group. I hope that you provide feedback on this Integrated Report from various points of view, which will create opportunities for constructive dialogue with our stakeholders. I thank you for your continued guidance and encouragement.

August 2018

\* This refers to the act of falsifying or fabricating inspection data (hereinafter, "the misconduct") for products falling short of public standards or customer specifications, and shipping or delivering those products to customers as if they conformed to the public

President, CEO and Representative Director

Om. Jamaguchi



# The Kobe Steel Group's Value Creation Story

The value creation story of the Kobe Steel Group entails further increasing corporate value by pursuing distinctive Group synergies while addressing the issues and needs of customers and communities in Japan and overseas. Vision Moreover, we act in accordance with the Core Values of KOBELCO and the Six Pledges of KOBELCO Men and Women. The Group will continue to implement business models, business activities, and growth strategies in line with its Increasing original value creation story. In this way, we will increase our corporate value while helping to resolve social issues. Code of Conduct for Each Group Employee to corporate value Follow to Fulfill the Core Values of KOBELCO We will also work to steadily restore trust by addressing the expectations of our customers, business partners, shareholders, investors, and other stakeholders, and by fulfilling our responsibilities. 1. Heightened Sense of Ethics and Professionalism 2. Contribution to the Society by Providing Superior Products and Services 3. Establishing a Comfortable but Challenging Work Environment Restoring 4. Living in Harmony with Local Community trust 5. Contribution to a Sustainable Environment Drawing on 6. Respect for Each Stakeholder Our Management Resources **Helping to Resolve** Issues Faced by **Customers and Society** Contributing to Customer demands and the resolution of expectations social and environmental · Environmental issues and Social / issues growth fields Relationship The Kobe Steel Group's capital Intellectual Promise to Stakeholders Six Pledges of capital **KOBELCO** Enhancing Men and Women Human the KOBELCO capital brand We provide technologies, Through continuous Fields of Contribution products and services and innovative changes, Manufactured that win the trust and we create new values capital The fields in which customers and society confidence of our for the society of which face issues are growth fields for the Kobe Steel Group. In accordance with the customers we serve we are a member. Fiscal 2016–2020 Group Medium-Term and the society in Management Plan ( P40), the Group is which we live. Core Values of working to further deepen growth strategies **Financial KOBELCO** capital **Pursuing and** and build a solid business enterprise in its three core business areas-materials demonstrating businesses, machinery businesses, and the electric power business. Natural the distinctive capital **Our Target Business Model** synergies of We value each employee and the Kobe Steel Group support his and her growth on an individual basis, while **Global Customer Base** creating a cooperative and Originality harmonious environment.

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## Next 100 Project

This section provides an overview of our initiatives to promote dialogue between members of the senior management team and employees and our surveys on employee awareness as well as the benefits of such initiatives.



Message from the President and CEO President and CEO Mitsugu Yamaguchi explains his commitment to addressing social issues and enhancing corporate value.

# Growth Strategy of the Kobe Steel Group and Strengthening the Business Foundation

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Outline of the Fiscal 2016–2020 Group Medium-Term Management Plan In this section, we focus on summarizing the main points of the Rolling of the Medium-Term Management Plan covering fiscal 2019 and fiscal 2020.



The Kobe Steel Group's Business Strategy
As well as introducing the materials, machinery,
and electric power businesses and technical
development and *monozukuri* operations, this
section features messages from the Directors in
charge of these businesses and operations.



#### Corporate Governance

This section summarizes the Group's corporate governance, which underpins the restoration of trust and the enhancement of corporate value.



Promoting Sustainability Management We explain how we approach and promote sustainability management.

#### **Editorial Policy**

The Kobe Steel Group places importance on dialogue with all of its stakeholders, including shareholders, investors, customers, and business partners. For this reason, the Group has been publishing an integrated report since fiscal 2018. The aim of the report is to provide a comprehensive understanding of the economic and social value created by the Group through its management strategies, business activities, social activities, and environmental activities.

We hope that this report will lead to a greater understanding among all of our stakeholders of our endeavor to restore trust and sustain growth.

# Integrated Report 2019 Production Process

- In August 2018, the Group issued its first integrated report, Integrated Report 2018. Externally, we notified stakeholders about the issuance of the report at financial results briefings and meetings attended by a small number of investors. In-house, we used digital signage and the intranet to inform employees about the report.
- We asked analysts, institutional investors, Group employees, and other internal and external stakeholders to give their frank assessments and opinions of *Integrated Report 2018*.
- The Corporate Communications Department was mainly responsible for consulting with the heads of the Corporate Planning Department and other departments in light of the aforementioned assessments and opinions.
- We prepared Integrated Report 2019 based on discussions with the management team at meetings of such committees as the CSR Committee

# Disclaimer Regarding Forward-Looking Statements

This Integrated Report contains forward-looking statements about the Company's forecasts, beliefs, expectations, aims, and strategies. These forward-looking statements are based on the Company's judgments and assumptions using currently available information, and these forecasts may differ substantially from actual results due to a variety of factors that may change over time, such as uncertainties within its judgments and assumptions, future business operations, and changes in conditions inside and outside the Group. Kobe Steel assumes no responsibility for revising these forward-looking statements or other content in this report.

Below is a list of factors that may contribute to these uncertainties and cause change. This is not a complete list of such factors.

- · Changes in economic conditions, demand, and prices in major markets
- · Political situations in major markets and regulations,
- including trade regulations
- · Fluctuations in foreign exchange rates
- · Availability and prices of raw materials
- $\cdot$  Products and services, price strategies of competitors,
- business developments including alliances and M&A
- $\cdot$  Changes in strategies of partners with ties to the Company

# Scope of Reporting

In principle, this Integrated Report covers the activities of Kobe Steel and its domestic and overseas Group companies.

# Period of Reporting

This Integrated Report covers fiscal 2018, from April 1, 2018 to March 31, 2019. However, when necessary, this Integrated Report makes reference to fiscal years before and after the period.

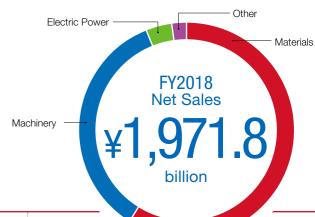
# The History of the Kobe Steel Group

In 1905, general partnership trading company Suzuki Shoten acquired a steel business in Wakinohama, Kobe, called Kobayashi Seikosho operated by Seiichiro Kobayashi and changed its name to Kobe Seikosho. Then, in 1911 Suzuki Shoten spun off the company to establish Kobe Steel Works, Ltd. with capital of ¥1.4 million at Wakinohamacho, Kobe.

Started as a steel casting and forging business, the Kobe Steel Group contributes to resolving issues facing customers and society by leveraging its expertise, technologies, and manufacturing capabilities fostered in a broad range of business fields that cover the Iron & Steel, Welding, Aluminum & Copper, Machinery, Engineering, Construction Machinery, and Electric Power segments.

of consolidated overseas sales from 1999 onward) from net sales (on a nonconsolidated basis until 1980 and on a consolidated basis from 1981 onward).

\*2 The pie charts' net sales breakdowns have been calculated based on the simple total for each segment, which includes intersegment transaction.



VISION "G+"

Launches Rolling of the Medium-Term

Management Plan (Fiscal 2019-fiscal 2020)

#### 2006 2014 **Materials** 1968 1970 2016 1955 Begins steel casting Begins aluminum Achieves first Establishes Completes Starts up processing Establishes base Begins producing 2017 production Kakogawa Works plant for special steel in China for aluminum panel industrial production and forging business business Iron & Steel, Consolidates manufacture and of titanium metal base in wire rod used in material at Tianiin Begins aluminum 1916 upstream processes casting and forging Thailand for automobiles in China sale of automotive plant in China at Kakogawa Works Begins steel welding cold-rolled, high-Starts up aluminum Becomes first Japanese products business electrodes strength steel company in China to forging plant for FY1990 1959 1940 produce automotive Begins production of automotive suspension 1979 **Net Sales** aluminum panel material rolled steel products Begins welding Establishes products in U.S. Develops integrated steel 1917 business ARCMAN<sup>TM</sup> production Produces the first Begins copper business welding robot weldina electrodes Starts up Nadahama Begins production of copper in Japan No. 1 Blast Furnace billion tubes and bars Machinery 1962 1975 1983 2004 1926 1914 2017 Begins overseas Introduces Acquires U.S. company Establishes manufacturing Begins machinery Begins engineering business Aluminum 2014 Acquires world's leading isostatic plant business automated Midrex Technologies. Inc. and sales base for standard & Copper business Completes Japan's first cement plant press manufacturer, Quintus Celebrates 100th anniversary Japan's first plant guideway Begins direct reduction compressors in China Beains first domestic Technologies of Sweder of machinery business export (East Pakistan transit (AGT) ironmaking plant busines development of air currently Bangladesh) system compressors 1930 Begins operation 2006 of AGT system Begins construction Establishes called KRT at machinery business manufacturing and Okinawa Completes first domesti-International sales base for cally produced electric Ocean Exposition nonstandard minina shovel compressors in U.S. 1996 2002 2016 FY1955 Enters wholesale Begins Electric Starts up **Net Sales** Iron & Steel Machinery power supply Kobe Power Power Business Overseas sales ¥24.7 (IPP) business Plant Begins construction Domestic sales of Moka Power Plant Enters field follow-Begins com (scheduled to start up ing deregulation operations Expanding and Establishing the **Evolving diversified** Creating and Strengthening management improving Group and laying management and 1950 2005 2019 1970 1990 1905 production system establishing the and business systems for contributing to business and developing business globally **KOBELCO** brand the next 100 years foundations local communities 2000 2005 2017 1905 1960 1979 1988 1995 2011 1937 Companywide Establishes Core Values of KOBELCO as corporate Establishes Corporate Establishes U.S. Suffers damage Celebrates Establishes China Founded when Lists on stock Opens office Establishes philosophy and newly establishes Six Pledges of exchanges in Tokyo, KOBELCO as headquarters in in Great Code of Ethics 100th anniversary headquarters major pre-war in New York KOBELCO Men and Women New York Hanshin-Awaii conglomerate Osaka, and Kobe international 2006 Suzuki Shoten (Currently listed on unified trademark (Integrates New York Earthquake 2016 Discovers misconduct and establishes measures Office into headquarters. enters heavy stock exchanges in Restarts blast to prevent recurrence Establishes Establishes Tokyo and Nagoya) Consolidates headquarindustry field furnace two and a Establishes headquarters in Southeast Asia and South Asia corporate philosophy medium- to ters to Detroit in 2017) half months after long-term earthquake 2019 business vision KOBELCO Establishes regional headquarters in Europe \*1 Domestic sales have been calculated by deducting overseas sales (on the basis of monetary amounts of exports until 1998 and on the basis

# Distinctive Technologies, Products, and Services, by Customer Domain

Since its founding in 1905, the Kobe Steel Group has created and supplied products needed by its customers for more than 100 years. Today, the Kobe Steel Group operates businesses centered on seven segments, but from the perspective of customers, its operations can be divided into the three main categories of transportation, energy and infrastructure, and other fields.

Below is a brief introduction to the Kobe Steel Group's diverse and distinctive technologies, products, and services.



# **Transportation field**

Automobiles Aircraft Shipbuilding Rolling stock

# Energy and infrastructure field

Construction and civil engineering Environment and energy Urban transit systems

## Other fields

Electrical equipment and electronics Container materials

# **Automobiles**



Wire rods for automotive engine valve springs

Kobe Steel's flagship product



# High-strength steel sheets

Leading producer in development and commercialization of ultra-high-strength steel sheets



#### Aluminum sheets for automotive closure panels

Help reduce weight of automobiles via use in automobile engine hoods, etc.



Used for complex-shaped automotive parts and such environmental applications as the purification of polluted soil and water



#### Aluminum forgings for automotive suspensions

More than 40% lighter than conventional steel forgings



#### Aluminum extrusions and fabricated products for automobiles

Help reduce weight of automobiles via use in bumpers and structural frames



## Copper alloys for automotive terminals and connectors

Used in wire harnesses, or "nerves," of cars. Approximately 30% share of domestic market



# solid wires (SE wires)

# Reduce environmental burden

through our original wire surface treatment technology, which eliminates need for copper plating treatment during manufacturing



# Non-copper coated

# machinery

These systems produce resin pellets, a raw material for making plastic products used in bumpers, etc.

Plastic processing



# Flexform™ hydraulic presses

One press can process metal into complex shapes. Various applications include automotive bodies and frames



# PVD coating systems 25% share of world market

Apply PVD coatings on auto parts. such as engine components. for improving durability under



Indispensable for production of tires and rubber products. Offer high productivity and energy efficiency based on our leadingedge technologies



# dismantling machines

With a special nibbler, these machines efficiently recover resources from engines and wire harnesses, shortening time to dismantle used vehicles safely

# Distinctive Technologies, Products, and Services, by Customer Domain

# **Aircraft**

Titanium for aircraft engine components

Delivering fan case components for aircraft engines for more than 30 years



#### Aircraft gearboxes

Aircraft parts realized thanks to our competence in aluminum casting, forging, analysis, and alloy development

Isostatic presses

70% share of world market

Enable processing of aircraft components and materials (parts) in many fields

# Shipbuilding



Crankshafts

40% share of global market

Boasting 40% share of the global market for built-up and solid crankshafts for ships



Robotic welding systems for assembling large blocks in shipbuilding

Reduce welding time by roughly

Automated robotic welding systems improve productivity of welding for assembling large blocks in shipbuilding. Contributes to proliferation of robots



# Compressors for LNG-fueled ships

Exclusive technology in the world

Compressors for supplying fuel in LNG-fueled ships. Contribute substantially to reducing CO<sub>2</sub>

# Rolling stock



Used as materials that shape the bodies of rolling stock. Employed in rolling stock in Japan and the U.K.

# Container materials



Aluminum bottle can stock

Holding domestic market shares of more than 30% for aluminum beverage can stock and approximately 70% for aluminum bottle can stock, which requires complex processing

# Electrical equipment and electronics



Copper tubes for air-conditioning heat exchangers

Developing copper tubes for air-conditioning heat exchangers, inner-grooved copper tubes for the EcoCute heat pump, and other highvalue-added products while strengthening supply capabilities in Southeast Asia



Materials for semiconductor leadframes

Using proprietary elemental bonding to develop copper-alloy strip products that combine strength, conductivity, and heat-resistance



Aluminum disks

Used as substrates in hard disk drives mainly for desktop computers and data centers

# Construction and civil engineering



Eco-View steel plates for longer-lasting paint on bridges

Contribute to longer lifespans of steel bridges

Eco-View steel plates offer excellent paint corrosion resistance, lengthening the interval for repainting bridges, even in high salinity environments. Help reduce lifecycle costs



# Flux-cored wires

Enable high work efficiency and reduce spatter and fumes to improve workplace environments. Used in a wide variety of applications, including shipbuilding, architectural steel frames, and bridge construction



REGARC™-equipped structural steel welding systems

Improve quality and productivity of structural steel welding

Enhancing quality and productivity of structural steel welding through our original REGARC™ welding process, which significantly reduces sparks and fumes during welding



**NEXT** building demolition machines with main boom

NEXT attachments need fewer steps for safe dismantling, transport, and assembly before work operations begin. Compared with previous models, NEXT shortens work time, lightens labor, and reduces costs



# New-model TK-G Series telescopic boom crawler cranes

transport, retains the original series' sturdy structure capable of withstanding tough foundation and civil engineering work, compact layout with superior operability, and ability to lift to great heights



While being less than 3 meters wide during



# Computerized construction work brand Dig Nav

ICT-enabled construction machinery with a navigation system that significantly increases work efficiency by incorporating monitor displays and alarms in the driver's cab as well as a machine control system that allows the operator to conduct complex work operations through simple manipulation of a lever



Grid-type sabo dams for erosion control

Maintain safety by intercepting debris and driftwood while minimizing environmental impact by allowing the passage of water and fish when conditions are normal

# Urban transit systems



#### Urban transit systems

Boasting an extensive track record in supplying advanced transit systems, such as the Hiroshima Astram Line Overseas the North-South Line of the Jakarta Mass Rapid Transit system opened in April 2019

# Environment and energy



# Emeraude standard compressors

Oil-free compressors with highest specs and energy efficiency

# Distinctive Technologies, Products, and Services, by Customer Domain

# **Environment and energy**



HyAC series of compressors for hydrogen refueling stations

#### About 30% market share in Japar

These compressors are sold as a set with dispensers in the U.S., enabling the refueling of fuel-cell vehicles with compressed hydrogen



Nonstandard screw compressors
50% share of global market

Supplying compressors to large plants since manufacturing the first domestically produced screw compressor in 1956



#### **Kobe Power Plant**

One of the largest independent power producers in Japan

TOPICS Sustainability P21



# MIDREX® Process

World's top share

World's leading direct reduction process, used in over 70 plants worldwide



Water treatment facilities

Full product lineup

Meeting a wide range of water treatment needs by offering facilities for treating water, sewage, industrial water, wastewater, sludge, and pure/ ultra-pure water



Fluidized-bed gasification and melting furnaces

Domestic leader

Address needs in waste treatment field for reducing CO<sub>2</sub> emissions and reducing final landfill disposal volume



Welding materials for low-alloy steel

Top global share

Used in oil refining reactors and thermal power boilers



# Micro channel heat exchangers (DCHE) Best track record in Japan

Compact heat exchangers used in hydrogen fueling stations and natural gas-related equipment



# Wood biomass power generation Effective use of biomass

Unused timber from forest thinning left in mountainous regions are used as biomass fuel for boiler power generators



Sewage biogas city gas pipe injection facility

Effective utilization of biogas

City gas facility that refines biogas from sewage sludge to same quality as city gas



# LNG vaporizers

#### World-renowned high reliability

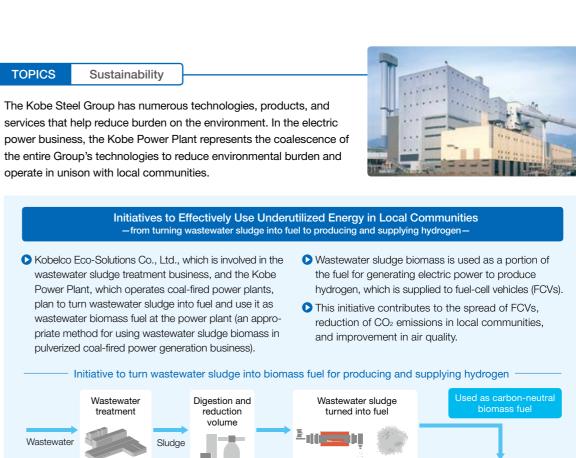
Equipment for gasifying liquefied natural gas (LNG) to enable use at gas-fired power plants and city gas facilities

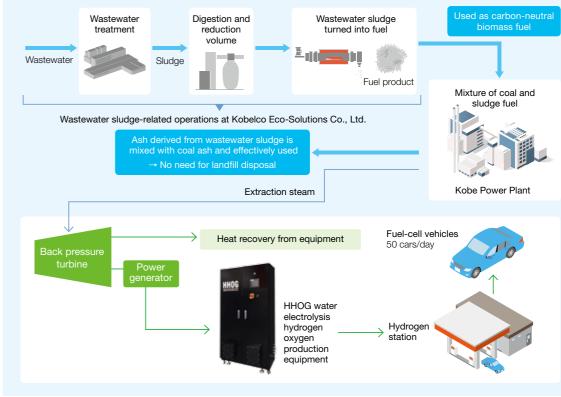


## Heat pumps

Industry-leading energy efficiency

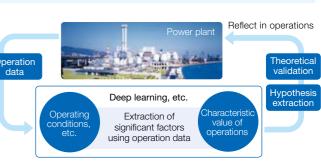
Energy-saving devices used for air conditioners and heaters in buildings and plants





# Initiative to Realize Operations with Less Environmental Impact

▶ In 2018, the AI Promotion Project Department was created within the Technical Development Group to advance efforts to optimize operating conditions through AI technology, with the aim of increasing the efficiency of power plants and reducing their impact on the environment.



# At a Glance (Fiscal 2018)

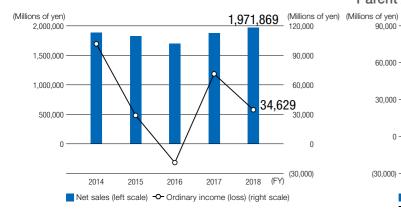
	Segment	Breakdo	wn*(%)		Major Products and Businesses	Fiscal 2018 Highlights
Materials Businesses	Iron & Steel  Net sales Ordinary income Total assets No. of employees  Y753.9 billion (up ¥38.4 billion year on year)  ¥4.7 billion (down ¥12.5 billion year on year)  Y973.2 billion (up ¥35.7 billion year on year)  10,887	Net Sales Tota	al Assets Em	ployees	<steel and="" bars="" rods="" wire=""> Ordinary wire rods, special wire rods, special steel wire rods, ordinary steel bars, special steel bars <steel sheets=""> Heavy plates, medium plates, steel sheets (hot-rolled, cold-rolled, surface-treated) <steel billets=""> <processed &="" etc.="" iron,="" pig="" products=""> Steel castings and forgings (ship parts, electrical parts, industrial machinery parts), titanium and titanium alloys, steel powder, foundry pig iron, pig iron for steelmaking, slag products, stainless steel tubes, building materials, other special steel products, various steel wires</processed></steel></steel></steel>	Sales volume of steel products: Sales volume decreased year on year because of temporary issues with production equipment at Kakogawa Works and the impact of natural disasters, although demand was firm centered on the domestic automotive sector.  Sales prices of steel products: Prices increased year on year, reflecting the higher costs of key raw materials.  Sales of steel castings and forgings: Sales declined year on year due to changes in the product mix.  Sales of stianium products: Sales increased year on year as a result of higher sales to the aircraft sector.  Ordinary income: Ordinary income decreased ¥12.5 billion year on year, to ¥4.7 billion, due to lower sales volume, which resulted from production equipment issues and natural disasters, and higher distribution costs.
	Welding       Net sales       \$\pmu 83.9\$ billion (up \$\pmu 3.3\$ billion year on year)         Ordinary income       \$\pmu 3.6\$ billion (down \$\pmu 1.2\$ billion year on year)         Total assets       \$\pmu 78.5\$ billion (up \$\pmu 2.4\$ billion year on year)         No. of employees       \$2,560	37.2	43.5	27.7	<welding materials=""> Covered welding electrodes, wires for automatic and semi-automatic welding, fluxes <welding systems=""> Welding robots, welding power sources, robotic welding systems <testing and="" inspection=""> Welding-related testing, analysis, and consulting</testing></welding></welding>	Sales volume of welding materials: Sales volume increased year on year because higher demand in the overseas automotive sector outweighed sluggish demand in the shipbuilding sector centered on East Asia. Sales of welding systems: Sales levels were roughly the same year on year, as demand in Japan's architectural steel-frame sector remained solid. Ordinary income: Ordinary income declined ¥1.2 billion year on year, to ¥3.6 billion, reflecting higher raw material costs.
	Aluminum & Copper  Net sales Ordinary income Total assets No. of employees  V359.0 billion (up ¥9.4 billion year on year)  ¥(1.5) billion (down ¥13.3 billion year on year)  ¥359.0 billion (up ¥9.4 billion year on year)  7,550	4.1		6.5	<aluminum products="" rolled=""> Aluminum can stock, aluminum sheets for heat exchangers, automotive aluminum sheets, aluminum extrusions, aluminum disk materials for HDDs <copper products="" rolled=""> Copper strips for semiconductors, copper strips for automotive terminals, lead frames, condenser tubes, copper tubes for air conditioners <aluminum and="" castings="" etc.="" forgings,=""> Aluminum-alloy and magnesium-alloy castings and forgings (parts for aircraft and automobiles, etc.), fabricated aluminums products (parts for automobiles, building materials, scaffolding materials for construction, etc.)</aluminum></copper></aluminum>	Sales volume of aluminum rolled products: Sales volume decreased year on year due to lower demand for aluminum can stock for beverage cans, although demand increased in the automotive sector.  Sales volume of copper rolled products: Sales volume rose year on year as a result of a recovery in the sales volume of copper tubes thanks to the resolution of equipment issues at a production plant in Thailand.  Ordinary income (loss): Ordinary loss of ¥1.5 billion was recorded, compared with ordinary income of ¥13.3 billion in the previous fiscal year, due to the lower sales volume of aluminum rolled products, higher energy costs, and the impact of the misconduct.
Machinery Busine	Machinery  Net sales  Ordinary income Total assets No. of employees  Y171.4 billion (up ¥10.1 billion year on year)  ¥1.2 billion (down ¥1.1 billion year on year)  ¥171.9 billion (down ¥10.1 billion year on year)  4,094		3.5	19.2	<industrial machinery=""> Equipment for energy and chemical fields, equipment for nuclear power plants, tire and rubber machinery, plastic processing machinery, ultra-high-pressure presses, vapor deposition systems, metalworking machinery, plants (steel rolling, nonferrous metals, etc.), various internal combustion engines  <compressors> Compressors, refrigeration compressors, heat pumps, energy-saving turbine generators</compressors></industrial>	<ul> <li>Orders: Orders grew 13.6% year on year, to ¥171.7 billion, reflecting higher demand in the petrochemical sector in Asia and the Middle East and a recovery in demand for compressors in the oil refining sector.</li> <li>Backlog of orders at fiscal year-end: ¥156.6 billion</li> <li>Ordinary income: Ordinary income decreased ¥1.1 billion, to ¥1.2 billion, due to deterioration in the profitability of existing projects.</li> </ul>
sses	Engineering  Net sales  Ordinary income Total assets No. of employees  Value 151.7 billion (up ¥28.9 billion year on year)  ¥6.5 billion (down ¥0.3 billion year on year)  ¥137.3 billion (up ¥28.0 billion year on year)  3,523		15.0	10.4	<plants> Direct reduction ironmaking, pelletizing, petrochemical, nuclear power-related, water treatment, waste treatment, etc. <social infrastructure=""> Erosion control and disaster prevention structures, civil engineering, advanced urban transit systems <chemical and="" foodstuff=""> Chemical and food processing equipment</chemical></social></plants>	Orders: Orders were up 2.8% year on year, to ¥122.6 billion, thanks to firm orders in the waste treatment business.     Backlog of orders at fiscal year-end: ¥169.3 billion     Ordinary income: Ordinary income decreased ¥0.3 billion, to ¥6.5 billion, due to changes in the project mix.
	Construction Machinery  Net sales Ordinary income Total assets No. of employees  Y386.0 billion (up ¥21.4 billion year on year)  ¥25.5 billion (up ¥3.5 billion year on year)  ¥358.6 billion (down ¥29.7 billion year on year)  7,487	7.5	6.2	9.0	<civil and="" construction="" engineering="" machinery=""> Hydraulic excavators, mini excavators, mini wheel loaders, road machines <environmental machinery="" recycling=""> Metal recycling machines, construction recycling machines, industrial waste recycling machines, forestry machines <crawler cranes=""> Various lattice boom crawler cranes, telescopic boom crawler cranes <wheel cranes=""> Various rough terrain cranes, lattice boom wheel cranes</wheel></crawler></environmental></civil>	Unit sales of hydraulic excavators: Unit sales were higher year on year as a result of firm demand mainly in China and Europe.     Unit sales of crawler cranes:         Japan: Unit sales declined year on year because of delays in pre-shipment inspection following a crane collapse accident that occurred at Kobe Steel's Takasago Works in July 2018.         Overseas: Overall unit sales were approximately unchanged year on year due to solid demand in Southeast Asia.  Ordinary income: Ordinary income rose ¥3.5 billion year on year, to ¥25.5 billion, thanks to higher unit sales of hydraulic excavators and the partial reversal of an allowance in the hydraulic excavator business in China, which resulted from progress in the collection of retained receivables.
Electric Power Business	Electric Power  Net sales  Vrdinary income Total assets No. of employees  Y76.1 billion (up ¥3.9 billion year on year)  ¥(0.3) billion (down ¥8.2 billion year on year)  ¥123.2 billion (up ¥16.0 billion year on year)  244	19.1	16.0	19.0	Electric power supply	Sales volume of electric power: Sales volume declined year on year, reflecting an increase in the number of days for periodic inspections.  Unit price of electric power: Unit price was higher year on year due to an increase in market prices for coal used to generate electric power.  Ordinary income (loss): Ordinary loss of ¥0.3 billion was recorded, down ¥8.2 billion from the previous fiscal year, due to the incurring of temporary costs as a result of fund procurement for a new power generation project in Kobe.
Other Businesses	Other Businesses  Net sales  Ordinary income  Total assets  No. of employees  Y42.0 billion (down ¥26.8 billion year on year)  ¥2.3 billion (down ¥3.0 billion year on year)  ¥57.0 billion (down ¥89.0 billion year on year)  1,643	3.8	5.5	7.6	Special alloys and other new materials (target materials, etc.); material analysis and testing; high-pressure gas cylinder manufacturing; superconducting products; general trading company	Kobelco Research Institute, Inc.: Orders in the testing and research business declined.     Shinko Real Estate Co., Ltd. changed from a consolidated subsidiary to an equity-method affiliate.     Ordinary income in Other Businesses: Ordinary income decreased ¥3.0 billion year on year, to ¥2.3 billion.

<sup>\*</sup> The breakdown of net sales and total assets is the simple sum of each segment, including intersegment transactions. In the breakdown of employees, the Other Businesses segment includes employees from the management divisions at the Head Office (1,353 people).

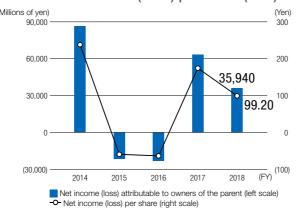
# 5-Year Financial and Non-Financial Highlights

# Financial Highlights

# Net Sales / Ordinary Income (Loss)

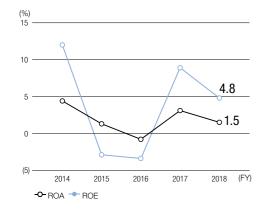


# Net Income (Loss) Attributable to Owners of the Parent / Net Income (Loss) per Share (EPS)\*1

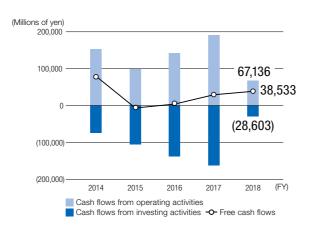


<sup>\*1</sup> The Company carried out a 1-for-10 reverse stock split of its shares on October 1, 2016. Net income (loss) per share has been recalculated as if the reverse stock split had been carried out at the beginning of fiscal 2014.

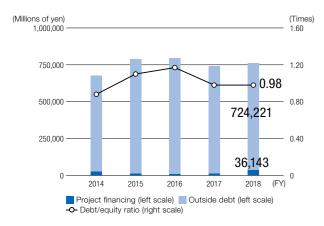
# ROA / ROE



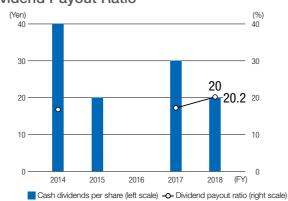
# Cash Flows



# Outside Debt / Debt/Equity Ratio



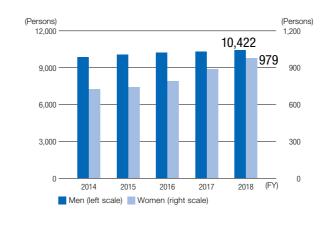
# Cash Dividends per Share\*2 / Dividend Payout Ratio



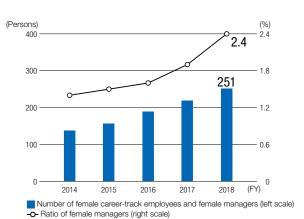
\*2 The Company carried out a 1-for-10 reverse stock split of its shares on October 1, 2016. Cash dividends per share has been recalculated as if the reverse stock split had been carried out at the beginning of fiscal 2014.

# Non-Financial Highlights

# Number of Employees (Kobe Steel, Ltd.)

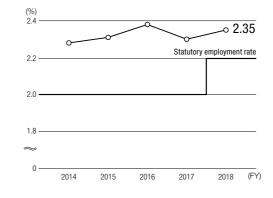


# Ratio of Female Managers (Kobe Steel, Ltd.)\*3

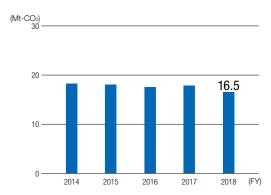


\*3 At Kobe Steel, managers or above are considered to be managerial staff

# Employment Rate of People with Disabilities (Kobe Steel, Ltd.)

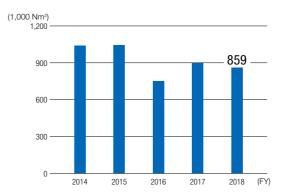


# CO<sub>2</sub> Emissions (Kobe Steel, Ltd.)\*4

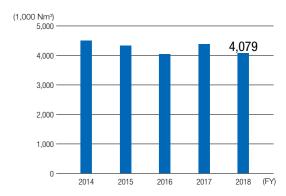


\*4 As emission factors from purchased power in fiscal 2018 have yet to be announced, the emission factors for fiscal 2017 were used. Emissions for past years have been recalculated due to revisions to power coefficients, etc.

# SOx Emissions (Kobe Steel, Ltd.)



# NOx Emissions (Kobe Steel, Ltd.)



# Next 100 Project

Aiming to unite all employees, create a corporate group full of pride, confidence, passion and hope, and achieve sustainable development, in fiscal 2017 Kobe Steel launched the Core Values of KOBELCO Next 100 Project for activities covering the next 100 years. The quality misconduct occurred in the midst of these initiatives, causing our customers and other stakeholders considerable trouble. In response, we have been taking steps to further strengthen our activities while reinforcing aspects that are inadequate, in reflection of the major impact the misconduct has had on society.

Based on the Core Values of KOBELCO and the Six Pledges of KOBELCO Men and Women, we are making every effort to regain the trust of our stakeholders, including shareholders, investors, customers, business partners, Group employees, and local communities. At the same time, we aim to continue increasing our corporate value through contributions to the environment and society.



Dialogues between management and employees

President Yamaguchi participates in dialogues with employees

Heads of business divisions engage in dialogues with employees

Initiatives centered on Core Values of KOBELCO Month (October)

Implement the Dialogue Platform

Employee awareness survey

Clearly state in writing the significance of the social existence of the Kobe Steel Group (MS-PRO\*1)

Administer KOBELCO Core Values Awards

Establish KOBELCO Core Values Place

Do not forget the quality misconduct (remember lessons learned)
Regain trust from society

Instill corporate philosophy
Restore pride and confidence in employees



# Dialogues between Management and Employees

The President and other senior executives continue to visit business locations in Japan and overseas, and speak directly to employees about the meaning of the ideas incorporated into the Core Values of KOBELCO and the Six Pledges of KOBELCO Men and Women. We are actively demonstrating the earnest commitment of senior executives in regard to these initiatives and to reforms targeting the restoration of trust.

# Dialogues with President Yamaguchi in Fiscal 2018

In fiscal 2018, President Yamaguchi engaged in dialogues on a total of 50 occasions at business locations inside and outside Japan, mainly with general managers and general foremen who serve as supervisors at manufacturing sites. A total of 482 employees participated. President Yamaguchi directly conveyed his thoughts to these general managers and general foremen, who play a central part in the activities of the Next 100 Project, impressing upon them their key role in implementing the activities. During these dialogue sessions, President Yamaguchi repeatedly stressed the importance of maintaining close communication with subordinates, and the prerequisites for a company's survival, namely thorough compliance and a deep respect for safety, the environment, disaster prevention, work-style reform, and diversity.

Dialogues conducted by executives, including the heads of business divisions, were also held.





President Yamaguchi holding dialogue sessions with general managers and general foremen

# Dialogues with President Yamaguchi Planned for Fiscal 2019

In fiscal 2019, dialogues with President Yamaguchi will continue to be held, mainly at domestic business locations, with the heads of sections and groups and foremen at each of our manufacturing sites. Dialogues conducted by executives, including the heads of business divisions, are also being held.

- 1. Dialogues at domestic business locations
- Timeframe: Entire year
- Format: Discussions with about 10 people per session (1.5–2 hours)
- Number of sessions: About 50 (once a week)
- Participants: Section heads, foremen at manufacturing sites
  Scope: All domestic business locations (visits made at
- least once every six months)

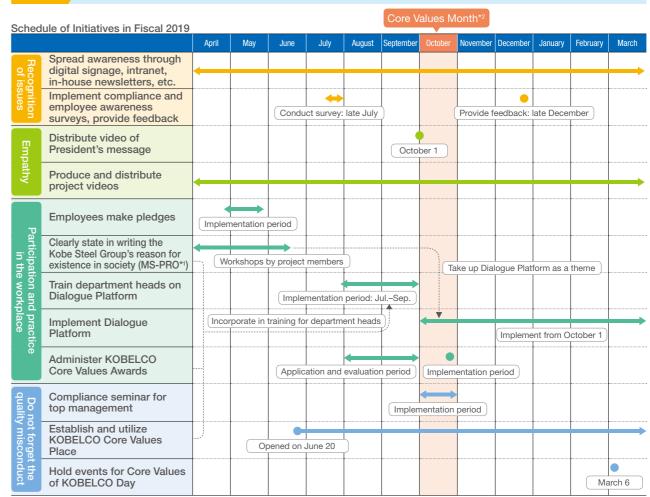
  2. Dialogue sessions using a live broadcasting system
  Events for employees to participate in dialogue with
- 3. Dialogues at Group companies



Events for employees to participate in dialogues with the President (Left) Live broadcast, (right) Q&A session

# 2

# Initiatives Centered on Core Values of KOBELCO Month (October)



<sup>\*1</sup> Abbreviation for Mission Statement Project

<sup>\*2</sup> October of every year has been designated Core Values of KOBELCO Month, an opportunity for all employees to think about how they can avoid breaches of compliance and prevent nearby employees from violating compliance.

# **Next 100 Project**

# **Employee Awareness Survey**

In July 2018, Kobe Steel conducted its first employee awareness survey as part of a framework to comprehensively understand the current state and issues regarding the awareness of employees for their work and their company, as well as the state of organizations. This survey will be conducted every year to monitor changes in employee awareness and the state of organizations, while continuously making improvements.

#### Summary of Survey Conducted in Fiscal 2018

- Purpose: Understand employee awareness and status of issues in organizations to facilitate solutions to various workplace issues
- Period: July 2018
- Scope: All employees working at the Company (including incoming transfers, part-time employees, and temporary employees)
- Response rate: 90.1%
- Content: Employee opinions on job satisfaction, ease of work, and fair and sound organizations

#### Survey Results and Initiatives Based on Results

- Based on the results of this survey, we understand that there are many areas with room for improvement, as shown by the low percentage of positive responses to questions on employee job satisfaction, ease of work, and fair and sound organizations.
- ▶ In light of the survey results, we are taking the following initiatives.
- Create opportunities for dialogue between management and employees
- Clarify employee evaluation standards
- Provide feedback on evaluations
- Create a new awards system (create opportunities to commend employees)
- Carve out more time (advance activities to reform work styles), etc.
- ▶ In fiscal 2019, the scope of this survey will be expanded to include domestic Group companies as a Groupwide initiative.

# Video Distribution of President's Message

During Core Values of KOBELCO Month, a message from President Yamaguchi, subtitled in several languages, was distributed to employees. A similar effort will be made in fiscal 2019.



President Yamaguchi's video message to all Group employees

# Dialogue Platform

During Core Values of KOBELCO Month, Dialogue Platforms are set up in departments for everyone working at Kobe Steel and Group companies with the objectives of (1) instilling the Group corporate philosophy, (2) remembering the lessons learned from the quality misconduct, and (3) promoting two-way communication within the organization.

In fiscal 2018, the department heads chose themes from among such subjects as quality, compliance, safety, the environment, and work-style reform, and encouraged open discussions on these themes between superiors and subordinates.

#### Items Implemented in Fiscal 2019

- Purpose: Instill Group corporate philosophy, remember lessons learned from the quality misconduct, and encourage two-way communication within the organization
- Scope: Everyone working at Kobe Steel and Group companies
- Dialogue topics and format, etc.
- 1) Recommended topic for dialogue:
- Reason for the Kobe Steel Group's existence in society
- 2) Format: Up to 10 employees, 1.5–2 hours per session, two-way discussions
- 3) Period: October 2019





Posters promoting Core Values of KOBELCO Month in October 2018 (printed in 17 languages, including Japanese, English, Chinese, and Arabic)

# Clear Statement of Significance of the Kobe Steel Group's Existence in Society (MS-PRO)

A project is underway to clearly state in writing the significance of the Kobe Steel Group's existence in society and its future mission.

As the first step, a cross-organizational team of members from the head office and business divisions of Kobe Steel, as well as from Kobelco Construction Machinery Co., Ltd., engaged in extensive debate. Next, the opinions of Kobe Steel Group employees on a draft statement created by the cross-organizational team will be gathered through department head training sessions from July through September and Dialogue Platform sessions in October. Finally, a mission statement and vision will be clearly stated in writing to be shared across the entire Group.

By clarifying our mission and vision, we will move the Next 100 Project onto the next stage.



Core Values of KOBELCO (promises that the Group has made to society demonstrating the values shared throughout the Group)

KOBELCO Men and Women (code of conduct)

The Core Values of KOBELCO and Six Pledges of KOBELCO Men and Women with regard to all Group companies, business divisions, departments, and individual employees

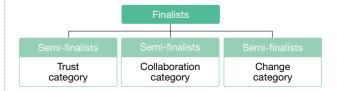
All employees of the Kobe Steel Group—holding the values of the Core Values of KOBELCO and under the code of conduct of the Six Pledges of KOBELCO Men and Women—shall realize the future through fulfilling their mission and the shared significance of their existence in society.



Mission Statement Project (MS-PRO) to clearly state the significance of the Group's existence in society

# KOBELCO Core Values Awards

Examples of workplace initiatives related to the Core Values of KOBELCO and the Six Pledges of KOBELCO Men and Women are submitted in the three categories of trust, collaboration, and change, and the best initiative from each business division is selected as the finalists and semi-finalists for each category.



# KOBELCO Core Values Place

The KOBELCO Core Values Place was set up in a Kobe Steel Group training facility for executives and Group employees to visit, with the aim of passing onto future generations the lessons learned from the quality misconduct.



Executives visiting KOBELCO Core Values Place

# Core Values of KOBELCO Day

March 6, the date of release of the final report on the quality misconduct, has been designated Core Values of KOBELCO Day. It is on this day that Kobe Steel made a promise to society to never forget the lessons it has learned from the misconduct.



On Core Values of KOBELCO Day, this letter from President Yamaguchi was distributed to Group employees and their families.

# Progress of Measures to Prevent Recurrence of the Misconduct

As part of measures to prevent a recurrence of the misconduct, in April 2018 the Kobe Steel Group launched the Project for Restoring Trust, led by President Yamaguchi. The Group formed various subcommittees and task forces to implement preventive measures and is currently implementing concrete measures.

Established to monitor the progress of the Company's preventive measures, the Independent Quality Supervision Committee concluded its activities upon submission of a final opinion in March 2019. These activities have been assumed by the newly established Quality Management Committee.

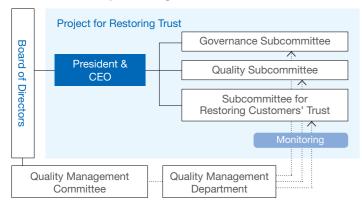
Maintaining its "quality first" commitment, the Group will continue its efforts to prevent a recurrence of the misconduct.

For more details, please see "Progress of the Measures Promoted by the Kobe Steel Group to Prevent Recurrence of the Misconduct" https://www.kobelco.co.jp/english/progress/index.html

For details on the final opinion, please see "Notice on the Receipt of the Final Opinion of the Independent Quality Supervision Committee on the Progress of the Preventive Measures," announced on March 29, 2019. https://www.kobelco.co.jp/english/releases/1201033\_15581.html

	-FY2018	FY2019	FY2020	
Penetration of the Group's corporate philosophy	Next 100 Project Continue dialogue	es with the President and Dialogue Pla	atforms at department level	
2 Desirable state of the Board of Directors	Continue review of structure, including composition of the Board of Directors			
Restructuring of risk management system		ompanies		
Reforming of the insular nature of organizations	Rotate personnel among business of	Reorganize Iron & Steel Business and Aluminum & Copper Business		
5 Restructuring of quality assurance system	Create Quality Charter, invite outside quality senior executive, set up Quality Management Departm			
6 Restructuring of management indicators		Create and start using seven mana including ROIC	gement indicators,	
Management	Continue quality audits and the Qua	lity Caravan Team		
Process	Automate testing and inspection eq	: uipment and visualize process capab	ilities, etc.	

# Framework for Implementing Preventive Measures



# **Outline of Quality Management Committee**

Established: April 2019 (as an advisory body to the Board of Directors)

Purpose

- 1 Monitor and advise on activities to strengthen quality management throughout the Kobe Steel Group
- 2 Continuously monitor measures to prevent a recurrence of the quality misconduct

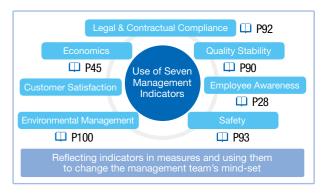
Members : Three outside experts, two internal executives (an outside expert chairs the committee)

# 1 Governance - Building a Quality Governance System

- 1) Penetration of the Group's corporate philosophy P26
- 2) Desirable state of the Board of Directors P76
- 3) Restructuring of Risk Management System The Group has established a Compliance Management Department and is currently implementing various measures to strengthen risk management of the whole Group. The results of our Compliance Awareness Survey were reported to all employees in December 2018. \$\square\$ P28
- 4) Restructuring of Business Divisions We plan to reorganize the Iron & Steel Business and Aluminum & Copper Business by April 2020.
- 5) Restructuring of Group Companies We have begun organizing the risk management and governance systems of respective Group companies to strengthen governance throughout the Group.
- 6) Rotation of Personnel between Divisions We conduct personnel transfers between the divisions as required. With a view to developing personnel, invigorating the organization, and strengthening collaboration, we established personnel rotation rules, which came into force in April 2019.

- 7) Understanding of Issues Occurring at Worksites We began activities for detecting issues at our worksites through the "Quality Caravan Team," which visited 113 locations in fiscal 2018. The team is continuing its activities in fiscal 2019.
- Establishment of the Quality Charter (February 2018)
- Revision of Quality Assurance System We have completed restructuring the quality assurance system at each level of our organization: the head office, business divisions, and business locations. Going forward, we will also establish the quality assurance system at Group Companies.
- 10) Restructuring of Management Indicators We have established management indicators with the aim of realizing the commitments stated in the Report on Misconduct in Kobe Steel Group, issued on March 6, 2018, by reforming management approaches that overemphasize profitability and realizing sustainable enhancement of

corporate value. Since April 2019, we have been steadily introducing the use of these management indicators with a view to conducting business management that takes into account goals and indicators and which enables the internal control system to function throughout the organization, the early detection of risks, and the implementation of appropriate measures.



# (2) Management — Ensuring Quality Management

- 1) Measures for Quality Management In May 2018, we established the Quality Management Department and the KOBELCO Quality Guidelines. The department hosted the Group Quality Leader Conference in Japan, China, Southeast Asia, and the U.S. We plan to continue holding these conferences in fiscal 2019 and beyond.
- 2) Rotation and Development of **Quality Assurance Personnel** We have begun creating a diagram based on quality assurance personnel and systematizing quality-related educational programs.
- 3) In-House Education Programs Regarding Quality The Company conducts quality and compliance training for approximately 600 heads of departments and sections at Kobe Steel and domestic Group companies. It also conducts similar training at overseas Group companies.
- 4) Support by the Head Office The Quality Audit Section of the Quality Management Department conducts quality audits at all target locations. The section conducted quality audits at 117 locations in fiscal 2018, and will continue to conduct quality audits in fiscal 2019 and beyond.

# 3 Process — Strengthening Quality Control Processes

- 1) Elimination of Opportunities for Mishandling Test/Inspection Data With respect to ongoing efforts to automate test and inspection devices by the end of fiscal 2020, we completed the automation of approximately 40% of devices by the end of fiscal 2018. We plan to complete the automation of approximately 80% of devices by the end of fiscal 2019.
- 2) Understanding of Process Capabilities and Their Utilization (with respect to the materials businesses) We are promoting the visualization of inspection data through graphs and indexing to better understand the levels of inconsistency in the quality of our manufacturing processes relative to required specifications.
- 3) Review of Approval Process for **Accepting New Purchase Orders**

- We began further strengthening this process in the second half of fiscal 2018.
- 4) Review of Approval Process When Changing the Manufacturing Process
- 5) Promotion of Quality Risk Assessment in Capital Investments

For decisions on quality-related capital investment, certain business locations have begun using quantitative evaluations of quality risks. Specifically, they quantitatively evaluate the effect, frequency, and detection rate. In fiscal 2019, we changed our decision-making system for major capital investments by establishing reduction of quality risk as a criterion. We will continuously monitor progress toward improvements at each location. At the same time, through quality audits at each location, we will confirm that the guidelines are being used.

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# the President and CEO

By fiscal 2020, we will complete the key themes identified in the Rolling of the Medium-Term Management Plan and address ongoing themes for the next medium-term management plan, making original contributions to resolving social issues while pursuing improvements in corporate value.

# Restoring Trust in the Group through Steady Change

We truly regret the quality misconduct that has shaken the foundation of trust on which our business is based. I believe the most important task ahead of us is earning back the trust of our customers, suppliers, and other stakeholders. The Kobe Steel Group has cooperated with investigations by government authorities inside and outside Japan and has responded to lawsuits in relation to the quality misconduct. Kobe Steel was subsequently convicted of violating the Unfair Competition Prevention Act in Japan, and we understand that investigations by the U.S. Department of Justice have come to a conclusion. We are working toward a conclusion regarding the civil complaints in Canada and the U.S. At the same time, Kobe Steel is undertaking strong efforts to implement measures to prevent a recurrence of the misconduct, raising awareness among all employees, reforming the corporate culture, and making other operational changes with the understanding that this process is necessary to restore trust.

With respect to reforming the corporate culture, Kobe Steel launched the Core Values of KOBELCO Next 100 Project (activities covering the next 100 years) in fiscal 2017. Through this project, the Kobe Steel Group intends to instill in each and every employee the Core Values of KOBELCO, the Group's corporate philosophy and an expression of our common values, and the Six Pledges of KOBELCO Men and Women, our code of conduct for all employees. We are doing our utmost to break away from the mind-set behind

the misconduct. As a part of these efforts, I have devoted my time to visiting our business locations in Japan and around the world and engaging in dialogue directly with Group employees. I have continued these activities since being appointed President in April 2018, focusing first on the general managers and then the general foremen who are the leaders at our manufacturing sites in the second round of discussion sessions. As of August 2019, I have engaged in dialogues with over 800 employees on 82 occasions. With the intention of closing the gap between management and employees, fostering a sense of unity, and strengthening solidarity, I expect the people I have spoken with to act as intermediaries for reforms to our corporate culture that will help restore trust. To this end, I will continue to engage in face-to-face dialogue in my encounters with managers as well as leaders at our works and plants. In these encounters, I have felt their strong conviction and understanding that changes must be made, and that action must be taken to effect this change. Without allowing these intentions for change to fade away, we will move resolutely onto the next step so that our actions translate into specific outcomes and changes for the better. This will also restore confidence in Group employees. It is my duty and the duty of other executives to repeat this cycle of change that begins with communication, and I believe this will be a true test of our colors.

# Message from the President and CEO

# We Need to Ask Ourselves, "Who Are We?"

What is the Kobe Steel Group? What is the significance of the Kobe Steel Group's existence in society? What is the mission we should fulfill? While taking measures to prevent a recurrence and restore trust, the Kobe Steel Group is asking itself these fundamental questions over and over again. The Kobe Steel Rugby Club, the Kobelco Steelers, retook the crown in the All-Japan Rugby Football Championship. Looking at their winning the top title and the effort they made to achieve this, I was impressed with their single-minded determination



at play and their pure devotion to rugby. By learning the history of Kobe Steel and its rugby team, they continue to ask themselves who they are and how they can do better, coming up with ideas and creative techniques to increase their solidarity as a team. These legacy activities for team-building by the rugby team's General Manager, Wayne Smith, also left a lasting impression of their importance on me.

On reflection, we have a once-in-a-lifetime chance to rethink the Kobe Steel Group, and opportunities to

do so are spreading internally. To begin changing, we must continue to ask ourselves, "What is the Kobe Steel Group?" and "What is the significance of our existence in society?" I believe this will also enhance our comprehensive strengths and synergies, as we leverage the potential of our technologies and human resources as much as possible. This simply means we must genuinely approach matters from the customers' standpoint, and by taking this approach, restore the trust of stakeholders. As a corporation, I am confident this approach will also translate into securing profits and instilling thorough compliance throughout the Group.

We have a once-in-alifetime chance to rethink the Kobe Steel Group, and opportunities to do so are spreading internally."

# Outcomes and Issues with the Rolling of the Medium-Term Management Plan

The Kobe Steel Group has put in motion its five-year Group Medium-Term Management Plan, which ends in fiscal 2020, in order to attain KOBELCO VISION "G+," its medium- to long-term business vision that aims to establish a business enterprise consisting of the three core business areas of materials, machinery, and electric power.

From fiscal 2016 to fiscal 2018, Kobe Steel was able to stay on schedule with plans to concentrate upstream processes in the steel business and rebuild the construction machinery business in China. Moreover, the Company successfully launched two new projects in the electric power business as planned. In addition, management decided to earmark about ¥160 billion for

strategic investments, and has steadily executed these investments to promote its strategy for automotive weight reduction.

On the earnings front, Kobe Steel posted an ordinary loss of ¥19.1 billion in fiscal 2016, owing to the provision of significant amounts for the allowance for doubtful accounts in the hydraulic excavator business in China. The Company put these ordinary losses behind it in fiscal 2017, thanks to brisk market conditions. However, production-related issues clearly arose in mainly the materials businesses. The quality misconduct undermined production efficiency in the Aluminum & Copper Business. In addition, in fiscal 2018, the steel business encountered a series of

production problems. Furthermore, strategic investment projects have been slow to turn a profit in the steel, aluminum, and titanium businesses. As raw materials, logistics, and other costs continue to rise, passing these higher costs onto selling prices has become a major issue. Strengthening profitability with a focus on the materials businesses is an urgent issue that must be addressed over the two years through fiscal 2020.

In fiscal 2017 and fiscal 2018, earnings were adversely affected by a cumulative total exceeding ¥20 billion due to the quality misconduct, including compensation paid to customers and costs for retaining experts. Thanks to the cooperation of our customers, we have finished conducting safety verifications at a total of 688 companies to which nonconforming products had been delivered.

In view of this situation, the Company launched the Rolling of the Medium-Term Management Plan, ending in fiscal 2020, which clarifies key issues and measures to address by fiscal 2020. Although the external environment has changed from the original plan, management has not changed the basic aim of the plan, which is to establish a solid business enterprise centered on the three core business areas of materials, machinery, and electric power. The Group will continue to act in unison toward this objective. To do so, we need to resolve urgent near-term issues that include strengthening profitability with a focus on the materials businesses, efficiently using management resources, and strengthening the business foundation, while working to restore the trust of stakeholders.

# Strengthening Profitability with a Focus on the Materials Businesses

Kobe Steel's highest priority is to rebuild a stable production structure in order to strengthen profitability in the materials businesses. The series of production facility problems in the steel business in fiscal 2018 had an impact on profits, but more importantly, it caused problems with our customers. Also, in the context of reducing costs by consolidating upstream processes, we intend to quickly reinforce our facilities as well as control and maintenance systems to prevent production problems from occurring. In the Aluminum & Copper Business, production efficiency has worsened since the discovery of the quality misconduct, despite the Company's efforts to create a well-organized manufacturing structure. By steadily implementing measures to improve productivity and yield, we aim to fix these production problems by fiscal 2020. Moreover, as raw material prices and other costs rise, management will continue to negotiate for better prices of our products that reflect these rising costs in order to secure an appropriate margin. At the same time, we will work to expand sales of high-value-added products by proposing solutions that leverage Group advantages.

Furthermore, Kobe Steel will accelerate measures

to obtain returns on strategic investment projects implemented thus far in the steel and aluminum businesses. The Company is also striving to strengthen profitability by reorganizing the Iron & Steel Business and the Aluminum & Copper Business. Management is targeting April 2020 for these reorganization plans, centering on "materials," including steel products and aluminum flat-rolled products, and "parts," such as aluminum castings and forgings, aluminum extrusions, and titanium products. These areas share various points in common, such as plant operations, production technologies, and quality management. From a manufacturing perspective, there are also benefits from the reorganization in terms of more effective utilization of technologies and human resources. The integration of the steel and aluminum businesses should also enhance our ability to propose solutions. I also believe the reorganization will make it easier for customers to understand us, and also bring major benefits from a governance standpoint. The new organizational structure will also allow the Kobe Steel Group to leverage its comprehensive capabilities in advancing its strategy for reducing the weight of automobiles.

# Efficiently Using Management Resources and Strengthening the Business Foundation

To further improve business management and governance, Kobe Steel plans to introduce new indicators for business management, using both financial and nonfinancial criteria, and fully implement these benchmarks from fiscal 2020. Management plans to start using return on invested capital (ROIC) as a benchmark for increasing the efficiency of management resources with a higher awareness of the cost of capital. ROIC will be a useful metric for scoring the performance of individual business divisions and managing the business portfolio. Furthermore, management will look more closely at the restructuring of Group companies, from the standpoint of strengthening governance.

# Message from the President and CEO

We be a structure of the Group, as well as the comprehensive capabilities of its human resources, Kobe Steel will promote sustainability management that balances business growth with resolutions to social issues.

# Continuing to Reinforce Corporate Governance

Each of the Group's businesses has unique characteristics and strengths rooted in its own particular history. Over the years, the Kobe Steel Group has pursued Groupwide growth by strengthening its individual businesses. As a result, head office functions began to weaken, and many decisions were left to the businesses themselves. We now understand that the head office's weak grip on each business division was one factor that led to the quality misconduct. While clarifying the authority of the Head Office and each business division, we are revising and strengthening head office functions. More specifically, Kobe Steel established the Quality Management Department and the Compliance Management Department in 2018 to take control of Companywide quality and compliance, and put a Director in charge of each department. In April 2019, the Company created the Health & Safety Department as a new organization that oversees safety throughout the Company. In the past, an organization within the Human Resources Department was responsible for managing occupational health and safety. In light of its importance, Kobe Steel decided to elevate this function to the department level and assign a Director to oversee the department.

We aim to enhance corporate governance by reexamining the state of the Board of Directors in step with reviewing and strengthening head office functions. From an external viewpoint for fairness and transparency, the Company increased the ratio of Independent

Directors to at least one-third of the total in fiscal 2018 and appointed Independent Directors to chair the Board of Directors and Audit & Supervisory Committee. Looking back over the past year, I believe this arrangement has been rather effective from the standpoint of invigorating discussions on the sustainable growth of the Kobe Steel Group, as these Independent Directors have drawn on their extensive experiences and knowledge to offer diverse opinions from an outsider's viewpoint. With the aim of enhancing transparency and objectivity further, the Company will continue to make reforms while taking diversity into consideration, as demonstrated by the appointment of a female Independent Director at the General Meeting of Shareholders held in June 2019.

In only a year, Kobe Steel has reviewed the Board of Directors and organizational structure, strengthened its personnel, updated pertinent regulations and other initiatives, and largely finished updating its systems. Now, we will focus on increasing the effectiveness of these changes. Gauging by meetings of the Board of Directors and the Executive Council, a decision-making entity for business execution, I am seeing gradual yet steady changes in the awareness of Directors and Executive Officers, as shown by the increase in comments on areas outside of their own business domains. Moreover, they are clearly thinking in the context of the entire Group, which has led to more vigorous discussions.

# Enhancing Corporate Value by Contributing to the Environment and Society

Under the Rolling (or update) of the Medium-Term Management Plan, management reaffirmed its outlook that the trend toward lighter automobiles will continue as environmental regulations are tightened around the world. This trend is gaining momentum on a world scale, creating an unmistakable tailwind for Kobe Steel. We believe this will lead to sustainable growth as the Kobe Steel Group maximizes its advantages in being able to globally supply ultra-high-strength steel and aluminum products, in addition to its multi-material joining technology. In addition to supplying these materials, another feature of the Kobe Steel Group is its

extensive lineup of processing machinery, testing equipment, and evaluation and analysis software. Another strength of the Company is its ability to propose ideas at each stage of automobile development, from concept to final product. I believe Kobe Steel has strong potential to satisfy its customers with these comprehensive capabilities, centered on technologies for reducing the weight of automobiles.

Since its founding, the Kobe Steel Group has made concerted efforts to contribute in its own way to the environment and society through its technologies, products, and services. Looking ahead, we will



accelerate these initiatives to realize a low-carbon society and achieve the United Nations' SDGs. In addition to reducing the impact of our business and manufacturing activities, we will contribute to the environment and society through our technologies and products. This is the true duty and mission of the Kobe Steel Group. By harnessing the diverse technologies, products, and

services of the Group, as well as the comprehensive capabilities of its human resources, Kobe Steel will promote sustainability management that balances business growth with resolutions to social issues.

We ask for the continued guidance and support of our stakeholders.

# Legacy Activities of the Kobe Steel Rugby Club Kobelco Steelers



Kobe Works, once called a symbol of reconstruction, was being dismantled



winning the championship title, the rugby players show their solidarity with steelworkers.

Wayne Smith, General Manager of the Kobelco Steelers, launched legacy activities as a means of building a team out of athletes from various backgrounds. These legacy activities were conceived with the intention of getting the rugby players to have the same pride as steelworkers and fostering a spirit of wanting to fight together with Group employees. The activities entail learning about the history of Kobe Steel's founding in 1905 and the formation of the Kobelco Steelers' Kobe Steel Rugby Club in 1928, as well as consideration of the reasons why they play rugby and why they play for Kobe Steel. These activities strengthened solidarity among the teammates by inviting them to appreciate the fact that their club was built on a historical foundation laid by the Company and their predecessors.

One story in particular that was moving for the players was the story about how the No. 3 Blast Furnace at Kobe Works was quickly restored after being damaged by the Great Hanshin–Awaji Earthquake in 1995. While upstream processes were being consolidated, the team visited the idled No. 3 Blast Furnace as it was being dismantled. Each member of the team picked up a refractory brick from the furnace and carried it back to the clubhouse. After writing their names on the bricks, they built a monument for the clubhouse pledging their commitment to victory. The various ideas behind these legacy activities have increased the solidarity of the team. The Kobelco Steelers then went on to claim the championship title in the Japan Rugby Top League for the first time in 15 years, and won the All-Japan Rugby Football Championship for the first time in 18 years, providing us all with strong encouragement to do better.

# Summary of Key Themes for the Kobe Steel Group

The Kobe Steel Group formulated the Fiscal 2016–2020 Group Medium-Term Management Plan to realize the KOBELCO VISION "G+" business vision for establishing a solid business enterprise and furthering growth strategies centered on the three core business areas of materials, machinery, and electric power. Three years have passed since this Medium-Term Management Plan was created in 2016, and the Company has identified new issues to tackle as a result of changes in the business environment surrounding the Group.

In May 2019, Kobe Steel announced the Rolling (or update) of the Medium-Term Management Plan for

the fiscal years 2019–2020 in order to address key themes for the remaining two years of the original plan and the period thereafter. These key themes and initiatives under the current Medium-Term Management Plan are closely intertwined with the United Nations' Sustainable Development Goals (SDGs), and the Kobe Steel Group believes resolving these issues faced by society are also growth opportunities. We aim to sustain growth while resolving social issues by identifying risks in the business environment surrounding the Group and advancing measures to address key themes and turn them into growth opportunities.

Promoting Sustainability Management

Initiatives in sustainability

management P89

▶ Initiatives for the environment P97

Contribute to the environment

through technologies, products,

· Coexist in harmony with society

Further

Strengthening

the Next 100

Project

P26

Initiatives for society P90

Environmentally friendly

production activities

and services

# **Changes in the Business Environment Risks and Opportunities** ▶ Increase in transportation and personnel costs Increasing elderly population due to labor shortages and labor shortage in Japan Decline in monozukuri capabilities due to outflow of personnel and insufficient transfer of technical skills Diversity and ▶ Employment of diverse personnel and improvements work-style reforms in productivity Changes in industrial Delays and advances in development of technologies and structure brought about by businesses using IT and other innovative technologies IT and other technological Delays and advances in development of technologies and innovations, increase in businesses through external collaboration external collaboration Increase in restrictions on operations from tighter environmental regulations and rise in related costs, accumulation of know-how in reducing environmental impact More severe environmental problems (climate change, Interruption of operations due to natural disasters and natural disasters, etc.) burden of related losses Development and proliferation of technologies, products, and services that reduce environmental impact Increase in social responsibilities with growth ▶ Impact of compliance infractions (impact on orders and other in corporate activities sales activities, incurrence of compensation costs and penalalongside globalization ties, damage to corporate reputation, etc.) (rise in social interest in

ESG and the SDGs)

# Key Themes and Measures for Management

# Strengthening Profitability

# Strengthen profitability with a focus on materials P48

- Strengthen monozukuri capabilities and increase sales prices
- Obtain returns on strategic investment projects
- Make further contributions to customers by reorganizing the Iron & Steel Business and Aluminum & Copper Business

# Make efficient use of management resources with awareness of cost of capital □P42

- ▶ Revise evaluation methods for businesses
- Strengthen Group governance, including restructuring of Group companies
- ▶ Make efficient use of capital and assets

# Strengthening the Business Foundation

# Initiatives in focus fields under Medium-Term Management Plan

- ▶ Automotive weight reduction P43
- ▶ Energy and infrastructure field ☐ P53
- Stable earnings in electric power supply business ☐ P57
- Strengthen the business foundation
- Improve technical development and monozukuri capabilities P60
- Initiatives to secure and train personnel 

   P64
- Occupational health and safety
   P93

Initiatives for Restoring Trust Measures to prevent
a recurrence of the misconduct
Improve governance,
management, and processes 
P30

# Relevance to SDGs























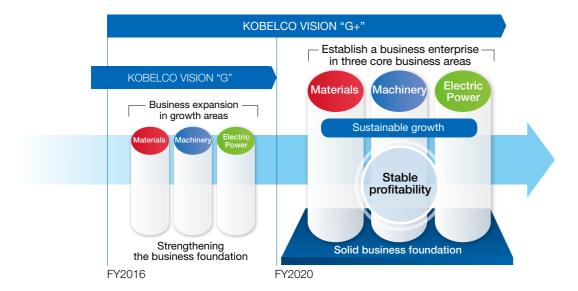


# Outline of the Fiscal 2016–2020 Group Medium-Term Management Plan

# Kobe Steel Group's Medium- to Long-Term Business Vision

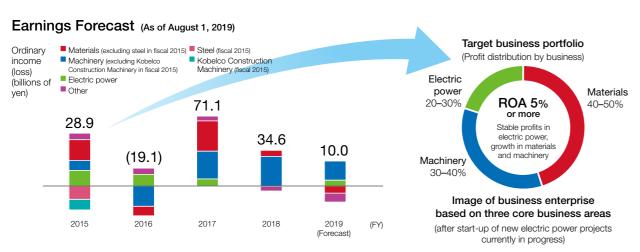
# **KOBELCO VISION "G+"**

The Kobe Steel Group formulated the Fiscal 2016–2020 Group Medium-Term Management Plan to realize the KOBELCO VISION "G+" business vision for establishing a solid business enterprise and furthering growth strategies centered on the three core business areas of materials, machinery, and electric power. The Company aims to contribute to society while expanding and advancing its businesses by concentrating management resources on growth fields likely to expand over the medium to long term, such as energy and infrastructure, as well as strategies to reduce the weight of vehicles.



# -Growth Strategies for the Three Core Business Areas

#### Machinery Electric Power Materials Initiatives to stabilize profitability in 1 Initiatives for weight reduction 1 Initiatives in the fields of energy the electric power business of vehicles and infrastructure 2 Strengthening profitability in 2 Strengthening profitability in the the steel business construction machinery business Strengthening the Business Foundation 1 Strengthening corporate governance 2 Securing and developing human resources 3 Strengthening technical development and monozukuri (manufacturing) capabilities



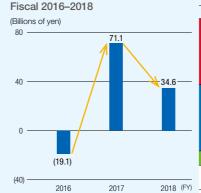
## Review of Fiscal 2016-2018 Started to pursue medium- to long-term business vision in fiscal 2016 to advance growth strategies for the three core business areas of materials, machinery, and electric power, and establish Results a business enterprise with a solid profit structure. KOBELCO VISION "G+" (Major progress and results up to fiscal 2018) Steel: Earnings improvement from consolidation of upstream processes at Kakogawa Works Steel & aluminum: Decided on investment strategies for automotive weight reduction, etc. Business expansion Construction machinery: Finished restructuring excavator n growth business in China Machinery Compressors: Entered market for large-capacity centrifugal compressors Stable Promoted new power generation projects in profitability Moka and Kobe Reinforced corporate governance Strengthening the reviewed composition of Directors, etc.) Next 100 Project (activities to instill our corporate philosophy) business foundation Generated about ¥110 billion in cash FY2016 FY2018

# **Financial Results**

Ordinary Income (loss) in

# Profitability declined in materials businesses despite one-time factors, while earnings recovered due to stronger demand for construction machinery

Generated cash of about ¥110 billion over three years; maintained financial discipline by keeping D/E ratio below 1.0 times



#### Segment Breakdown 2016 2017 2018 (Billions of yen) ron & Steel (29.5)17.3 4.7 Welding 4.9 3.6 6.8 Aluminum & 12.0 11.8 (1.5)34.0 6.8 (10.7)5.8 2.3 1.2 Machinery 2.8 6.9 6.5 Engineering (31.3)21.9 25.5 31.1 33.2 (22.7)13.0 7.9 (0.3)7.6 5.4 2.3

(6.4)

(7.5)

(7.5)

34.6

	riajaotimoni	(0)	(1.10)
	Total	(19.1)	71.1
Cash Flow & D/E Ratio in Fiscal 2016–2	2018		

(Billio	ons of yen)	2016	2017	2018
	Operating cash flow	126.7	191.8	72.3
	Investing cash flow	(131.9)	(160.7)	(10.9)
	Free cash flow*	(5.2)	31.1	61.4
* Excludes project financing				
D/E	ratio	1.17	0.98	0.98
(Excludes early procurement of borrowings)		1.00	_	0.85

# Identified Issues



- ▶ Initiatives to restore trust
- Negative earnings impact in excess of ¥20 billion in fiscal 2017–2018
- Safety inspections completed at 688 companies thanks to their cooperation

# Production problems in

- Steel production problems caused ¥10 billion in losses in fiscal 2018
- Production efficiency worsened in the aluminum business

# strategic investments

Slow returns on strategic investment projects in the steel, aluminum, and titanium businesses

# Rising raw material and other costs

- Increase in raw material, logistics, and energy costs
- Reproducible sales prices an issue



Strengthening profitability with a focus on materials, assuming trust can be restored, is an urgent issue for the next two years through fiscal 2020, in order to realize our medium- to long-term business vision.

# Outline of the Fiscal 2016-2020 Group Medium-Term Management Plan

• Initiatives for securing and cultivating human resources

• Promote sustainability management that leverages the

distinctive features of the Kobe Steel Group (contribute to

society and the environment through business activities;

• Strengthen IT strategies P63

pursue sustainable growth) P89

P64

#### Rolling of the Medium-Term Management Plan for Fiscal Years 2019–2020 > Focus on key themes for fiscal years 2019–2020. Adhere to the Kobe Steel Group's basic policies for establishing a business enterprise in the three core business areas of materials, machinery, and electric power. Ongoing themes for the next medium-term management plan and initiatives for future growth are intended to truly restore trust and translate into contributions to the environment and society through sustainability management. Medium- to long-term business vision **KOBELCO VISION "G+"** 1 Strengthen profitability with a focus on materials 2 Make efficient use of management resources and Growth in materials and machinery, strengthen the business foundation stable earnings base in electric power Ongoing themes for the next medium-term management plan Automotive weight reduction strategies Corporate governance, securing and cultivating human resources, IT strategies, etc. Ordinary 40-50% incomé Sustainability management (contribution to the environment and society, sustainable growth) ¥34.6 Ordinary lachiner incomé 30-40% Initiatives to restore trust ¥10.0 Next medium-term Electric Rolling of management plan the Medium-Term power Management Plan FY2018 FY2019 FY2020 **Business enterprise** (Forecast) established in three core business areas (image of composition by business) Key Themes in the Rolling of the Medium-Term Management Plan Make efficient use of management resources and strengthen the business foundation 1 Strengthen profitability with a focus with focus on capital costs on materials P48 Strengthen monozukuri capabilities and increase sales prices Initiatives to be completed Obtain returns on strategic investment projects by fiscal 2020 Make further contributions to customers by Business management and governance reorganizing the Iron & Steel Business and Aluminum & Copper Business Revise the evaluation method of 2 Make efficient use of management resources each business and strengthen the business foundation Use ROIC to assess businesses Start using non-financial indicators in assessments from fiscal 2019 Ongoing themes for the next medium-term plan Strengthen Group governance, including Group company reorganization Steadily implement automotive weight reduction strategies

# Automotive Weight Reduction Strategies: Kobe Steel's Unique Initiatives

- Promote solution proposals as the world's only manufacturer that has steel, aluminum, welding, and dissimilar material joining technologies.
- Strengthen ability to propose solutions for making vehicles lighter by reorganizing materials-related businesses.
- □ In addition to automotive weight reduction, contribute to reducing CO₂ emissions by providing Kobe Steel Group technologies. products, and services to meet the needs for satisfying stricter fuel economy and emissions regulations, including e-mobility.

# Multi-Materials That Contribute to Automotive Weight Reduction

Propose comprehensive solutions for materials that contribute to reducing weight, such as ultra-high-strength steel and aluminum, along with processing, structural proposals, and joining methods to make full use of materials

#### Fields That Contribute to e-Mobility

Steel	Soft magnetic iron material, magnetic steel powder
Copper	Copper alloys for high voltage circuits
Machinery	Equipment and units for hydrogen refueling stations
Others	Fast chargers for vehicles, mobile power supply vehicles

Steel: Ultra-high-strength steel Aluminum: Aluminum extrusions Hoods, fenders, doors, roofs, etc. Aluminum: Aluminum sheets for automotive closure panels Bumpers, door impact beams Steel: Ultra-high-strength steel Aluminum: Aluminum extrusions Chassis components Aluminum: Aluminum forged Joining and analysis suspensions Joining: Welding materials, dissimilar

# Initiatives to Stabilize Profitability in the Electric Power Business

Nobe Steel is currently advancing new projects (No. 1 and No. 2 units at Moka, No. 3 and No. 4 units at Kobe) in an effort to stabilize its earnings base over the longer term.

- Maximize profits from stable operations of the No. 1 and No. 2 units of the Kobe Power Plant
- Construct and smoothly launch the No. 1 and No. 2 units of
- the Moka Power Plant and No. 3 and No. 4 units of the Kobe Power Plant

1.4 million kW

 Establish a stable earnings base Realize cost competitiveness with cutting-edge facilities

3.95 million kW

[Pulverized coal-fired, 2.65 million kW ultra-supercritical pressure power generation (USC)]

[Gas turbine combined cycle using city gas]

[Pulverized coal-fired, supercritical pressure power generation (SC)]

FY2002 FY2019 FY2022

Earnings Forecasts\* (Billions of yen)

Kobe Power Plant

FY2016

\* This refers to the earnings forecasts that we disclosed at the "Initiatives in the Electric Power Business" briefing held in January 2017. Earnings forecasts for each fiscal year include head office expenses of around ¥2–3 billion. The Company expects temporary upfront expenses to arise until the new power generation units go into operation

FY2017

(Result)

(Forecast)

(Plan)

FY2023

Around

¥40 billion

material joining technology

Analysis: Structure, processing,

ioining analysis

Kobe Steel Group Integrated Report 2019 Kobe Steel Group Integrated Report 2019

Finance

Make efficient use of capital and assets

• Reduce strategically held shares, etc.

Maintain financial discipline with D/E ratio of 1.0 times or less

Improve working capital

► Target ¥50 billion

Make disciplined investments

# Message from the CFO

# Message from the CFO



By making efficient use of capital and assets and with healthier finances, we will monetize strategic investments, achieve sustainable growth in earnings, and realize returns for shareholders.

# Our Corporate Resolve to Take on Change

Around the world, needs are increasing for lighter automobiles, presenting an excellent opportunity for materials producers. In a period of change that could be of historical proportions, the Kobe Steel Group is confidently and boldly executing and advancing strategic investments in line with its Medium-Term Management Plan in a bid to turn changes in the market into growth opportunities. In our materials businesses, we are consequently prioritizing investments in the process industry, and although it will take some time before we see a return on these investments, the environmental and energy markets have

been changing. We believe we must improve our profitability in tandem with market growth.

In order to make strategic investments in these once-in-a-lifetime growth opportunities, the Company must generate cash and bolster its finances. The Group's "lifeline" depends on whether it has the decision-making and execution capabilities to generate and secure this cash.

In fiscal 2016–2018, Kobe Steel began to shape its strategic investment projects inside and outside Japan in line with its Medium-Term Management Plan, but returns on these investments have not materialized as

initially projected. Our profitability declined, especially in the materials businesses, and it has become harder to secure adequate operating cash flow. We now face the urgent issue of creating a framework for strengthening profitability, especially in the materials businesses, for the sake of future growth.

In the Rolling of the Medium-Term Management Plan through fiscal 2020, Kobe Steel plans to rebuild businesses where it can leverage its unique advantages. As a part of this plan, the Company is reorganizing the Iron & Steel Business and the Aluminum & Copper Business with its sights set on April 2020. We are committed to our shareholders, investors, customers, and other stakeholders, as well as our employees across the Group, in taking on the challenge of realizing "change" in order to strengthen profitability through these new initiatives.

# Boosting Capital and Asset Efficiency: ¥50 Billion Target

With regard to generating cash flow, Kobe Steel is boldly advancing measures to improve capital and asset efficiency in addition to strengthening the profitability of its businesses. The Company is keen to establish a cycle that can generate earnings and cash flow soon. In the context of maintaining financial discipline, management is committed to its financial target of keeping the D/E ratio below 1.0x, even if it is a prime time for strategic investments.

During fiscal 2016–2018, Kobe Steel implemented a number of measures to generate cash, such as increasing capital efficiency with a cash management system (CMS) and selling strategic shareholdings after reassessing their significance, in addition to selling a portion of its shareholdings in consolidated subsidiaries. As a result, the Company generated about ¥110 billion in cash, and the D/E ratio declined to 0.98x in fiscal 2018, from 1.17x in fiscal 2016.

We will continue to reassess our capital and assets with an eye on the future. Kobe Steel plans to improve its capital and asset efficiency, with a target of ¥50 billion by fiscal 2020, and will steadily make strategic investments while maintaining its financial standing.

# Shareholder Returns and Increasing Efficiency of Management Resources with a Focus on Cost of Capital

Turning to asset efficiency, Kobe Steel targets a return on assets (ROA) of at least 5%. However, the expansion of assets due to upfront strategic investments led to an ROA of only 1.5% in fiscal 2018. With the aim of improving efficiency of management resources in terms of cost of capital, the Company is redoubling its efforts to increase asset efficiency, such as by adopting ROIC as a business management indicator with the intention of fully deploying this indicator from fiscal 2020. As an indicator, ROIC will be used to evaluate individual business segments and guide the management of our business

portfolio. Moreover, we aim to put in place a structure where ROIC is consistently higher than the weighted average cost of capital (WACC).

Regarding shareholder returns, management targets a dividend payout ratio of 15–25% of net income attributable to owners of the parent. With the electric power business as a stable earnings foundation and growth in the materials and machinery businesses, the Company has begun discussions on increasing the dividend payout ratio as quickly as possible with an eye on realizing its vision.

# Promoting Sustainability Management

Lately, initiatives to realize a low-carbon society and the SDGs of the United Nations have drawn growing interest. In 2019, the Kobe Steel Group reviewed its systems for advancing sustainability management. The Group has long provided technologies, products, and services that lessen environmental impact, such as reducing CO<sub>2</sub> emissions, and has engaged in CSR activities for nurturing the next generation in local communities. We will strengthen activities that lead to

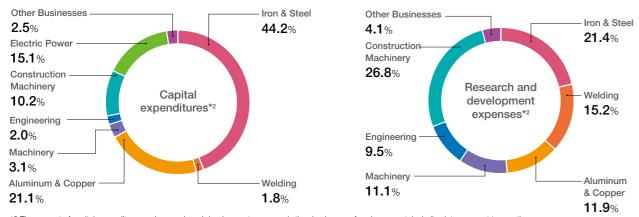
both growth for the Group and resolutions to social issues. By advancing sustainability management, we also intend to broaden the scope for procuring capital.

Management carefully considers the external opinions it obtains through engagements with share-holders, investors, and other stakeholders, and relies on them to help guide the continuous growth of the Group. In this regard, we would like to ask for your candid opinions and continued support.

# Results by Operating Segment (Fiscal 2018)



Financial data (Billions of yen)	Iron & Steel	Welding	Aluminum & Copper	Machinery
Net sales	753.9	83.9	359.0	171.4
Ordinary income (loss)	4.7	3.6	(1.5)	1.2
Total assets	973.2	78.5	335.0	171.9
Depreciation	55.7	2.2	14.7	6.1
Research and development expenses	5.2	3.7	2.9	2.7
Capital expenditures	58.8	2.3	28.1	4.1
Crude steel production	6.91 (millions of tons)	_		-
Sales volume	5.62 (millions of tons)	298 (thousands of tons)	Aluminum 345 (thousands of tons) Copper 144 (thousands of tons)	_
(Domestic)	4.25 (millions of tons)	127 (thousands of tons)	Aluminum 274 (thousands of tons) Copper —	_
(Exports)	1.37 (millions of tons)	171 (thousands of tons)	Aluminum 70 (thousands of tons) Copper —	_
Received orders				
Value of orders	_	_		171.7
(Domestic)	_			61.2
(Exports)	_	_		110.4
Backlog of orders	_	_		156.6
(Domestic)	_	_		43.2
(Exports)	_	_		113.3



<sup>\*2</sup> The amount of capital expenditures and research and development expenses is the simple sum of each segment, including intersegment transactions.

Non-financial data (Persons)	Iron & Steel	Welding	Aluminum & Copper	Machinery
Number of employees (Non-consolidated)	5,088	968	2,080	1,679
Number of employees (Consolidated)	10,887	2,560	7,550	4,094

# Machinery Businesses





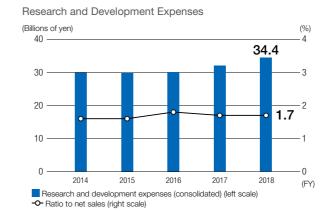


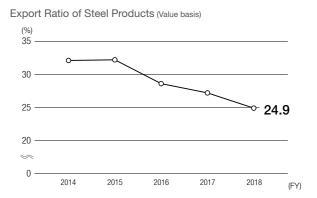
Engineering	Construction Machinery	Electric Power	Other Businesses	Adjustment	Total
151.7	386.0	76.1	42.0	(52.5)	1,971.8
6.5	25.5	(0.3)	2.3	(7.5)	34.6
137.3	358.6	123.2	57.0	149.7	2,384.9
2.0	12.3	5.8	1.6	1.7	102.5
2.3	6.5	_	1.0	9.7*1	34.4
2.7	13.5	20.1	3.3	0.2	133.4
			#1 Interconnent and basis D0F	Consider the Koba Charle To	shainal Davalanment Crava

<sup>\*1</sup> Intersegment and basic R&D carried out by Kobe Steel's Technical Development Group

122.6 90.5 32.1 169.3 104.2 65.1

# Average Steel Sales Price (Thousands of yen/ton) 100 86.1 75 50 25





Engineering	Machinery	Electric Power	Other Businesses	Head Office	Total
347		244		995	11,401
3,523	7,487	244	1,643	1,353	39,341
					•

# **Materials Businesses**

# Interview with the Executive

The Director in charge of the materials businesses discusses initiatives to strengthen profitability and sustain growth.

Our highest priorities are initiatives for ensuring safety, improving quality and reliability, and maintaining stable production. At the same time, we are keen to strengthen profitability and contribute to the environment by maximizing our advantages and comprehensive capabilities in the materials businesses.



# Resolving Issues One by One, Moving to Strengthen Profitability by Fiscal 2020

Kobe Steel is advancing its strategy to tap into growth opportunities arising from demands for reducing the weight of automobiles. At the same time, we also need to find a way to boost and strengthen profitability in the materials businesses. In the steel business, the Company finished consolidating upstream processes at Kakogawa Works, but its impact was clouded by several production problems that arose in fiscal 2018. I believe our foremost issue is maintaining stable production by reinforcing our equipment as well as our control and maintenance systems. The Company continues to focus its efforts on securing reproducible and appropriate margins, in addition to reflecting rising costs in selling prices in light of the significant increases in costs for main raw materials, secondary materials, and logistics. In the Welding Business, although the rise in cost of raw materials and other expenses have become an issue, we are building a high-value-added business model that combines welding materials and welding robot systems. We are working to further expand earnings in the business by tapping into the growing demand for automated welding systems against a backdrop of labor shortages in Japan, as well as the joining needs in automotive weight reduction. In the Aluminum & Copper Business, production efficiency has worsened considerably, despite the Company's efforts to create an orderly manufacturing system after the discovery of the quality misconduct. By steadily implementing measures to improve productivity and yield, we aim to rebuild these production systems by fiscal 2020.

To strengthen profitability, it is imperative that returns are generated on strategic investment projects that have transitioned to the execution stage. In the steel business, Kobe Steel is expanding its global supply capacity for ultra-high-strength steel, which helps reduce the weight of automobiles, throughout its global three-region structure comprising Japan, the U.S., and China. Furthermore, to meet the growing demand for aluminum as a means of reducing the weight of

# Vice President

automobiles, the Company has created a supply structure overseas for aluminum sheets for automotive closure panels in China and aluminum forged suspensions in the U.S. and China, as well as for aluminum extrusions and fabricated products for car bumpers and frames in the U.S. Our energy is focused on quickly generating returns on these investment projects, while further strengthening collaboration between production and sales.

In addition to these initiatives, we are bringing together the comprehensive capabilities of the materials businesses with the aim of making greater contributions to our customers and reinforcing our business through organizational reforms of the Iron & Steel Business and the Aluminum & Copper Business, which are targeted for April 2020. We will shape a concrete path to achieve our financial target of ROA of 5% by fiscal 2020, the final year of the Rolling of the Medium-Term Management Plan. At the same time, we will show our stakeholders the synergies generated through our organization reforms.

# Significance of Organizational Reforms in the Iron & Steel Business and Aluminum & Copper Business

People are the wellspring of the Kobe Steel Group's competitiveness. This is fundamentally because the abilities of our employees are matched against their peers at global rivals. I am especially mindful of management techniques that leverage the abilities of people who have extensive experience managing massive organizations like a steelworks. Through daily communication, we mutually acknowledge the presence of all employees and respect the work they do. I will continue to emphasize the importance of trusting one another.

In a similar vein, our organizations should also acknowledge each other's strengths, and it is important to help shore up any weaknesses. As the Director in charge of the materials businesses, I have reminded myself of the strengths and weaknesses of each business division. For example, the strength of the Iron & Steel Business is the ability of the organization to coalesce when problems arise while the strength of the Welding Business is the leadership and speed with which decisions are conveyed along the chain of command. The strength of the Aluminum & Copper Business is its ability to negotiate with customers. These are some of the strengths I would like each business division to be aware of. However, I think more needs to be done in order for the business divisions to offset each other's weaknesses and learn from each



other's strengths. While taking an objective view of the current state of our organization, my job over the past year has been to determine our future direction as an organization. Through periodic meetings and lively discussions with each business division, from which we identified problem areas, I came to the conclusion that organizational reforms are needed.

The steel business, which seeks to enhance profitability by consolidating upstream processes, requires a more aggressive approach to marketing, a strength of the aluminum business. Meanwhile, human resources are likely to become a bottleneck in the aluminum business, despite aggressively developing the business overseas through strategic investments. Effectively providing the aluminum business with access to the abundant personnel in the steel business could be a breakthrough. With this in mind, we intend to reorganize the businesses into the Iron, Steel & Aluminum Business (tentative name), as an entity formed around materials consisting of steel products and aluminum flat-rolled products.

Kobe Steel boasts high market shares compared with its rivals in steel castings and forgings, titanium, and aluminum castings and forgings, despite its smaller scale in each business. Moreover, thanks to our excellent product development capabilities, these products are used in the suspensions and bumpers of automobiles, as well as key components for aircraft, ships, and Shinkansen bullet trains. In other words, these parts are high-value-added products that help reduce the weight and fuel consumption of vehicles. Through these components, the Metal & Processed Materials Business (tentative name) will be formed. The aim is to create an agile business entity with quick decision-making capabilities that

# **Materials Businesses**

are in tune with the lifecycles and evolution of these parts. Moreover, we intend to enhance our ability to propose solutions to customers and redouble our efforts to raise awareness of the high-value-added nature of our parts through public relations campaigns inside and outside the Company to promote the KOBELCO brand.

In addition to the Welding Business, which boasts strong leadership and rapid decision-making ability, the reorganization of the Iron & Steel Business and the Aluminum & Copper Business with these objectives in mind should lead to stronger profitability and higher efficiency in business operations by uniting the comprehensive capabilities of the materials businesses.

# The Value Kobe Steel Can Provide Thanks to Its Materials Businesses

The Kobe Steel Group's strategy to reduce automotive weight has drawn strong interest and attention from shareholders, investors, and other stakeholders. The movement to reduce the weight of automobiles can be attributed to tightening environmental regulations around the world. As such, this trend is unlikely to waver in the future. The Kobe Steel Group views this trend as a growth opportunity where it can leverage its unique advantages and strengths.

Although we are making steady progress in our search for business seeds, we have yet to create a business model that will significantly contribute to earnings. In this context, I am keen to get personally and deeply involved in the project to help reduce the weight of automobiles. As organizational reforms take shape, the materials businesses will strengthen collaboration with the Automotive Solution Center in the Technical Development Group.

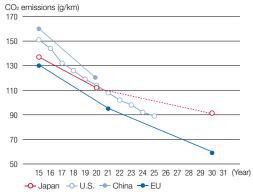
Initiatives such as this strategy to reduce the weight of automobiles are unique to the Kobe Steel Group for the value they provide while contributing to the environment. We are taking a two-pronged approach to reducing CO2 emissions, namely (1) reducing the amount of CO2 emitted through the Group's business activities, and (2) contributing to CO2 reduction in various parts of society through the Group's technologies, products, and services. I believe we can make rather large contributions to the environment and society through the second approach. Kobe Steel will leverage its strengths in technologies and products, which help reduce CO<sub>2</sub>, such as through improving fuel economy by reducing the weight of vehicles with its ultra-high-strength steel, aluminum products, and titanium. With ongoing efforts by each business division, CO2 emissions can be reduced through the first approach as well. This represents a unique challenge, one where the Kobe Steel Group can continue to apply its comprehensive capabilities. More specifically, collaboration between the Iron & Steel Business in the materials businesses and the Engineering Business in the machinery businesses could lead to creating and achieving ironmaking operations that generate lower levels of CO2 in the future.

Looking ahead, we will advance measures to strengthen profitability, an urgent issue of late. At the same time, I would like Kobe Steel to become a materials maker that can contribute in a unique way to conservation of the global environment. We hope to help realize a sustainable society by promoting sustainable management that balances profitability with conservation of the global environment.

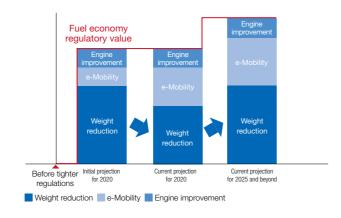
# Automotive Weight Reduction Strategies: External Environment

- Tougher vehicle fuel economy and emissions regulations likely through 2030.
- Demand for ultra-high-strength steel, a means of making vehicles lighter in order to meet stricter regulations, was in line with expectations, but the switch to aluminum is taking longer than initially anticipated. However, automotive weight reduction will continue to drive demand.

Fuel Economy Regulations by Region (CO<sub>2</sub> emission equivalent)



Europe: Decided to further tighten fuel economy and emissions regulations in 2030 Japan: Laws currently being revised for 2030 regulatory values \* Created by Kobe Steel based on data from regulatory authorities in each country and region Changes in Ways to Meet Regulations (Kobe Steel projections)



# Strengthen Monozukuri Capabilities and Increase Sales Prices

Initiatives for Fiscal 2020

# Steel / Kakogawa Works

Prevent production issues by improving equipment and control and maintenance systems

# Aluminum / Moka Plant

Improve productivity and yield by increasing heat treatment capacity

# Aluminum / Daian Works

▶ Improve productivity

# Increase Sales Prices

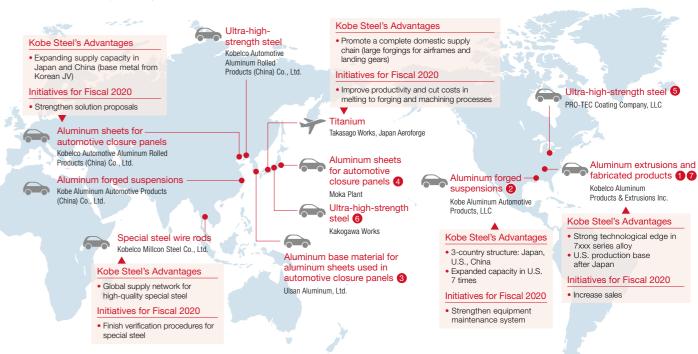
- Revise prices following rise in raw material and distribution costs
- Achieve appropriate sales prices

About ¥160 billion

Expand sales of value-added products through solution proposals, etc.

# **Obtain Returns from Strategic Investment Projects**

Initiatives for Completion by Fiscal 2020



No.	Remarks	Investment	Decision date
1	Established new production and sales base (KPEX) for aluminum extrusions and fabricated products	US\$46.7 million	April 2016
2	Expanded production facility for aluminum forged suspensions (KAAP) (7th expansion)	About US\$53 million	April 2017
3	Established joint venture with Novelis in South Korea (aluminum base material for automotive closure panels)	US\$315 million	May 2017
4	Expanding production equipment for aluminum sheets for automotive closure panels at Moka Plant	About ¥20 billion	May 2017
5	Adding new production facility for ultra-high-strength steel at PRO-TEC	About US\$400 million*	September 2017
6	Adding new production facility for ultra-high-strength steel at Kakogawa Works	About ¥50 billion	April 2018
7	Expanding production facility for extrusions and fabricated products at KPEX	US\$42 million	August 2018

Total investments

Status of Investments

<sup>\*</sup> Financing arranged by PRO-TEC

# C33C3

#### ·

**Materials Businesses** 

# Make further contributions to customers by reorganizing the Iron & Steel Business and Aluminum & Copper Business

Iron & Steel Business Aluminum & Copper Business Steel castings Steel wire rods Welding and forgings Aluminum castings Aluminum flat-rolled and bars Copper strips materials Titanium and forgings Steel plates products Copper tubes Welding Aluminum extrusions Steel powder Steel tubes Steel castings Steel wire rods April 2020 Welding and forgings Aluminum castings and bars Aluminum flat-rolled Copper strips materials Onward and forgings Welding Steel plates products Copper tubes Steel powder Steel sheets

Objectives of the Reorganization

# Strengthen Strategies for Each Demand Field

- Reorganize along materials (steel products, aluminum flat-rolled products) and parts (automotive/ aluminum castings and forgings and extrusions, aircraft/titanium and aluminum castings and forgings)
- Consider integrating automotive steel sheet sales and aluminum flat-rolled products sales departments and product technology-related departments > Strengthen automotive weight reduction strategies
- Expand sales through solution proposals

# Strengthen *Monozukuri*Capabilities

Link common elemental technologies and quality management across business divisions [Materials] rolling, continuous annealing, etc.

[Parts] forging, extrusion, assembly, etc.

# Strengthen Corporate Governance

Strengthen management functions of business divisions

# Strengthen Common Functions

Strengthen common functions in procurement, information systems, distribution, facility maintenance, etc.

# **TOPICS**

# Development of Slag-Reducing Welding Process for Automobile Chassis

Kobe Steel and Mazda Motor Co., Ltd. combined their knowledge on welding to develop a slag-reducing welding process for automobile chassis, a groundbreaking welding method that reduces slag,\* a starting point for rusting, and enhances the anti-corrosion performance of chassis components. This technology was first adopted on the Mazda 3 and will be deployed on other models in the future.

This technology helps improve the anti-corrosion performance of chassis components, an issue that arises when reducing the weight of automobiles. For this joint development project, the two companies received The Japan Welding Engineering Society's Fiscal 2018 (49th) Technical Award (main prize), which recognizes researchers who contribute to the advancement of welding technology in Japan.

\* Slag: A non-metallic substance in weld zones. It is formed from reactions between elements in molten metal, shielding gas, and oxygen in the atmosphere.

# Expansion of Production Facilities for Automotive Aluminum Extrusions in the U.S.

Kobelco Aluminum Products & Extrusions Inc., a subsidiary that produces and sells aluminum extrusions and fabricated products for automobiles, decided in August 2018 to invest about \$42 million to expand its production capacity in order to meet the growing demand for automotive extrusions and fabricated products in North America. Production capacity will be expanded from 500 tons per month to 1,000 tons per month, with plans to commence mass production in the first half of 2020.

This investment will strengthen the supply structure for aluminum extrusions and fabricated products in Japan and the U.S., and allow the Company to propose unique ideas for reducing the weight of automobiles using its development capabilities for highstrength 7000 series aluminum alloys and cross-sectional design technology cultivated in the Japanese market.

#### **TOPICS**

Sustainability

# Commencement of International Industry– Academia Joint Research Collaboration for Welding Technology in Vietnam

Four organizations—the School of Mechanical Engineering at Hanoi University of Science and Technology in Vietnam; the Joining and Welding Research Institute at Osaka University in Japan; Kobe Steel, Ltd.; and its welding subsidiary, Thai-Kobe Welding Co., Ltd.—commenced an international industry—academia joint research collaboration in April 2019 to foster advanced technology for welding and joining in Vietnam and to contribute to the development of the industry in the country. This is the first time that a Japanese welding material manufacturer has participated in joint research through

industry-academia collaboration in Vietnam.

Expectations are high from Japanese companies in Vietnam that the activities of the four organizations will not only enhance technology and quality but also help foster advanced welding and joining technologies and industrial development in the country. The four organizations will collaborate with related agencies and focus on

developing the next generation of welding engineers. They will also contribute to improving welding technology in Vietnam and, furthermore, to the entire Southeast Asian market in the future.



# **Machinery Businesses**



# Message from the Director in Charge of the Machinery Businesses

# Takao Ohama

Executive Vice President and Representative Director

# **Annual Review**

Looking back at earnings in fiscal 2018 and initiatives taken under the Medium-Term Management Plan, the machinery businesses made good progress overall, though each business performed differently. However, some issues arose that need to be addressed.

In its Machinery Business, the Company successfully entered the large-capacity centrifugal compressor business, having set up one of the world's largest test facilities for largecapacity compressors as a part of its strategy to invest in expanding the compressor business. However, it will take time for this business to turn a profit due to the intensifying competitive environment. In the standard compressor field, Kobe Steel finished consolidating production at the Harima Plant in August 2018 and began selling new global strategic products that are cost competitive. In the industrial machinery business, demand was robust in the petrochemicals field for plastic processing machinery. The engineering business marked a second consecutive year of steady earnings since fiscal 2017. Kobe Steel completed integrating the waste treatment-related operations of Kobelco Eco-Solutions Co., Ltd. (KES) and IHI Enviro Corporation, finishing preparations for expanding the earnings base and strengthening its competitiveness in the waste treatment field. In the construction machinery business, we were able to maintain strong earnings by increasing sales volume on the back of brisk demand, mainly in China, while completing the restructuring of the excavator business in China. However, profitability in the crane business remained an issue.

# I Contributing to the Sustainable Development of Society with Innovative Technologies

An urgent issue we must overcome by the end of fiscal 2020, which marks the end of the current Medium-Term Management Plan, is the strengthening of our profitability in the compressor business, including centrifugal compressors, and the crane business. We intend to improve the function and price competitiveness of centrifugal compressors and reduce costs in the crane business.

When looking at the machinery businesses, I always keep in mind that only those who can respond quickly to change will survive. The operating environment surrounding the Kobe Steel Group has changed dramatically, including rapid advances in Al and other technologies and stronger efforts to address climate change. The Kobe Steel Group, which has focused its efforts on the energy, environment, and infrastructure fields, sees growing interest in social issues, especially the SDGs, as an excellent opportunity for giving back to customers and society through its many technologies accumulated over the years. Without letting this opportunity go to waste, we will step up efforts in the fields of energy, the environment, and infrastructure.

In the machinery businesses, I feel that growth opportunities are expanding as environmental regulations are tightened. For example, demand has been rising for compressors used in LNG-fueled ships, which are being increasingly deployed in order to reduce environmental impact. Our standard compressors, developed as new global strategic products, are also expanding their share of the world market thanks to best-in-class efficiency and functions. Kobe Steel and Quintus Technologies AB, a leading global manufacturer of isostatic presses that Kobe Steel acquired in fiscal 2017, are actively demonstrating their synergies in the area of automotive weight reduction. In the engineering business, we will expand

# **Machinery Businesses**

operations in the waste treatment field and develop a solutions business that combines technologies and know-how from inside and outside the Company related to utilizing waste energy and reducing CO<sub>2</sub> emissions. In the construction machinery business, we will hone our environmental technologies, including our strength in fuel-saving technology, while aiming to reform work styles at construction sites with the use of information and communications technology (ICT) through collaboration in many fields, including industryacademia partnerships.

By turning change into opportunities, Kobe Steel has achieved success as a business. Its experience in contributing to society and the environment has imbued confidence in Group employees. Kobe Steel aims to contribute to the sustainable development of society, establishing and growing the business foundations of its machinery businesses, while creating opportunities and a work environment where all employees are able to do their jobs with pride, the spirit to take on challenges, and the motivation to achieve their goals.

# **Machinery Businesses**

## Returns on Strategic Investment Projects

- ▶ Increase competitiveness of large-capacity centrifugal compressors (with one of the largest test facilities in the world)
- Maximizing synergies with Quintus Technologies AB, a leading global manufacturer of isostatic presses; entry into automotive weight reduction field in Japan
- Creating Demand for Compressors and **Expanding the Business with Products That** Contribute to the Environment
- Expansion of market share for compressors for LNG-fueled ships



Aim for 50% or higher market share by meeting needs for LNG-fueled ships amid

Expansion of market share in Asia for standard compressors with new global strategic products



Emeraude IV oil-free compressor Features global remote communications functions, in addition to world-class energy efficiency and low noise

# Initiatives to Expand Industrial Machinery Business

# TOPICS

# Order Received for Large Mixing and Pelletizing System for Polypropylene

In January 2019, Kobe Steel received an order from a major overseas petrochemical plant company for its LCM350EX, a large mixing and pelletizing system for polypropylene. The system has a production capacity of 60 metric tons per hour and is Kobe Steel's largest system for polypropylene ordered to date. Kobe Steel plans to deliver it in 2020.

Kobe Steel estimates that it has a 37% share of the world market for plastic mixing and pelletizing systems. As the world's leading manufacturer, Kobe Steel has delivered approximately 250 units to 34 countries. With this new order, the Company aims to further increase its share of the plastic mixing and pelletizing systems market, which

it estimates is worth around ¥30-50 billion per vear.



# Indian Tire and Rubber Machinery Production Base Becomes Wholly Owned Subsidiary

In April 2019, Kobe Steel turned India-based L&T Kobelco Machinery Private Limited (LTKM) into a wholly owned subsidiary. Now called Kobelco Industrial Machinery India Pvt. Ltd. (KIMI), the subsidiary manufactures, designs, and sells tire and rubber machinery used in production processes for tires for automobiles and construction machinery.

Demand has been increasing for tire and rubber machinery alongside growth in the production of automobiles in recent years, especially in India and other emerging markets, where growth has consistently been more than 5% annually. Kobe Steel decided to turn KIMI into a wholly owned subsidiary to improve marketing capabilities, strengthen cost competitiveness in production, and enable more flexible management. Kobe Steel aims to increase KIMI's share of the tire and rubber machinery

market by expanding sales in Southeast Asia and surrounding regions as well as Europe, while capturing demand inside India.



# **Engineering Business**

Providing value-added solutions that combine technologies and know-how from inside and outside the Company for the energy, environment, and infrastructure fields

Power generation husiness Wood biomass Digestion gas Waste Sewage sludge biomass

Hydrogen-related

Direct reduction ironmaking (MIDREX® Process)

Special waste treatment Waste treatment in the nuclear powerrelated field Storage facilities and equipment

Chemical weapons destruction PCB detoxification

General waste treatment

Transit systems

Water treatment

Waste treatment

MIDREX®

**Process** 

Kobelco Eco-Solutions Wins First Order for Waste Treatment Plant in the U.K. Kobelco Eco-Solutions Co., Ltd. has won an order in the U.K. from Denmark-based Burmeister & Wain Scandinavian Contractor A/S (BWSC),

a wholly owned subsidiary of Mitsui E&S Holdings Co., Ltd., for the basic design of a municipal waste-to-energy plant, as well as the supply of key equipment (gasification furnace, melting furnace, boilers, etc.) and the dispatch of supervisors for installing and testing the equipment. This is the fourth order overseas for Kobelco Eco-Solutions and its first order in the U.K.



# MIDREX® Direct Reduction Ironmaking Plant Begins Production in Algeria

A consortium led by U.S. subsidiary Midrex Technologies, Inc. and Paul Wurth S.A., an engineering firm and MIDREX Process licensee in Luxembourg, completed construction of a MIDREX® direct reduction ironmaking plant ordered in 2015. Production commenced in November 2018.

The MIDREX® Process is a proprietary direct reduction ironmaking technology developed by Midrex Technologies. Using natural gas (or gas derived from coal) as the reducing gas, pellets made of iron ore as the iron source are reduced in a shaft furnace to produce direct reduced iron (DRI). Compared with the blast furnace method, the MIDREX Process generates lower

CO<sub>2</sub> emissions. The year 2019 marked the 50th year since the start of the first commercial production of DRI using the MIDREX Process. World production of DRI made by the MIDREX Process reached nearly 64 million tons in 2018, helping to reduce the equivalent of 2,274 tons per year of CO<sub>2</sub>



\* DRI: direct reduced iron

DRI is an iron material made by reducing iron ore. Hot DRI (HDRI) is DRI that is discharged from the furnace without cooling, while cold DRI (CDRI) is DRI that is cooled off. DRI is a clean source of iron with few impurities, and can be used as an alternative to high-grade scrap and pig iron for the production of steel in electric arc furnaces (or in blast furnaces and converters in recent years)

# **Completion of Waste Treatment Business** Integration with IHI Enviro

Waste

In January 2019, Kobelco Eco-Solutions Co., Ltd. completed the integration of IHI Enviro Corporation's waste treatment facilities-related business.

This integration puts into place a stable earnings base from which Kobelco Eco-Solutions can further expand into overseas growth markets while strengthening competitiveness by combining the technologies of the two companies.

# **Water Treatment Joint Venture Company** Established in Myanmar

Kobelco Supreme Water Engineering Co., Ltd. was established as a joint venture between Kobelco Eco-Solutions Co., Ltd., its wholly owned subsidiary Kobelco Eco-Solutions Vietnam Co., Ltd., and Supreme Water Doctor Co., Ltd., one of the largest water treatment engineering firms in Myanmar. An opening ceremony was held in May 2019 for the new office in Yangon, Myanmar. The joint venture aims to contribute to the development of Myanmar's economy and improvement of living

environments in the country through the combined water treatment technologies of the participating companies.



# **Entry into Water Supply Business** in Cambodia

SOMA Kobelco Water Supply Co., Ltd., a joint venture between Kobelco Eco-Solutions Co., Ltd. and a Cambodian private-sector company, has acquired exclusive rights from Cambodia's Ministry of Industry and Handicrafts to supply water for 20 years in the Koh Dach area of Phnom Penh and the Koh Oknha Tei district of Kandal Province. This project marks the first time a Japanese company will

supply water in Cambodia.

# Indonesia's First Subway **Starts Operation**

Transit

In April 2019, operations commenced on the North-South Line of the Jakarta Mass Rapid Transit system, Indonesia's first subway line. A consortium comprising Kobe Steel, Ltd., Mitsui & Co., Ltd., Toyo Engineering Corporation, and PT. Inti Karya Persada Tehnik was awarded the contract for the line. Kobe Steel was responsible for system integration, as well as the design and supply of signaling and communications systems, automatic fare collection, and platform screen doors. The subway line is part of the core transportation infrastructure that will help alleviate chronic traffic jams in Jakarta and improve the investment

environment

Machinery Businesses

# The Kobe Steel Group's Business Strategy

# **Machinery Businesses**

# **Construction Machinery Business**

# Hydraulic Excavators

Tap into global demand by expanding production capacity

Production Capacity 8,900 units per year ▶ 10,500 units per year

Itsukaichi Investment About ¥2.0 billion Planned completion date March 2020

> Meeting diverse needs in Japan, Europe, and the U.S., where demand is likely to remain firm



**Production Capacity** 2,000 units per year > 3,000 units per year

832 million Indian rupees (about ¥1.4 billion) Planned completion date January 2020

Responding to growing demand in India

machinery (1.000 units) 2018 2020

- Expansion of ICT construction machinery and use of ICT in various situations, from marketing to after-sales services
- Advancement of environmental technologies, such as low-fuel consumption, an area of strength

# Cranes

Promotion of plan to rebuild crane business Reduce costs and strengthen sales in North America and Southeast Asia

## **TOPICS**

Sustainability

## India's SriCity Japanese Companies JIM Certified as Japan-India Institute for Manufacturing

Kobelco Construction Machinery Co., Ltd., along with six other Japanese companies, opened SriCity Japanese Companies JIM as a manufacturing school in India. In April 2019, the Ministry of Economy, Trade and Industry certified the school as the Japan-India Institute for Manufacturing (JIM).

The Ministry of Economy, Trade and Industry in Japan and the Ministry of Skill Development and Entrepreneurship in India launched the Manufacturing Skill Transfer Promotion Programme in November 2016 with the aim of contributing to India's Make in India and Skill India initiatives for its manufacturing industry, amid expectations for India's economy to grow over the medium and long terms. The JIM project, a central part of this program, seeks to train core personnel at manufacturing sites through the Japan-India Institute for Manufacturing established in India for learning about kaizen, the 5S (seiri, seiton, seiso, seiketsu, and shitsuke), and Japanese-style discipline in manufacturing

Kobelco Construction Machinery will contribute to the advancement of India's manufacturing industry by proactively training human resources in India through this program and other activities.

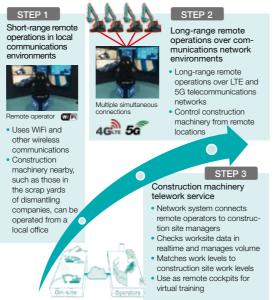
# TOPICS

# Promotion of New Work Styles for Construction Industry with Microsoft Japan

In 2018, Kobelco Construction Machinery Co., Ltd. drew up an ICT road map on the theme "To a workplace where anybody can work - KOBELCO IoT" and has advanced R&D with this road map as its longer-term vision. It has been collaborating with Microsoft Japan Company, Limited to advance the K-DIVE CONCEPT,\* a major element of this road map.

\* Kobelco Construction Machinery has been advancing R&D for its K-DIVE CONCEPT, a telework system for construction sites centered on workers utilizing the latest remote operation technologies. It aims to substantially change the way people work at construction sites and help achieve a richer

# Upward Steps in K-DIVE CONCEPT



# Collaboration between Toyohashi University of Technology and Kobelco Construction Machinery

In February 2019, Kobelco Construction Machinery signed a comprehensive collaboration agreement with the Toyohashi University of Technology for training highly skilled human resources, advancing research, and putting the results of this research to good use in society. They will combine their knowledge. experience, human resources, and other resources related to crawler cranes in this endeavor. In addition, the Kobelco Construction Machinery Next-Generation Crane Joint Research Course will be established at the Toyohashi University of Technology.

This agreement and joint research course will not only focus on timely research into the use of automation, Al, and Big Data but also explore the future vision of next-generation

crawler cranes in tomorrow's society. This initiative aims to create a more attractive university and company for society while training highly skilled technicians through hands-on education.



# **Electric Power Business**



# Message from the Director in Charge of the Electric Power Business

# Jiro Kitagawa

Director and Senior Managing Executive Officer

# **Annual Review**

A year has passed since I became the Director in charge of the electric power business. During this time, our energy was focused on maintaining stable operations at the existing No. 1 and No. 2 units at the Kobe Power Plant, while advancing new projects on schedule for the No. 1 and No. 2 units at the Moka Power Plant and the No. 3 and No. 4 units at the Kobe Power Plant. In fiscal 2018, the business incurred an ordinary loss due to upfront spending on the No. 3 and No. 4 units at the Kobe Power Plant. In fiscal 2019, however, we expect earnings to improve as this spending decreases and the startup of operations at the No. 1 and No. 2 units at the Moka Power Plant begins to contribute to profits.

Around 2023, when all of these projects are operating, the Company targets ordinary income of about ¥40 billion in the business. We continue to focus on making steady progress on these new projects in fiscal 2019, with the aim of creating a stable source of earnings for the Kobe Steel Group.

# Aiming for a World-Class Electric Power Business

The Japanese government has drawn up the Strategic Energy Plan to consider the best energy mix for attaining a reliable supply of energy that is economical and to take environmental conservation into consideration, assuming energy security is ensured. Based on this Strategic Energy Plan, the Japanese government has set targets for reducing greenhouse gas emissions by 2030 in line with the Paris Agreement, created technological standards for power generation equipment, and revised the Act on the Rational Use of Energy (also known as the Energy Conservation Act) with the aim of making steady progress toward achieving these targets.

While effectively utilizing its existing business infrastructure, the Kobe Steel Group's electric power business plans to construct high-efficiency gas- and coal-fired power plants using the best available technology (BAT) defined by the

government. Additionally, we plan on adhering consistently to energy conversion efficiency standards defined by the revised Act on the Rational Use of Energy.

The No. 3 and No. 4 units at the Kobe Power Plant currently under construction are the latest ultra-supercritical (USC) pressure power generation coal-fired power generation facilities that conform to national standards for high-efficiency power generation and the highest levels of environmental measures, making it a clean urban power station. The Kobe Power Plant is near an area with a high demand for electric power, which helps reduce power transmission loss while contributing to higher self-sufficiency for electric power in the urban area. The steam from the power plant is also used in the district heating business. Furthermore, some of the wastewater sludge emitted from the urban area is turned into hydrogen for use as fuel with the Kobe Steel Group's technologies, promoting the effective use of energy in the region.

At Moka, construction is underway on a gas turbine combined cycle power plant that will be among the most efficient in the world. The Cabinet Office highlighted the Moka Power Plant as a leading example of a private-sector initiative that strengthens the resilience of the nation as Japan's first full-fledged inland thermal power plant that helps reinforce electric power infrastructure.

I have called upon our employees to take pride in the work they do as we build up a world-class electric power business. Our electric power business began from operating our own power generators at steelworks, from which we have accumulated power generation technologies and environmental know-how while collaborating with other business divisions. I believe our environmental measures are among the best in the world. By coordinating with other businesses in new fields, such as turning wastewater sludge into fuel with the engineering business, we intend to contribute to local communities and the global environment. In our endeavors, all of our employees are working together toward the aim of becoming an electric power business that is highly regarded by our stakeholders.

# **Electric Power Business**

# Social Significance of the Electric Power Business

# National Energy Policy

Starting with the basic premise of energy security, Japan's Strategic Energy Plan calls for a diverse mix of power sources able to simultaneously achieve a reliable supply of energy, economic viability, and environmental conservation.

This plan designates coal-fired power plants as an important baseload source for electricity due to coal's advantages in terms of reliable supply and economic viability. The government envisions coal-fired power plants generating 26% of Japan's total electricity in 2030, as existing plants are updated with the latest high-efficiency power generation equipment using BAT today. The Energy Conservation Act was revised to ensure steady progress toward achieving this goal, while mandating that electric power producers reach an average power generation efficiency standard of at least 44.3% by 2030 through improvements to the efficiency of their thermal power plants.

# Targeted Energy Source Mix for FY2030



<sup>\*</sup> Source: Kobe Steel, based on public data from the Ministry of Economy, Trade and Industry

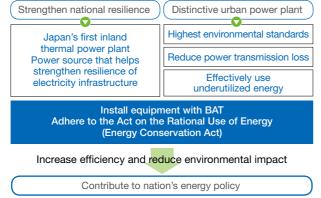
# Kobe Steel's Aims

Moka Power Plant (Gas fired)

In accordance with the nation's energy goals, Kobe Steel contributes to the effort to increase the efficiency of thermal power plants by installing high-efficiency power generation equipment that conforms to BAT, and satisfies the power generation efficiency standard set in the Energy Conservation Act.

At the Kobe Power Plant, the Company strives for its environmentally friendly coal-fired power generation business to serve as a model for the world, including the unique initiatives undertaken by this urban power plant.

Kobe Power Plant (Coal fired)



# Progress on Moka Power Plant (No. 1 and No. 2 units) Project

# Inland Thermal Power Plant That Strengthens National Resilience





Tour for local residents

# [ Progress ]

No. 1 unit: Test runs started, scheduled to start operations in second half of 2019

No. 2 unit: Under construction, scheduled to start operations in first half of 2020

#### [ Outline ]

Construction site: Moka, Tochigi Prefecture

Power generation capacity: 1,248,000 kW (624,000 kW x 2)

Power generation method: Gas turbine combined cycle generation

Fuel: City gas
Power generation efficiency: About 60%

(lower heating value basis)
Contract partner: Tokyo Gas Co., Ltd.
(wholesale supply of entire

amount for 15 years)

# [ Features ]

- Japan's first large-scale inland thermal power plant, introduced by the Cabinet Secretariat as a model private-sector initiative to strengthen national resilience
- Covers about 40% of the maximum power demand in Tochigi Prefecture (increasing prefectural electricity self-sufficiency to 70%)
- Highly efficient thanks to gas turbine combined cycle power generation system

# State of Kobe Power Plant (No. 1 and No. 2 units, and No. 3 and No. 4 units) and Progress on Projects

# ■ Environmentally Friendly Urban Power Plant



[ Progress ]

No. 1 and No. 2 units: Stable operations

No. 3 and No. 4 units: Construction started in October 2018, operations to start for No. 3 unit in

fiscal 2021 and No. 4 unit in fiscal 2022

[ Outline of New Projects (Kobe Power Plant No. 3 and No. 4 units) ]

Construction site: Kobe, Hyogo Prefecture

Power generation capacity: 1,300,000 kW (650,000 kW x 2)

Power generation method: Pulverized coal-fired, ultra-supercritical (USC)

pressure power generation Power generation efficiency: About 43%

(higher heating value basis)

Contract partner: Kansai Electric Power Co., Inc. (wholesale supply of entire

amount for 30 years)

## [ Features ]

- Use of land, wharfs, and unloading equipment at steelworks; technology and know-how gained from operating own power plants
- Covers more than peak demand in Kobe City; improves self-sufficiency ratio for electric power
- Contributes to higher efficiency and lower carbon at coal-fired power plants
- Urban power plant reduces power transmission loss
- Uses the latest high-efficiency power generation equipment
- Effective use of underutilized sources of energy - Initiative to use biomass fuel derived from wastewater sludge to produce and supply hydrogen ☐ P21

Development of heat supply business using steam from power plants





Supply of steam to sake brewing companies nearby

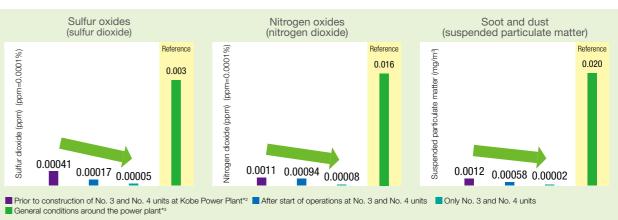
Aggressive efforts to improve environment

 Signed environmental preservation agreement with Kobe City, which is stricter than laws and regulations currently in place

# TOPICS Sustainability

## Outcome of Projections for Highest Ground Concentration\*1 and Conditions around Power Plant

After constructing the No. 3 and No. 4 units at the Kobe Power Plant, the Company plans to reduce the impact of soot and dust on the surrounding environment. The impact is projected to be limited compared with general conditions currently around the power plant.



- \*1 The largest concentration of soot emitted from smokestacks onto the surface of the ground (annual average value)
- \*2 Refers to when Kobe Works was operating its blast furnaces (before the consolidation of upstream processes was finished).
- \*3 Refers to five-year average values between fiscal 2011 and fiscal 2015 as measured by environmental atmosphere measurement stations within a 10-km radius of the planned site for new power generation equipment.

# Technical Development and Monozukuri



# Message from the Director in Charge of **Technical Development**

#### Yoshinori Onoe

Executive Vice President and Representative Director

# **Annual Review**

Since being appointed the Director in charge of technical development, I have concentrated on establishing the Al Promotion Project Department, drawing up an IT strategy, creating a working group for examining technologies to reduce CO2 emissions, and building a framework for new business creation, guided by the ultimate aim of restoring trust and sustaining growth. In our initiatives to restore trust, it feels as though we are being closely scrutinized by society even while the Group is working together in unison to improve and strengthen its operations. However, it has also given me a fresh perspective on customer viewpoints and expectations about the changes underway at Kobe Steel as it strives to become a company trusted by society once again.

In the Rolling of the Medium-Term Management Plan, we are intently focused on one of the most important issues, that of improving profitability by strengthening monozukuri capabilities. Although there are numerous issues that must be addressed to restore trust and carry out the Rolling of the Medium-Term Management Plan, Group employees are positively tackling these issues, and I am ready to provide leadership while fulfilling my own role in helping to restore trust and improve profitability.

# Restoring Trust and Rebuilding Profitability

We continue to carry out initiatives to emphasize our highest priority of preventing any recurrence of the quality misconduct. During fiscal 2019, we plan to finish addressing the most pressing and important issues related to quality management and processes.

The creation of new technologies, products, and services that please our customers is a fundamental endeavor for

improving profitability and increasing the corporate value of the entire Group. All Group employees are putting forth their best effort to show society that Kobe Steel is an invaluable contributor to society once again.

As top priorities in the field of technical development and monozukuri, we are focusing on developing technologies according to schedule that are among the best in the world for strategic investment projects, helping to improve profitability by enhancing our *monozukuri* capabilities through the combined efforts of our production sites and R&D staff, and concentrating on technology fields likely to see considerable change, such as IT and technologies for reducing CO2 emissions, in addition to the automotive field, where we can expect earnings to expand. Moreover, we are putting more effort into activities to come up with new ideas for discovering technical development topics that could lead to promising technologies, products, and services in the future

Furthermore, as an IT strategy for transforming business, we are rolling out cutting-edge IT for R&D and production sites, and pursuing a long-term IT strategy from every angle, such as introducing systems to facilitate work-style reforms and training IT personnel, in a bid to reinforce the business foundation and increase corporate value.

In the environmental and disaster-prevention field, we are steadily cultivating confidence through proactive efforts in areas that naturally deserve our attention, such as ensuring thorough compliance with laws and regulations at subsidiary companies and affiliated companies, as well as reducing risks and enhancing the sophistication of our business continuity plan (BCP) in the event of a major earthquake.

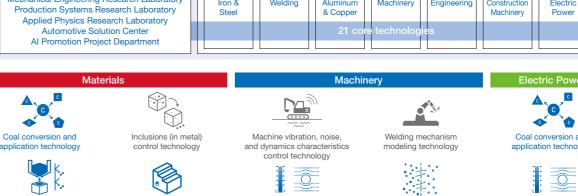
# Core Technologies Supporting the Kobe Steel Group

At the Technical Development Group, we have dedicated many years to building up a broad base of technologies through research and development activities for diverse businesses that cover materials, machinery, and electric power.

The technological assets that support the creation of distinctive products and our advanced manufacturing capabilities can be classified into the following 21 core technologies. While working to strengthen and combine these core technologies, Kobe Steel will endeavor to create new value for its customers.









Metal surface



Structural deformation evaluation technology

Melting, forging, and welding technology

Metallographic structure

6\_3

Functional electronic materials technology

N. R.

Measurement technology

**TOPICS** 



Atomic-level analysis and evaluation technology

Magnetic property control technology

Process control technology



Melting, forging, and





Adsorption and lesorption technolog



process technolo



*f* 

Electric control technology



Thermal and fluid dynamics

control technology









Metallographic structure control technology









application technology

\* Core technologies in blue are core technologies used across businesses

#### Co-Creation Initiatives with Customers

The KoCoLab was set up for the purpose of disseminating information, facilitating co-creation with customers, and combining the technologies of the Kobe Steel Group. We are also proactively setting up venues and opportunities to accurately identify the needs of customers and create more valuable ideas together with them





Nobe Corporate Research Laboratories KOBELCO Co-creation Laboratory (KoCoLab)

#### ♠ Fuiisawa Plant

Automotive Joining Technology Showroom

#### ▶ Takasago Works

KoMPass, Machinery Business Product Showroom

# Nobe Steel Group Technology Exhibitions

Kobe Steel Group Technology Exhibitions were held at the head offices and plants of automakers and parts manufacturers who are our customers, creating a venue for introducing our technologies,

products, and services that help reduce the weight of automobiles.

# Technical Development and Monozukuri

# Strengthening Collaboration to Create Technologies, Products, and Services

In addition to existing technologies, we are strengthening collaboration within the Group and with external parties in a bid to create new technologies, products, and services.

#### **Key Themes in Co-Creation Activities** Core technologies CO₂ separation and recovery New materials for aircraft Strengthen Group Creation of ▶ Electrification of aircraft Metal resource recycling collaboration new businesses ▶ High-thrust actuators Biomass utilization and products Use of underutilized energy Compact reactors for the future ▶ High-performance materials ▶ Energy storage systems, Enhance collaboration for FVs etc. with external parties TOPICS

# **TOPICS**

# **Initiatives to Use Underutilized Energy**

In order to help ships meet targets limiting CO<sub>2</sub> emissions, an urgent issue in the shipping industry, Kobe Steel turned its attention to waste heat in ships and began to develop a microbinary power generation system for ships\* in 2014. A prototype was tested offshore in 2016, and preparations are now being made to bring it to market.

To confirm the performance and durability of this system under actual operating conditions, Kobe Steel installed the microbinary power generation system on the Corona Youthful, a 91,000-ton bulk coal carrier built by Kawasaki Kisen in February 2019. Both companies will engage in joint research of this experimental vessel for approximately three years.

The microbinary power generation system installed on the Corona Youthful utilizes waste heat from the main engine of the

ship, most of which had been unused in the past, as a source of heat to generate up to 100 kW of electricity. The generated electricity is effectively used as a secondary power source for powering the ship, helping reduce fuel consumption and CO<sub>2</sub> emissions from the power generation engine.

\* Heat is added to working medium with a low boiling point from lowgrade heat sources, such as hot water, low-pressure steam, and hot air, to generate steam for turning a turbine that produces electricity.



Corona Youthful

# Utilization of Intellectual Property Based on Research and Development

Recent technological developments have diversified to create new businesses and products through collaboration with external partners. As a new policy for intellectual property activities, we established the "use of intellectual

property as a management resource to enhance corporate value." We promote intellectual property activities by flexibly combining multiple strategies such as "Disclosure/ Confidentiality" and "Open/Closed" according to the purpose.

Flexible Strategy for Protection of Our IP



# **TOPICS**

# Received "Top 100 Global Innovators" Award for 5th Consecutive Year

For five years in a row, we have been awarded the "Top 100 Global Innovators" by Clarivate Analytics, Inc., which selects innovative companies worldwide based on patent filings. We have received high marks for global reach and patent registration rate.



Top 100 Global Innovators Award Trophy

# Formulation of IT Strategies and Opening of IT Strategy Project Section

Based on its Medium-Term Management Plan, the Company has promoted the use of IT for reinforcing its production base and manufacturing capabilities. In a bid to accelerate these efforts, the IT Strategy Project Section was established in June 2019 to formulate IT strategies for transforming the operations of the entire Kobe Steel Group.

This business transformation through IT strategically aims to not only reinforce manufacturing capabilities but also promote R&D in advanced IT, build information systems that facilitate workstyle reforms and better relationships with customers, train IT staff, forge connections with customers from production sites, and diversify the work styles of employees. This strategy is broken down into eight topics in "offensive" and "defensive" IT categories.

Subcommittees take the lead in implementing measures for each topic, while the IT Strategy Project Section manages the progress of each subcommittee and develops the infrastructure for the subcommittees to function. Moreover, the IT Strategy Committee monitors the execution of IT strategies to ensure steady progress of IT strategies and the realization of business transformation.



#### Outline of Topic-Based Subcommittees

Topics	and Subcommittee Names	Remarks
	R&D in advanced IT	Aim for industry-leading R&D into technologies for Al/Big Data that simplify the transfer of technical skills and improve technological development and production efficiency. The Al Promotion Project Department, established in 2018, takes the lead.
<b>.</b>	Manufacturing cross- functional development	Aim for world-leading manufacturing capabilities at production sites through the cross-functional deployment of measures for improving productivity and quality with advanced IT, and for increasing equipment maintenance efficiency.
Offensive"	Work-style reforms	Aim to advance operations and increase employee productivity by automating administrative work and introducing systems that minimize communications loss.
'e" П	Improve points of contact with customers	Improve points of contact with customers and marketing capabilities by building an integrated information system able to provide business segments with access to information on market trends and other information useful in marketing activities, such as the Group's technologies, products, and services.
	Create new businesses and products	Aim to create a new business platform to invigorate new business and product development using integrated information systems.
	Rebuild existing systems	Promote reforms to business processes by rebuilding and optimizing complicated, aging legacy systems, and data platforms.
"Defensive"	Human resource training	Proactively train IT specialists while deepening all employees' understanding of IT. Train personnel to enable them to use IT on their own and to improve the sophistication and efficiency of their work.
ive,	System infrastructure and security	Enhance IT security level to address complicated cyber-security risks, and upgrade network and cloud computing infrastructure to support advanced IT utilization.

# Promoting *Monozukuri*

The Kobe Steel Group has introduced and uses advanced IT at production sites, and continues with activities to reinforce its manufacturing capabilities across the entire Group, including Leaders' Meetings for Monozukuri Promotion and Production Technology Exchange Meetings

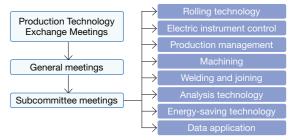
# Meetings for Monozukuri Promotion Leaders

Each manufacturing facility in the Group has a Monozukuri Promotion Leader (at the General Manager or Deputy General Manager level) who acts as a contact person for Kobe Steel Group *monozukuri* promotion activities. The leaders gather to attend the Meetings for Monozukuri Promotion Leaders, which are held regularly. Examples of internal and external initiatives are reported on, progress reports for ongoing initiatives are shared, and debates on new measures are carried out. Initiatives outlined during these meetings are then used as guidelines for improvement activities at each facility. When members are interested, we also arrange for on-site meetings with the facilities where improvements have been introduced.

# Production Technology Exchange Meetings

The Kobe Steel Group holds Production Technology Exchange Meetings to allow engineers to interact and exchange ideas with others in the same field within the Group. The meetings currently include eight subcommittee meetings split according to technological field, as shown in the diagram below. These subcommittee meetings go beyond the organizational framework of business divisions and companies. Engineers participate and tackle the issues of information-sharing, human resource development, and business contributions.

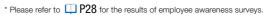
Production Technology Exchange Meetings



# **Securing and Training Human Resources**

In order to achieve the Kobe Steel Group's medium- to long-term business vision and key themes in the Rolling of the Medium-Term Management Plan, it is vital that all of our employees, who come from diverse backgrounds, are able to thrive and work to the best of their abilities and expertise. To realize this, we are implementing initiatives to upgrade work environments and train personnel.

In addition to promoting diversity, we strive to improve work environments based on the results of employee awareness surveys, and offer training to employees because we recognize that people are the greatest asset of the Group.





# Diversity

In promoting diversity, the Kobe Steel Group strives to create a work environment where all employees respect diversity and are able to use their skills to the fullest, based on three approaches: employment continuation support, activity support, and work-place improvement.

To support women in the workplace, we have a variety of initiatives underway, such as setting numerical targets for hiring female graduates and creating individual career advancement plans for young female career-track employees and female technicians working at production sites in order to speed up their career development prior to life events.

# **Employment Continuation Support**

- Extended leave for raising children (until they turn three years old)
- Consideration of flexible work hours for childcare (allow shorter work hours during elementary school age, etc.)
- Extension of caregiving leave (up to three years)
- Paid child and family care leave
- Complimentary points for child-rearing items in employee cafeteria plan
- Reemployment system (reemployment after quitting due to spouse's work relocation, etc.)
- Career sabbatical program (up to three years in the case of a spouse's work relocation)

# **Workplace Improvement**

- Support for men to help with child-rearing
- Reducing long working hours, encouraging employees to take more paid vacations, and other activities and collaborative efforts for work-style reforms
- Diversity training at all business locations to create pleasant work environments

# **Activity Support**

- Setting of numerical targets for hiring new graduates (30% career-track positions, 10% technical positions, 10% kikanshoku technical positions)
- Networking events for female employees and foreign employees
- Mentor system for female employees and foreign employees
- Career advancement plans for young female employees
- Management training for managers of female employees and foreign employees

# **TOPICS**

#### Awarded the Kurumin Mark

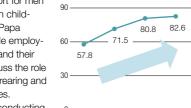
Kobe Steel received "Platinum Kurumin" certification in August 2019. The award recognizes companies that actively provide support for child-rearing. The Platinum certification is awarded to companies that have achieved a higher standard than Kurumin certification, which Kobe Steel received in 2012 and 2015.

# Increase of Women in Career-Track Positions and Management Positions

- Steady progress has been made with increasing the number of women in career-track positions as a result of efforts to achieve numerical targets for the ratio of female hires among new college graduates. Moreover, more women are in management positions thanks to career advancement planning and networking events for women in career-track positions.

# Seminars for Fathers

As a part of support for men actively involved in child-rearing, we hold "Papa Seminars" for male employees with children and their managers to discuss the role of fathers in child-rearing and different work styles.



Percentage of Male Employees

2015 2016 2017 2018 (FY)

Taking Childcare Leave (%)

We are also conducting initiatives for employees to

use support systems on the internal intranet and to encourage male employees to take advantage of child-rearing leave. For two years in a row, we have achieved our goal of having at least 80% of male employees with newborns take time off from work.

# Diversity Training at All Business Locations to Create Better Work Environments

Since fiscal 2017, diversity training has been implemented at all of our business locations for the purpose of learning more about gender bias. In fiscal 2018, 56 training sessions were held for approximately 1,500 mid-level employees.

# **Networking Events**

Since fiscal 2016, we have held networking events for women in technical positions who work at production sites, providing them with an opportunity to exchange information with senior-level female employees.

In fiscal 2018, a networking event was held for foreign employees that was attended by about 40 employees, including from Group companies. Senior employees talked about their careers, and time was set aside for group discussions.

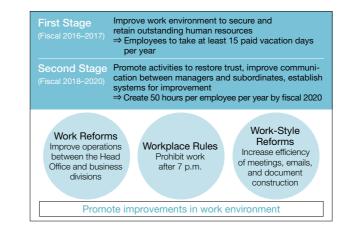
# Work-Style Reforms

In order to secure and retain outstanding human resources, the Kobe Steel Group has been focusing on encouraging the use of paid leave among employees, the promotion of a healthy work–life balance, and other measures to improve the work environment. With this in mind, we have taken a three-pronged approach to reforming work styles, comprising changes to work styles, changes to employment rules, and changes to work practices.

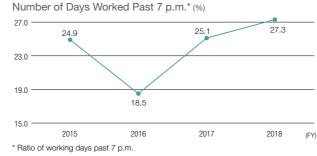
During the two years of the first stage of this initiative, from fiscal 2016 to fiscal 2017, we attained our medium-term target for employees to take an average of 15 or more days of paid vacation per year, with an average of 15.5 days off in fiscal 2017 and 16.3 days off in fiscal 2018. We will continue to encourage employees to make more use of their paid leave.

Over the three-year period from fiscal 2018 to fiscal 2020, positioned as the second stage of this initiative, we aim to create 50 hours per employee per year and invigorate communications.

By advancing these initiatives, we aim to further reduce the total number of work hours and encourage all employees to pursue self-growth and a better work-life balance.







# TOPICS

# Example of Work Environment Improvement: Effective Use of Cafeteria at Kobe Head Office

In addition to effectively using the cafeteria outside operating hours, we have set up areas with different concepts within the cafeteria at the Kobe Head Office in order to enhance communication and spur improvements in work efficiency.



Solo work area

Neeting area

# Introducing a System for Employees to Work Past Retirement Age of 65 from Fiscal 2021

In light of declining birth rates and a rapidly aging society, it is becoming more difficult to secure personnel. Against this backdrop, Kobe Steel is preparing to introduce a system for employees who wish to continue working past the retirement age of 65, with the aim of enhancing the motivation of veteran employees, maintaining and strengthening its *monozukuri* capabilities, and fostering a sense of unity in the workplace.

While extending employment opportunities past the retirement age, Kobe Steel is also creating a continuous compensation system under its lifetime employment system for employees, from the time they join the Company to the age of 65.

# Augmenting the Work-from-Home System

As a part of activities to adjust work styles, we have augmented the work-from-home system from April 2019 in order to further improve productivity while encouraging employees to adopt their own style of working that suits them best.

Key Changes

3, 1, 3, 1, 3, 1,				
	Before	After		
Requirements	Limited to reasons for taking care of dependents or family			
Place of work	At home or location of family residence	Any place conducive to work		
Frequency	Four times per month	Up to eight times per month		

#### Welfare Benefits Program

Kobe Steel provides company dormitories and housing, an important facet of employees' lifestyles, at relatively reasonable rents. When rebuilding dormitories, the Company designs them with special rooms and other features that take into account such factors as the particular needs of mid-career hires, foreign employees, women, and people with disabilities.





New Wakinohama Dormitory in Kobe Left: Aerial view of Wakinohama Dormitory Right: Accessible toilet (with sliding door) and bathroom sink

# Securing and Training Human Resources

# **Human Resource Development**

To achieve the Kobe Steel Group's medium- to long-term business vision and ensure the further growth and development of the Kobe Steel Group, we believe it is important to develop personnel who are able to adapt to changes in society, take pride in their work, and find work rewarding. During the remaining two years of the Medium-Term Management Plan, the Company will advance initiatives on key themes that include training leaders who will drive growth and strengthening the comprehensive capabilities of the Group.

# Support for Career Development and **Technical Skills Development**

For human resource development, Kobe Steel supports the growth of its employees through training programs that complement on-the-job training, the basis of employee education, in the workplace. We have created tiered training systems for managers, career-track employees, and kikanshoku (technical employees and administrative employees), and have revised the contents of those training modules annually. In fiscal 2018, in light of the quality misconduct, we revised the contents of training curriculums for each level and position in order to delve deeper into related issues

Kobe Steel provides a full range of support for employee growth, as it is important that all employees have their own specific goals for professional development, and work toward achieving them.

**Initiatives to Train Leaders** 

executives more involved in training.

▶ Implementing Selective Training

business literacy necessary for leaders.

▶ Enhancing Training for Management Personnel

#### Vision for Human Resources

We want all employees to share a diverse sense of values and to take pride and enthusiasm in their daily work. To this end, we have established the following "Vision for Human Resources at Kobe Steel.'



## 1 Training Leaders to Drive Growth As part of its initiatives to groom leaders, Kobe Steel is focusing on enhancing training for management personnel, Promotion of Leaders implementing training for select employees, and getting At the outset of the current Medium-Term Management Plan, the Company introduced management training for Encourage management to participate in young employees and took other steps to raise awareness personnel training Selective and improve the capabilities of management personnel. training Implement skills training program for managers The Company provides training for select employees with a curriculum that focuses on fostering the mind-set and Continue and strengthen Stratified training training for select employees Executive Involvement in the Training of Managers In our training programs for management personnel, exec-Nurturing of corporate culture utive involvement sparks participants' desire to learn. Events include lectures by the President and other executives, and attendance at presentations for achievements.

# 2 Strengthening Comprehensive Group Capabilities

#### **Personnel with Common Specialized Functions**

To strengthen common functions shared Companywide and across the Group, Kobe Steel has implemented policies for sharing personnel data, as well as assigning and training personnel, in eight common fields. These are occupational safety, quality assurance, environment and disaster prevention, accounting, labor, IT, intellectual property, and civil engineering and building construction.

In the accounting field, for example, some of our key initiatives are to offer training programs for employees to gain specialized skills, and promote employee transfers, including among Group companies, in a bid to improve the skills of Group employees in the accounting field.

# Human Resource Development at **Overseas Locations**

The training of human resources is becoming increasingly important not only in Japan but also at our overseas locations. In China, for example, the following training programs

are being provided to staff at local companies, centered on our regional headquarters, Kobelco (China) Holding Co., Ltd.

# Core Leader Training

This training at local companies aims to groom employees for management positions responsible for business operations. As training for general management, a total of four series are offered, with each series spanning two days.

## Manager Training

Manager-class employees are provided with training to improve the knowledge and skills necessary in management. As is the case with core leader training, a total of four series are offered, with each series spanning two days.





# 3 Strengthening Workplace Capabilities

# **Initiative to Train Technical Personnel**

Kobe Steel is keen on strengthening its workplace capabilities, including monozukuri capabilities, by actively encouraging kikanshoku technical personnel, who work on the front lines of manufacturing, to enroll in technical training during their first five years of joining the Company. Moreover, Kobe Steel takes a proactive role in training young technicians by helping them obtain qualifications, such as trade skill

sets, and dispatching them to the College of Industrial Technology. Training for selecting employees to supervisor positions to raise the management skills of factory supervisors is also held at our head offices and business locations. We also carry out training, not only in regard to quality and production but also in improving the knowledge required for supervisors to fulfill their duties. This includes knowledge on safety, the environment, compliance, and human rights.

#### Training Systems

Qual	ification/position	Content	Duration	Individual topics
	Head foreman	Follow-up training for new head foremen	1 day	-
Н		Training for newly appointed head foremen (late stage)	5 days	
		Training for newly appointed head foremen (early stage)		
Foreman		Follow-up training for new foremen	1 day	Occupational safety training, compliance
		Training for newly appointed foremen (late stage)	10 days (Stage I: five days) (Stage II: five days)	
		Training for newly appointed foremen (early stage)		
		Training for newly appointed team leaders (late stage)	5 days	training, human
Team leader		Training for newly appointed team leaders (early stage)		rights training, environmental and disaster preventior training
		Training for newly appointed team leaders to obtain qualifications		
		Leader development training	5 days	
Kikan		Training for technical workers		
	Skills training by profession	Companywide training in years 1–5	40-60 days	
Kikanho	Technical training	Common skills training	About 20 days	
		Introductory training for new employees		



# Evaluation of Reforms to Corporate Governance

Kitabata I understand that the Kobe Steel Group has worked positively to strengthen corporate governance while incorporating the spirit of the Corporate Governance Code. It was during this process that the quality misconduct was discovered. Management faced this issue head-on without hesitation and implemented thorough reforms that also involved corporate governance as a part of measures to prevent a recurrence. As a result, the Group's corporate governance has become considerably more effective in form. Among reforms to the state of the Board of Directors, the Internal Directors in charge of all business divisions were narrowed down to three Directors responsible for the materials, machinery, and electric power businesses, and Directors were selected to oversee quality and compliance. I believe these reforms are quite meaningful, establishing a structure that facilitates Companywide discussions on the state of the Group. Furthermore, Kobe Steel increased the ratio

of Independent Directors to at least one-third of the total, and appointed an Independent Director to the position of Chairman of the Board in a bid to improve the objectivity and transparency of the Board of Directors. This has led to more effective and vigorous deliberations in meetings. Okimoto A preliminary evaluation of the effectiveness of the Board of Directors entailed the Audit & Supervisory Committee conducting surveys and interviews with Directors. In this evaluation, changes to the composition of the Board of Directors were highlighted as an excellent decision. After Mr. Kitabata became the Chairman, Directors were clearly able to engage in more open and frank discussions than before. Moreover, the style of the Board meetings changed, from one where Internal Directors explained matters to Independent Directors, to one where both Internal Directors and Independent Directors discuss matters more as peers. I deeply regret the quality misconduct, which caused considerable trouble for shareholders, customers, and other stakeholders. The top management at Kobe Steel is strongly determined and committed to conducting quality

audits and quality-focused inspections, and the discovery of the quality misconduct has led to a "self-cleansing" that has been beneficial in its own right.

Kitabata I still clearly remember the series of events that took place upon discovering that an affiliated company had violated JIS regulations in 2016, including Outside Auditors' severe criticism toward management, which took it seriously head on. I believe the results speak for themselves in that this self-cleansing worked to uncover the quality misconduct. Thanks to the cooperation of many customers, the Company was able to verify the safety of its products. This was done so well that the Ministry of Economy, Trade and Industry introduced Kobe Steel as a case example of "best practices," underscoring the Company's response after the incident was revealed, which should be highly evaluated. Bamba The Kobe Steel Group has experienced other compliance infractions and scandals in the past, but this time around I believe the Company's remedies have gone deeper than just treating the symptoms. While reassessing

the state of the Board of Directors, Kobe Steel established

the Quality Management Department and the Compliance Management Department. Although not a measure to prevent a recurrence, in 2019 the Company also set up the Health & Safety Department, continuing with initiatives to change and fortify Head Office functions. It takes time to rebuild organizations and frameworks to cover a broader scope, including Group companies, but management has been rapidly moving forward while paying attention to details, underscoring how seriously this issue is being taken throughout the Group. Now that the rebuilding of organizations and frameworks has been broadly completed, only time will tell if Kobe Steel is able to nurture a corporate culture that genuinely respects compliance and makes a clean break from past misconduct. The President and other members of the management team are keen to instill the Company's management philosophy in all employees, and now is the time to show their true colors. A key point will be diligent monitoring by the Board of Directors, with management understanding that they will be starting from scratch.

# State and Effectiveness of the Kobe Steel Group's Board of Directors

Kitabata Ms. Ito, an attorney at law, was appointed as an Independent Director at the General Meeting of Shareholders held in June 2019. She is the first female Director to be appointed by Kobe Steel since its founding. Based on her abundant experience and deep insight centered on legal matters related to corporate management, Ms. Ito has the ability to render objective, fair, and neutral judgments. I believe she is an excellent choice from the standpoint of fairness, diversity, and effectiveness in the Corporate Governance Code. With her appointment, the ratio of Independent Directors increased to 37.5%.

Okimoto With Ms. Ito becoming an Independent Director, the ratio of executives to non-executives is an even 8:8. If the non-executive side is unable to adequately understand matters, the Board of Directors cannot make decisions. This would greatly impact the Company's corporate governance. The ability of Independent Directors to speak up without reservation, leveraging their own experiences, specialties, and diversity, further enhances the effectiveness of the Board of Directors. The professional skills of the Independent Directors are rather well-balanced with their

#### Three-Way Dialogue on Corporate Governance with Independent Directors



backgrounds in the fields of industry, law, government, and finance.

Bamba There is a wider variety of opinions outside a company than within. One major role expected of Independent Directors is the provision of viewpoints and perspectives that may be overlooked in internal discussions and reasoning. In this context, the proper consideration, reflection, and augmentation of diversity of the Board of Directors is a positive development.

Kitabata I was appointed Chairman of the Board, even though I am an Independent Director. While aware that not all internal matters are clearly visible to me, I make every effort so that independent deliberations can take place without being bound to discussions by the executive side during meetings of the Executive Council, which consists of Internal Directors, the heads of business divisions, and other Internal Executive Officers. Meanwhile, I am also conscious of my role as an Independent Director in speaking on behalf of all stakeholders, including shareholders and investors. In order to have lively discussions, the method for appointing leaders and making decisions was changed from asking if there are any objections to a majority vote by show of hands. I also endeavor to comprehend the discussions of the Executive Council by confirming ahead of time what matters will be discussed through the Corporate Planning Department. Confirming with the Corporate Planning Department allows for careful deliberations of matters that have attracted various opinions internally, while keeping in mind the reason for the discussion. As Chief Executive Officer, President Yamaguchi always makes the final comment at meetings of the Board of Directors, and the basic thoughts and aims of the executive side are well heard during deliberations of the Board of Directors.

Bamba As an Independent Director, I understand my role in airing opinions and criticisms that Internal Directors may find difficult to vocalize. While referring to my own experiences and ideas gained from my long track record in the industry,

More time should be set aside for discussing the business portfolio and state of the Group over the longer term.

Hiroyuki Bamba

I take care to proactively express my opinions and advice whenever I feel there is something out of place. After the quality misconduct was discovered, the atmosphere of the Board of Directors changed dramatically, with Internal Directors speaking up more often while understanding and recognizing their respective positions and roles.

Okimoto I come from the financial industry, having built a career in credit examination. In light of my own experiences, I freely express my opinion on matters related to evaluating returns on investments, quality, risk management, and compliance. I understand that now is the time to rebuild "defensive" governance, including risk management and compliance, in the wake of the quality misconduct. As an Independent Audit & Supervisory Committee Member, I will fulfill my checking duties and by doing so, contribute to sound management.

Kitabata As Mr. Okimoto said so well, a key focus will be rebuilding "defensive" governance in the Kobe Steel Group. In order to sustain development, however, the Company must also take appropriate risks. The Board of Directors checks whether these risks are being properly managed, and encourages the business execution side to take appropriate risks. In other words, this is an "offensive" form of corporate governance, in my opinion. Recently, as discussions have become livelier and deliberations have taken longer to finish, reducing the agenda items submitted to the Board of Directors and ensuring adequate time for discussions have become a topic of conversation as of late. I believe discussions should be conducted and improvements need to be made in this regard.

Bamba I agree that deciding the matters to be discussed will be important moving forward. A good topic will naturally spur a lively discussion that so the topics for debate need to be carefully selected. It is important to deliberate and reach decisions on important matters, and also to monitor business execution. However, some time should be set aside for discussing the longer-term composition of the business portfolio and the status of the Group. I think it would be helpful to categorize topics for discussion and examine them from the standpoint of annual plans, for example.

Okimoto The Audit & Supervisory Committee also has a number of ideas concerning the effectiveness of the Board of Directors. In terms of strengthening monitoring functions, one aim is to further enhance the cross-supervision functions of the Directors. Although the number of comments made

I believe the Board of Directors should aim to provide appropriate advice to the business execution side in open-ended discussions.

by Internal Directors is on the rise, it is a fact that they still ask fewer questions and voice fewer opinions than the Independent Directors. It may be a challenge to increase their level of participation to 50-50 because they have already discussed these matters in the Executive Council. However, I would strongly encourage the Directors to observe the business execution of other Directors outside their own field, especially when they harbor some doubts about market analysis, investment returns, risk management, or other aspects. For matters deliberated by the Board of Directors, we recommend narrowing down matters to the delegation of authority in order to shift the focus to topics related to the longer-term growth of corporate value, as well as risk management.

Kitabata While advancing measures to prevent a recurrence, the Company is building mechanisms and systems for preventing major risks from occurring. As small risks could turn into larger ones unless we increase awareness of them Companywide, they must be monitored to avoid any impact on operations. The Board of Directors needs to make sure that this function is properly carried out. I expect the Board of Directors to be able to provide proper advice to the business execution side during discussions as needed.

# Nomination & Compensation Committee and Management Personnel

Kitabata The Nomination & Compensation Committee is an advisory body to the Board of Directors that deliberates the nomination and dismissal of Directors and Executive Officers and their compensation. From an external perspective, the committee confirms the approach to and process behind personnel matters and compensation levels for Directors and Executive Officers, and checks for any arbitrariness or irregularities. The basic role of the Nomination & Compensation Committee is to ensure transparency and objectivity.

Okimoto For the nomination of Directors and Executive Officers, it is necessary to ensure that the selection

As an Independent Audit & Supervisory Committee Member, I aim to contribute to sound management by fulfilling my duties and checking functions.



process is fair, and to increase opportunities for Independent Directors to interview core candidates for future management positions. This is an important process for expanding our knowledge of a candidate's personality, abilities, and credentials, and for creating a pipeline for human resources. Kitabata The Kobe Steel Group as well as numerous other companies are going through a trial and error process putting into place succession planning programs, where employees are trained for management positions in the future, including for the President. I think it would be useful to refer to the initiatives of other companies in this regard. The Kobe Steel Group has set up training programs for Directors and Executive Officers to foster a broader view of the entire Company. I also think the Company should broaden its pipeline of candidates for upper management positions by offering the same training to managers and facilitating personnel exchanges between business divisions. Bamba For example, it is important to clarify the fundamental approach to training, beginning with the basic idea of the level of experience required in certain departments or business divisions to become President, and extending this process to the level of experience required at Group



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#### Three-Way Dialogue on Corporate Governance with Independent Directors



companies for promotions to Director and Executive Officer. Depending on the field in question, I am not sure if this process can be replicated entirely in other areas, but having a basic idea makes it easier to prepare and make decisions in this context. The Kobe Steel Group is trying to change by reforming its corporate governance, organization, and mechanisms, and management is well aware of the necessity and importance of having a training program. I believe the Company will accelerate its development of management candidates.

# Improving Corporate Value over the Medium to Long Term

Kitabata I occasionally would like to more freely discuss mediumand long-term matters, such as the automotive weight reduction
strategies, rather than deliberating at the meetings of the Board
of Directors where we have to put time restrictions on discussions or require a conclusion to be reached. At the Meetings
of Independent Directors, which are held around once per quarter,
discussions cover many topics, such as the business environment surrounding the Group and growth fields for the future.

Okimoto The Meetings of Independent Directors are helpful
for resolving asymmetric information between Internal Directors
and Independent Directors. At the early stage before discussions begin to mature, Independent Directors are able to
freely express their opinions, which facilitates deliberations at
later meetings of the Board of Directors.

Bamba After participating in several meetings, while initially I felt that participants voiced their opinions on topics brought up by the Corporate Planning Department, in more recent gatherings, the discussions have become more open and vibrant about topics concerning the Group. These meetings have been a valuable experience as they provide an opportunity to understand the viewpoints of other Independent Directors.

Kitabata The Kobe Steel Group has successfully created the electric power business by leveraging its technologies, know-how, and personnel in in-house power generation cultivated through its steel business. Although more time is

needed for the electric power business to generate profits as the third core business area after the materials and machinery businesses, it is likely to become a stable source of earnings for the Group in the future. I hope Kobe Steel will become a company that boldly makes strategic investments and engages in R&D with an

Kobe Steel has the strengths and potential to contribute to the environment and society with its proprietary technologies, such as its automotive weight reduction strategies, and its products and services. It is essential for the Company to gradually increase its profitability through its diverse technologies and products that cannot be imitated by rivals. Bamba The Group makes substantial capital expenditures and the bulk of these outlays generate profits. Moreover, it may be a major problem if results differ from originally laid-out plans. I see a need for more precision at the plan drafting stage for the medium-term management plan, for example, and greater awareness of business practices based on the PDCA cycle. I intend to focus on raising this subject at the meetings of the Board of Directors. The smaller the difference between plans and actual budgets, the more effective the execution of business. I would like to see greater precision in the business planning-related aspects for the next mediumterm management plan.

eye on growth over the medium to long term using the cash

that is steadily generated by the electric power business.

Okimoto There is naturally synergy among the business divisions. However, profitability has flagged lately, especially in the materials businesses, and restoring the profitability of each business division has become an urgent issue. I believe it is important for the Company to be selective and concentrate resources to boost profitability and manage operations with an awareness of the cost of capital. Ultimately, as the next medium-term management plan is drawn up, I would like to see more discussion on the composition of the business portfolio. I believe it is also time to follow up on the Company's strategic investments, which have been slow to see a return, by reevaluating projects that have not performed in line with original plans, analyzing the reasons why, and then taking countermeasures. In non-financial areas that have drawn increasing interest in society, as the wellspring of corporate value, I think the Company needs to contribute more to the environment and society by investing in human resource development and through its businesses.

# Message from the New Independent Director

#### Yumiko Ito

Independent Director

# Genuine Reforms of the Corporate Culture through Ceaseless Efforts

I believe that the management has been sincerely and diligently working on measures to prevent a recurrence of the quality misconduct that was publicly disclosed in October 2017. In the report published in March 2018, there is a sense of urgency on initiatives for reforming corporate governance, including the state of the Board of Directors, as a part of the preventive measures. I recognize this marks a turning point for the Kobe Steel Group.

Misconducts are said to derive from a triangle of motivation, opportunity, and justification. Among the Company's preventive measures, I am especially concerned with whether the measures that address motivation and justification are effectively working in manufacturing facilities. From an objective standpoint as an Independent Director, I will monitor the progress and effectiveness of these measures.

The Group's efforts to prevent a recurrence must lead to broad improvements in the level of compliance, reforms to the corporate culture, and a restoration of trust among stakeholders. President Yamaguchi and the top management are strongly determined to show leadership in reforms to the corporate culture. While reminding themselves of the lessons learned from the quality misconduct, the management must commit to making tireless and unending efforts to genuinely reform the corporate culture.

# Aiming to Contribute to Both "Defense" and "Offense"

With expertise in legal affairs, I have been involved in the management of some foreign-affiliated companies as well as a Japanese company. Through such experiences, I have learned that enterprises in modern society are not only required to comply with laws and regulations but also to address and respond to social norms. Based on this understanding, I intend to be aware of recent social trends and expectations for enterprises, and will commit to contributing to the enhancement of the supervisory functions of the



Board of Directors with regard to compliance, by always offering my frank opinions to the business execution side, including the President, and also by proactively participating in candid discussions among the Directors.

Along with the "defense" aspect of governance, I will seek to contribute to the "offense" aspect of governance by providing advice on how to develop the right path for the sustainable global growth of the Group, based on my knowledge of various management methods acquired through my experiences.

#### A Channel for Dialogue between Stakeholders and the Business Execution Side

In addition to compliance, a company must adapt to changes in the world around it. For Japanese companies, which tend to be homogeneous, it is critical to have an awareness and understanding of the diverse views in society, and include those views when adapting. I understand that one of the major roles expected of Independent Directors is to present the business execution side with these diverse viewpoints in society.

Independent Directors play the role of a channel for dialogue between the business execution side and stakeholders, such as shareholders, investors, customers, business partners, and local communities. As an Independent Director, I am committed to fulfilling this role.

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## Management Team (As of June 20, 2019)



Yasushi Tsushima

Director, Audit & Supervisory Committee Member Hiroshi Ishikawa

Director, Audit & Supervisory Committee Member Yoshihiko Katsukawa

Director, Senior Managing **Executive Officer** 

Jiro Kitagawa

Director, Senior Managing **Executive Officer** 

\_6\_ Shohei Manabe

Director, Senior Managing **Executive Officer** 

Hiroyuki Bamba

Independent Director

Takashi Okimoto

Independent Director, Audit & Supervisory Committee Member

Yoshiiku Miyata

Independent Director, Audit & Supervisory Committee Member

Hidero Chimori

Independent Director, Audit & Supervisory Committee Member

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Koichiro Shibata

**Executive Vice President** and Representative Director Takao Ohama

Executive Vice President and Representative Director Fusaki Koshiishi

Executive Vice President and Representative Director

\_2\_ Yoshinori Onoe

Executive Vice President and Representative Director

President, CEO and Representative Director

Mitsugu Yamaguchi Takao Kitabata

Independent Director, Chairman of the Board Yumiko Ito

Independent Director



## **Corporate Governance**

## The Kobe Steel Group's Corporate Governance: Supporting the Restoration of Trust and the Enhancement of Corporate Value

## **Basic Policy**

The Kobe Steel Group recognizes that corporate value includes not only business results and technological capabilities but also the stance on social responsibility to all stakeholders affected by its business activities, such as shareholders, investors, customers, suppliers, employees in the Kobe Steel Group, and local communities. Earnestly undertaking efforts to improve for all stakeholders leads to improvements in corporate value.

Therefore, corporate governance is not merely a form of the organization, but is a framework for realizing all the efforts the Kobe Steel Group is undertaking. In building the framework, the Group recognizes the importance of establishing a system that contributes to improving corporate value by taking appropriate risks; acting in cooperation with stakeholders; promoting appropriate dialogue with investors in the capital market; maintaining the rights of and fairness for shareholders; and securing transparency in business dealings.

Under such a policy, the Kobe Steel Group has established the Core Values of KOBELCO, which are promises that the Group has made to society demonstrating the values shared throughout the Group, and the Six Pledges of KOBELCO Men and Women, which are concrete actions that must be carried out by all employees in order to fulfill the Core Values of KOBELCO. The Group aims to improve its corporate value over the medium to long term by implementing these policies while operating its businesses.



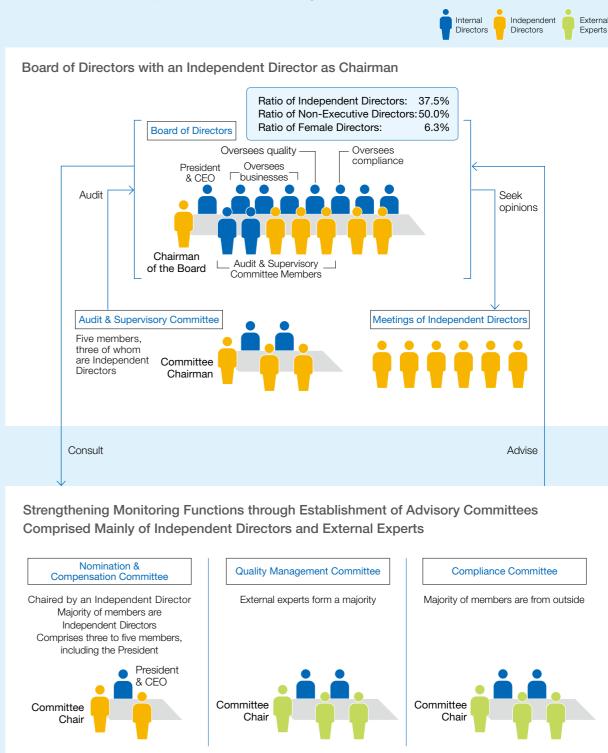
For information about the Company's basic policy on corporate governance and management policy, please see Basic Policy and Initiatives on the Corporate Governance of Kobe Steel, Ltd.

 $https://www.kobelco.co.jp/english/about\_kobelco/kobesteel/governance/files/Basic\_Policy\_and\_Initiatives.pdf$ 

## **Initiatives to Strengthen Corporate Governance**

1999	Introduced internal company system and adopted executive officer system		
2000	Established Corporate Code of Ethics		
2003	• Established Compliance Committee as an advisory committee to the Board of Directors		
2006	Established Corporate Philosophy		
2007	Appointed two Independent Directors		
2010	Abolished internal company system and introduced business unit system		
2015	<ul> <li>Established Basic Policy and Initiatives on the Corporate Governance of Kobe Steel, Ltd.</li> <li>Established the Meetings of Independent Directors</li> <li>Established principles on appointment of Directors/Audit &amp; Supervisory Board Members and established standards for Independent Directors/Auditors</li> </ul>		
2016	<ul> <li>Launched Kobe Steel's Fiscal 2016–2020 Group Medium-Term Management Plan</li> <li>Became a company with an audit and supervisory committee</li> <li>Revised executive remuneration system (introduced stock-type remuneration)</li> <li>Established training policy for executives</li> <li>Introduced evaluation system for the Board of Directors</li> </ul>		
2017	Turned the Corporate Philosophy into the Core Values of KOBELCO and established Six Pledges of KOBELCO Men and Women		
2018	Reassessed the state of the Board of Directors from the standpoint of enhancing its oversight functions		
2019	Appointed the Company's first female Director		

## **Features of the Corporate Governance System**



## **Corporate Governance**

Main Experiences	Todhical										
		Length of service as Director (years)	Planning/ project management	Finance/ accounting	Materials businesses	Machinery businesses	Electric power business	development/ manufactur- ing/facility technology	Overseas business	Legal/risk management	Insights into other industry sectors
Mitsugu Yamaguchi President, CEO and Representative Director Yoshinori Onoe	61	3	0	0	0	0		37	0		
Yoshinori Onoe Executive Vice President and Representative Director	63	5	0		0		0	0			
Fusaki Koshiishi Executive Vice President and Representative Director	59	4	0		0			0			
Takao Ohama Executive Vice President and Representative Director	63	1	0			0		0	0		
Koichiro Shibata Executive Vice President and Representative Director	60	1	0		0			0			
Shohei Manabe Director, Senior Managing Executive Officer	63	4	0			0			0	0	
Jiro Kitagawa Director, Senior Managing Executive Officer	59	1	0		0		0	0			
Yoshihiko Katsukawa Director, Senior Managing Executive Officer	57	1	0	0		0				0	
Takao Kitabata Independent Director  Hiroyuki Bamba Independent Director	69	9								0	0
Hiroyuki Bamba Independent Director	65	2	0					0			0
Yumiko Ito Independent Director	60	_								0	0
Hiroshi Ishikawa Director, Audit & Supervisory Committee Member	61	1	0			0			0		
Yasushi Tsushima Director, Audit & Supervisory Committee Member	59	1	0	0	0	0	0				
Takashi Okimoto Independent Director, Audit & Supervisory Committee Member	68	3		0							0
Yoshiiku Miyata Independent Director, Audit & Supervisory Committee Member	66	3	0						0		0
Hidero Chimori Independent Director, Audit & Supervisory Committee Member	65	3								0	0

#### Policy on Management Structure (Management structure and range of delegation of management)

The Company believes the basis of its corporate value is the promotion of its diversified management covering a wide range of segments—various demand fields, business environments, sales channels, and business scales—and the leveraging of that synergy. The Company believes it is impossible to pursue technical development and innovation, which form the foundation for the Company's continued growth, without integrating discussions with its manufacturing sites.

Furthermore, to advance its diversified management, the Company believes it is necessary to actively discuss and undertake appropriate decision-making with regard to the risk management of its various businesses and the allocation of management resources, as well as to flexibly oversee

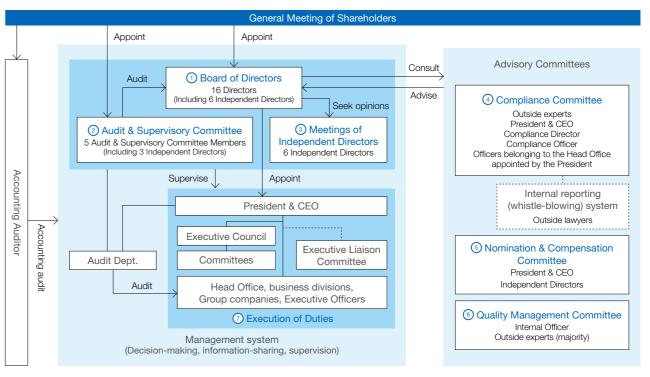
business executions by the Board of Directors. It is desirable to maintain certain cohesion between execution and oversight and to have the Board of Directors served by members with a sound understanding of the Company's business execution.

In line with this approach, the Company has shifted to adopting an Audit & Supervisory Committee whose members have voting rights on the Board of Directors. Under this governance structure, the Company aims to enable comprehensive audits of the Company's extensive businesses; maintain and strengthen the supervisory function of the Board of Directors; and accelerate decision-making with regard to management without completely separating the oversight and execution functions.

#### **Outline of Corporate Governance System**

Organizational form	Company with an audit and supervisory committee
Number of Directors (of whom are Independent Directors)	16 (6)
Term of Directors	One year (two years for Audit & Supervisory Committee Members)
Number of Audit & Supervisory Committee Members (of whom are Independent Directors who are Audit & Supervisory Committee Members)	5 (3)
Accounting Auditor	KPMG AZSA LLC

#### Corporate Governance System



## 1 Board of Directors

The numbers of Directors (excluding Directors who are Audit & Supervisory Committee Members) shall be not more than fifteen (15) as stipulated under the Articles of Incorporation of the Company. The Company conducts the following actions to ensure that an appropriate number of Directors constitutes the Board of Directors to ensure substantial discussion at meetings of the Board of Directors as well as enhance the auditing function, while considering its diversity.



Purpose	Measure
Reflect the fair and neutral perspectives of external parties, and the viewpoints of stakeholders including minority shareholders	Invite several Independent Directors (three as of June 20, 2019) (excluding Audit & Supervisory Committee Members)
Strengthen the monitoring functions of the Board of Directors	In addition to the President, appoint Directors to oversee the head office division, each business division in materials, machinery, and electric power, and the technical development division; a Director to oversee compliance; and a Director to oversee quality assurance
Enhance fairness and transparency of the Board of Directors and advance	Appoint Independent Directors so that they will account for one-third or more of the Board of Directors
growth strategies as a company	In principle, the Chairman of the Board of Directors is selected from among the Independent Directors

#### **Corporate Governance**

## 2 Audit & Supervisory Committee

In principle, the Audit & Supervisory Committee of Kobe Steel consists of five members, including two Internal Directors and three Independent Directors. This is not only in accordance with the rules on audit and supervisory committees of Japan's Companies Act, which requires at least three Non-Executive Directors (a majority of whom must be Independent Directors), but it also ensures transparency and fairness and encourages satisfactory auditing for the diversified management of a wide range of business segments. The Chair of the Audit & Supervisory Committee is selected from among the Independent Directors.

Full-time Internal Audit & Supervisory Committee Members are mainly responsible for acting as liaisons between the management team and the Audit & Supervisory Committee and for coordinating with the internal audit departments. Independent Audit & Supervisory Committee Members are responsible for providing expert knowledge with respect to auditing and for maintaining fairness. To ensure these roles are fulfilled, the Company appoints Independent Audit & Supervisory Committee Members from diverse fields, including legal, financial, and industrial circles.

Moreover, at least one of the Audit & Supervisory Committee Members must have a considerable degree of knowledge on finance and accounting in order to improve the effectiveness of audits.

## (3) Meetings of Independent Directors

The Company has established the Meetings of Independent Directors to maximize the roles of Independent Directors. The meetings are a platform where the Company shares with Independent Directors information regarding the Company's businesses other than nomination and compensation of executives.

The Meetings of Independent Directors consist solely

of Independent Directors. Regular meetings are held every quarter and ad-hoc meetings are held when necessary.

The Executive Directors of the Company attend the Meetings of Independent Directors as appropriate to share information and exchange opinions with the Independent Directors.

## (4) Compliance Committee

The Company has established the Compliance Committee, which, as an independent advisory body to the Board of Directors, deliberates matters regarding compliance with laws, regulations, and ethics concerning the Company's business activities.

The Compliance Committee consists of the President, the Director overseeing Companywide compliance, the Executive Officer in charge of compliance, internal and external experts, and attorneys (without a retainer agreement executed by the Company) in charge of

receiving reports via the internal reporting (whistle-blowing) system. The majority of the Committee consists of members from outside of the Company.

The Compliance Committee plans fundamental policies regarding compliance activities, monitors the progress of compliance activities, and submits reports and recommendations on necessary actions to the Board of Directors.

The Compliance Committee holds regular meetings biannually, and ad-hoc meetings when necessary.

## 5 Nomination & Compensation Committee

The Company has established the Nomination & Compensation Committee as an advisory body to the Board of Directors on important matters concerning nomination and compensation of Directors and Executive Officers in order to enhance fairness and transparency in the management of the Board of Directors. The Nomination & Compensation Committee consists of three to five

members including the President, with a majority of Independent Directors. Meetings are held at least once per fiscal year and as needed. An Independent Director chairs the Nomination & Compensation Committee.

The Board of Directors fully respects the opinions of the Nomination & Compensation Committee and its decisions on relevant matters.

## 6 Quality Management Committee

The Company has established the Quality Management Committee as an advisory body to the Board of Directors. The committee constantly monitors the effectiveness of measures to prevent a recurrence of the quality misconduct in the Group, in addition to continuously monitoring and advising on activities to strengthen quality management

across the Group. Members of the Quality Management Committee comprise two internal executives of the Company and three external experts selected by the Board of Directors who have technical knowledge or legal knowledge on quality. The committee is chaired by one of the external members.

## (7) Execution of Duties

The Board of Directors is responsible for deliberating and deciding on matters concerning execution of important business and other legal matters, as well as for overseeing business execution.

However, to ensure prompt decision-making, the Company has established deliberation standards for the Board meetings and delegated authority, within a certain scope, to persons responsible for specific duties, including the President and other executives.

In addition, by appointing Executive Officers as assistants to Directors who execute duties, the Company has established a system that enables delegation of business management responsibilities and prompt decision-making with respect to business management.

The term for Directors (excluding Audit & Supervisory Committee Members) and Executive Officers shall be one year to enable the Company to respond flexibly to a volatile business environment.

## **Reasons for Appointment of Independent Directors**

The Company deems that its Independent Directors satisfy its standards for Independent Directors, and are fully independent with no risk of conflicts of interest with general

shareholders of the Company. All six of its Independent Directors are currently registered as independent directors with the Tokyo Stock Exchange.

			No. of Meetings Attended in Fiscal 2018		
Name	Reason for Appointment	Board of Directors' Meetings	Audit & Supervisory Committee Meetings		
Takao Kitabata	Although Takao Kitabata has not participated in the management of a company in a position other than outside director or outside audit & supervisory board member, as he is able to make objective, fair, and neutral judgments based on his deep insight in the world of industry backed by his broad experience as an administrative official and his extensive knowledge as an outside director/audit & supervisory board member of listed companies, we have concluded that he is well-qualified to be an Independent Director of the Company in light of the Company's principles on appointment of candidates for Directors and Standards for Independent Directors.	Attended 16 of 16 meetings	_		
As Hiroyuki Bamba is able to make objective, fair, and neutral judgments based on his abundant experience in business fields different from those of the Company in the world of industry and his deep insight as a corporate executive, we have concluded that he is well-qualified to be an Independent Director of the Company in light of the Company's principles on appointment of candidates for Directors and Standards for Independent Directors.			_		
Yumiko Ito (Newly appointed in fiscal 2019)	As Yumiko Ito is able to make objective, fair, and neutral judgments based on her abundant experience and deep insight centered on legal affairs in corporate management, we have concluded that she is well-qualified to be an Independent Director of the Company in light of the Company's principles on appointment of candidates for Directors and Standards for Independent Directors.	_	_		
Takashi Okimoto	Takashi Okimoto has abundant experience in credit management and financial management at financial institutions and deep insight as a corporate executive of financial institutions, and as he is able to make objective, fair, and neutral judgments based on his insight in the financial sector, we have concluded that he is well-qualified to be an Outside Director who is an Audit & Supervisory Committee Member of the Company in light of the Company's principles on appointment of candidates for Directors and Standards for Independent Directors. Additionally, he has considerable knowledge of finance and accounting.	Attended 16 of 16 meetings	Attended 15 of 15 meetings		
As Yoshiiku Miyata is able to make objective, fair, and neutral judgments based on his abundant experience in business fields different from those of the Company in the world of industry and his deep insight as a corporate executive, including the post of president of an overseas business entity, we have concluded that he is well-qualified to be an Independent Director who is an Audit & Supervisory Committee Member of the Company in light of the Company's principles on appointment of candidates for Directors and Standards for Independent Directors. Additionally, he has considerable knowledge of finance and accounting.		Attended 15 of 16 meetings	Attended 12 of 15 meetings		
Hidero Chimori					

#### **Corporate Governance**

#### Standards for Independent Directors

The Company's Outside Directors (including Audit & Supervisory Committee Members) are recognized as Independent Directors as long as any of the following requirements are not applicable. Requirement "L" only applies to Independent Directors serving on the Audit & Supervisory Committee.

- A) A person who currently executes or has executed businesses of the Group, which includes the Company and its subsidiaries (i.e., Executive Directors, Executive Officers (consisting of shikkoyaku and shikkoyakuin) and other employees: hereinafter the same shall apply).
- B) A person who has a close relative (spouse, relative within the second degree of kinship; hereinafter the same shall apply) who currently executes or has executed businesses of the Group within the past five years.
- C) A person who is currently or has been over the past three years a principal shareholder of the Company (a shareholder who, directly or indirectly, currently owns or has owned 10% or more of all voting rights of the Company), or who currently executes or has executed businesses of the principal shareholders' companies within the past three years.
- D) A major business partner of the Company (when the highest payment among payments by this partner to the Company accounts for more than 2% of the Company's annual consolidated net sales in the past three fiscal years) or a person who currently executes or has executed its business over the past three years.
- E) A person who executes businesses thereof whose major business partner is the Company (when the highest payment among payments by the Company to the person accounts for more than 2% of the person's annual consolidated net sales in the past three fiscal years) or a person who currently executes or has executed its business over the past three years.
- F) Persons who are or have been over the past three years financial institutions, other large creditors or those executives indispensable for the Company's financing and that the Company depends on to the degree there is no substitute.
- G) A consultant, accountant, or legal professional who has received a large sum of money or other financial gain in the past three years from the Company, excluding remuneration for Director of the Company. If the person receiving such financial gain is an individual, the "large sum"

means the larger of ¥10 million or US\$100 thousand or more in a year. If the person receiving such financial gain is a party such as a company or an association, the "large sum" means the amount equal to or more than 2% of the party's annual consolidated net sales, and this condition is applicable to an individual who belongs to the party (but excluding an individual independently performing his or her duties without receiving any remuneration from the party).

- H) Certified public accountants who are Accounting Auditors of the entity or those who belong to the audit corporation that is an Accounting Auditor of the Company.
- A representative person or the equivalent thereof of a company who receives a donation or aid (which exceeds the larger of ¥10 million, US\$100 thousand or 30% of the total average annual cost of the company in a year) from the Company.
- J) A person who executes businesses of companies that mutually dispatch Independent Directors/Corporate Auditors. (The person who executes the business of the Group is an Independent Director/Corporate Auditor and the person who executes the business of such a company is an Independent Director of the Company.)
- K) A person who has a close relative who falls under any of the categories C through J above. The person who executes a business of the Company is limited to Directors and Executive Officers and, the person who belongs to a professional advisory firm such as a law firm is limited to a member or a partner of the firm.
- L) A person who has a close relative who falls under any of the following categories a) through c).
- a) A person who is currently or has been over the past one year a Non-Executive Director of a subsidiary of the Company.
- b) A person who is currently or has been over the past one year an accounting advisor of a subsidiary of the Company. (If the accounting advisor is a company, it is limited to those with a certified public accountant or a certified public tax accountant.)
- A person who has been over the past one year a Non-Executive Director of the Company.

## 3 Calculation Method

- Basic remuneration consists of a fixed amount paid to each Director depending on rank in internal regulations taking into account an appropriate level of compensation in line with the capabilities and responsibilities expected of each Director.
- 2) The amount of performance-based compensation will be determined using net income attributable to owners of the parent (hereinafter "net income") and net income of each business division as evaluation indicators. In terms of target standards used in evaluations, raising the level of profit attained through the steady execution of strategic investments is an important management issue, and the Company places emphasis on how much profit is gained from its total assets including strategic investments. Accordingly, these target standards will be based on the net income standard of the Company as a whole, which becomes "consolidated ROA of 5% or more" as stated in the Medium-Term Management Plan. Additionally, the target standards for each business division will be based on the same net income standard for each business division of "ROA of 5% or more in each business division," and depending on target standards for each business division and the accomplishment of these targets for both the Company as a whole and each business division, the amount paid is determined by multiplying a coefficient of 0%-200% to the base amount for each rank. Also, the calculation method for performance-based compensation is as follows. Performance-based \_ Standard pay amount by rank\*1 ×
- Performance-based Standard pay amount by rank\*1 × Coefficient based on evaluation index\*2
- \*1 Standard pay amount by rank: The standard pay amount by rank is determined by internal regulations taking into consideration a level of compensation in line with the capabilities and responsibilities expected of each Director.
- \*2 Coefficient based on evaluation index: Net income over the given period is the indicator used for the coefficient for calculating performance-based compensation, and the calculation method is provided below. The business division used for calculating the portion of compensation linked to division performance is determined based on actual duties assigned to each Director who is scheduled to receive performance-based compensation. Also, if the scope of duties assigned to a Director is the Head Office (including the Technical Development Group) or the electric power business, then said Director's performance-based compensation does not include the portion of compensation linked to division performance. Rather than the formula directly below, the performance-based compensation for such Directors is calculated using the formula "Portion linked to Companywide performance x 1.0."

Coefficient (%) = Portion linked to Companywide performance × 0.7 + Portion linked to division performance × 0.3

Portion linked to Companywide performance (%) = (Companywide consolidated net income  $\div$  net income equivalent to Companywide consolidated ROA of 5%)  $\times$  100

Portion linked to division performance (%) = (net income in each business division  $\div$  net income in each business division equivalent to consolidated ROA of 5%)  $\times$  100

- \* Decimal points are rounded off in the figures for the portion linked to Companywide performance and the portion linked to division performance. In the event that the value falls below 0%, then 0% is established as the value. In the event that the value goes above 200%, then 200% is established as the value.
- 3) For medium- to long-term incentive compensation, a system known as Board Benefit Trust will be adopted in order to raise the awareness of Directors for contributing to continuous improvements in corporate value. Payments based on this system will use a base point number established for each rank and a number of points according to a coefficient of 0%–100%. On a fixed date during each trust period of three years, a number of the Company's shares and cash equivalent to the amount converted from the market price of the Company's shares will be provided according to the number of points

provided. The Company positions shareholder returns as an important management issue. Accordingly, the Company calculates a coefficient for shareholder returns based on its entire net income and the state of dividend payments in each fiscal year. The reference value used in this calculation is net income of ¥36.5 billion, which serves as a target for the dividend payout ratio the Company adopts in its dividend policy.

#### 4 Method to Determine Remuneration Standard

Data from a Director remuneration survey conducted by an external specialized agency will be used as a base to determine remuneration standards commensurate with the Company's corporate scale and the duties expected of Directors.

# 5 Determination of Remuneration Policy and Method for Verification

- 1) The policy concerning remuneration for Directors (excluding Audit & Supervisory Committee Members) is determined by resolution of the Board of Directors, and the policy concerning remuneration for Audit & Supervisory Committee Members is determined by the Audit & Supervisory Committee.
- 2) The state of the remuneration system and the necessity for its revision are deliberated by the Nomination & Compensation Committee, a majority of which consists of Independent Directors. If it is necessary to revise the remuneration system, the Company will present a revised remuneration plan at a meeting of the Board of Directors for resolution. The Board of Directors has the duty to adopt such a resolution while fully respecting the opinions submitted by the Nomination & Compensation Committee.
- 3) The activities of the Board of Directors and the Nomination & Compensation Committee in the recent fiscal year are as follows. Board of Directors

In May 2019, the Board of Directors determined the performance-based compensation amounts and the medium- to long-term incentive compensation amounts for fiscal 2018 based on the opinions submitted by the Nomination & Compensation Committee.

Nomination & Compensation Committee

In May 2019, the Nomination & Compensation Committee deliberated on coefficients for calculating performance-based compensation and medium- to long-term incentive compensation for fiscal 2018 and submitted its opinions to the Board of Directors.

- 6 Reference Values for the Most Recent Fiscal Year Used in the Index Related to Performance-Based Compensation and Medium- to Long-Term Incentive Compensation; Fiscal 2018 Results
- 1) Index related to performance-based compensation Reference value for fiscal 2018: consolidated ROA of 5.0% Results for fiscal 2018: consolidated ROA of 1.5%
- 2) Index related to medium- to long-term incentive compensation Reference value for fiscal 2018: net income of ¥36.5 billion Results for fiscal 2018: net income of ¥35.9 billion

## Remuneration of Directors and Remuneration of Accounting Auditor

#### **Remuneration of Directors**

The Company has set forth the following remuneration system for Directors in order to improve medium- to long-term corporate value, as well as to effectively offer incentives for Directors to carry out their expected roles to their fullest capacities.

# 1 Fundamental Policy for Remuneration of the Company's Directors

- A system able to secure talented human resources who can contribute to the Company's continued growth, and appropriately compensate for such efforts.
- A system able to share values widely with stakeholders and promote not only short-term growth but also medium- to longterm growth.
- 3) In incentivizing the accomplishment of consolidated business result targets, the system must sufficiently consider the characteristics of each business so that Directors can fully carry out their roles.
- 4) Ensuring the objectivity and transparency of judgments regarding remuneration decisions by having the Nomination & Compensation Committee, the majority of which consists of Independent Directors, deliberate on the state of the remuneration system and the necessity of its reevaluation.

#### 2 Remuneration Framework

- 1) Remuneration for the Company's Directors (excluding Audit & Supervisory Committee Members) will consist of basic remuneration as fixed compensation, performance-based compensation linked to the achievement of business result targets for each fiscal year, and medium- to long-term incentive compensation based on stock compensation with the goal of sharing values with shareholders. Taking into consideration their duties, part-time Internal Directors and Independent Directors will not be eligible for performance-based compensation, and Independent Directors will not be eligible for medium- to longterm incentive compensation.
- 2) The standard amount of performance-based compensation for each rank will be at the level of 25% to 30% of fixed compensation, and the value of medium- to long-term incentives paid per fiscal year will be at the level of 25% to 30% of fixed compensation.
- 3) The Company's Directors who are Audit & Supervisory Committee Members will only be paid basic remuneration as fixed compensation, taking into consideration their duties.

#### **Corporate Governance**

#### Remuneration and Other Amounts to Directors in Fiscal 2018

•	Number of	Amount	Breakdown of Total Remuneration (Millions of Yen)			
Category	Directors (Persons)	(Millions of Yen)	Base Pay	Performance- Based Remuneration	Share- Based Remuneration	
Directors excluding Audit & Supervisory Committee Members (of whom are Independent Directors)	15 (2)	533 (27)	427 (27)	50 (–)	56 (-)	Number of Directors and Amount include five Internal Directors (who are not Audit & Supervisory Committee Members) and two Outside Directors (who are Audit & Supervisory Committee Members) who retired in fiscal 2018.
Directors who are Audit & Supervisory Committee Members (of whom are Independent Directors)	7 (3)	109 (44)	109 (44)	-	(-)	
Total	22	643	536	50	56	

<sup>\*</sup> The Company takes very seriously the fact that the quality misconduct in the Group has caused significant trouble to many people, and all Directors excluding Independent Directors and Audit & Supervisory Committee Members have voluntarily returned 10% to 50% of their fixed remuneration during the period from March 2018 to June 2018

## Remuneration of Accounting Auditor

In fiscal 2018, ended March 31, 2019, remuneration and other amounts payable to the Accounting Auditor by the Company were ¥146 million, and the total amount of money and other financial interests payable by the Company and its subsidiaries were ¥468 million.

#### **Evaluation of the Board of Directors**

The Company's Board of Directors evaluated its effectiveness by conducting a questionnaire targeting all 15 Directors who served in fiscal 2018. Based on the aggregated results of the questionnaire and interviews, the Audit & Supervisory Committee submitted to the Board of Directors an initial

evaluation and recommendations for improvements in the future. The Board of Directors then reviewed the evaluation results and analyzed current issues and deliberated future initiatives for improving effectiveness.



For details about analysis and evaluation methods and evaluation items, please visit our website below. https://www.kobelco.co.jp/english/about\_kobelco/kobesteel/governance/

#### **Evaluation Results in Fiscal 2018**

#### **Evaluation Items**

- 1 Structure of the Board of Directors 2 Agenda of the Board of Directors 3 Management of the Board of Directors
- 4 Documents for the Board of Directors 5 Monitoring and supervision of Directors
- 6 Provision of information to Independent Directors

#### **Summary of Analysis and Evaluation Results**

- In light of the measures taken in fiscal 2018 to improve effectiveness, it was confirmed that the Company's Board of Directors functions appropriately overall and maintains its effectiveness in terms of the structure, agenda, and management of the Directors; the contents of documents; the supervision and monitoring of the Directors; and the provision of information to Independent Directors.
- In response to the misconduct concerning the quality of the Company's products discovered in fiscal 2017, the Board of Directors receives reports on a regular basis on the progress of measures to prevent recurrence and activities of the Independent Quality Supervision Committee. The Board of Directors has concluded that the information necessary for monitoring has been properly shared.
- For the above reasons, the Company has determined that the Board of Directors is functioning adequately overall, and the effectiveness of the Board of Directors has steadily improved.

#### **Future Initiatives**

The evaluation results indicated that there is room for improvement from a management aspect mainly in relation to the points below, and the Company has shared these points as initiatives for the future. By addressing these issues, the Company aims to improve its effectiveness further.

- 1. Management of the Board of Directors: Initiatives aimed at strengthening monitoring functions
- 2. Agenda of the Board of Directors: Following up on matters submitted to the Board of Directors, narrowing down the agenda of the meetings of the Board of Directors to secure adequate time to discuss matters
- 3. Documents for the Board of Directors: Optimizing structure, content, and volume

## Directors (Including Audit & Supervisory Committee Members) and Executive Officers

(As of June 20, 2019)

#### **Directors**

President, CEO and Representative Director

#### Mitsugu Yamaguchi

Apr. 2015 Executive Officer

Number of Company shares owned: 13 500



Jun. 2016 Director, Senior Managing Executive Officer Apr. 2017 Executive Vice President and Representative Director Apr. 2018 President, CEO and Representative Director (incumbent) Executive Vice President and Representative Director

#### Yoshinori Onoe

Number of Company shares owned: 21.700

Apr. 1980 Joined the Company Apr. 2008 Officer Apr. 2010 Senior Officer

Apr. 2012 Executive Officer Apr. 2014 Executive Vice President

Jun. 2014 Executive Vice President and Representative Director Apr. 2016 Executive Vice President and Representative Director

(incumbent)

#### Executive Vice President and Representative Director

#### Fusaki Koshiishi

Number of Company shares owned: 14.400

Apr. 1984 Joined the Company

Apr. 2012 Officer Apr. 2014 Senior Officer

Jun. 2015 Managing Director Apr. 2016 Director, Senior Managing Executive Officer

Apr. 2018 Executive Vice President and Representative Director

## Executive Vice President and

19.400

Apr. 1981 Joined the Company Apr. 2010 Officer

Apr. 2018 Executive Vice President

Jun. 2018 Executive Vice President and Representative Director

Executive Vice President and

12 800

Apr. 1984 Joined the Company Apr. 2012 Officer

Apr. 2014 Senior Officer

Apr. 2016 Senior Managing Executive Officer

Apr. 2018 Executive Vice President

Jun. 2018 Executive Vice President and Representative Director

(incumbent)

Representative Director

#### Takao Ohama

Number of Company shares owned:

Apr. 2012 Senior Officer

Apr. 2014 Executive Officer

Representative Director

#### Koichiro Shibata

Number of Company shares owned

Apr. 1978 Joined the Company Apr. 2009 Officer

Apr. 2011 Senior Officer Apr. 2015 Executive Officer

Director

16.200

Senior Managing

**Executive Officer** 

Shohei Manabe

Jun. 2015 Senior Managing Director

Number of Company shares owned

Apr. 2016 Director, Senior Managing Executive Officer (incumbent)



#### Directors (Including Audit & Supervisory Committee Members) and Executive Officers

#### **Directors**

Director. Senior Managing Executive Officer

#### Jiro Kitagawa

Number of Company shares owned: 13,500

Apr. 1982 Joined the Company

Apr. 2014 Officer

Apr. 2016 Managing Executive Officer

Apr. 2018 Senior Managing Executive Officer

Jun. 2018 Director, Senior Managing Executive Officer (incumbent)

Senior Managing **Executive Office** 

#### Yoshihiko Katsukawa

Number of Company shares owned 7.400

Apr. 1985 Joined the Company

Apr. 2015 Officer

Apr. 2017 Managing Executive Officer Apr. 2018 Senior Managing Executive Officer

Jun. 2018 Director, Senior Managing Executive Officer (incumbent)

#### Independent Director

#### Takao Kitabata

Number of Company shares owned:



Joined the Ministry of International Trade and Industry Apr. 1972 Director-General, Economic and Industrial Policy Bureau, Jun. 2004 Ministry of Economy, Trade and Industry (METI) Jul. 2006 Vice-Minister of Economy, Trade and Industry

Jul. 2008 Retired from MFTI

Jun. 2010 Director of the Company (incumbent)

Outside Corporate Auditor of Marubeni Corporation Jun. 2013 Chairman of SANDA GAKUEN Junior High School-

Senior High School (incumbent)

Outside Director of Marubeni Corporation (incumbent) Principal of SANDA GAKUEN Apr. 2014

Junior High School-Senior High School

Outside Director of Seiren Co., Ltd. (incumbent)

Outside Director of Zeon Corporation (incumbent)

Retired from Chairman of SANDA GAKUEN Junior High School-Senior High School

## Independent Director

#### Hiroyuki Bamba

Number of Company shares owned:



Apr. 1976 Joined Sumitomo Rubber Industries, Ltd. Mar. 2000 Director of Sumitomo Rubber Industries, Ltd. Mar. 2003 Executive Officer of Sumitomo Rubber Industries, Ltd. President and Director of SRI Sports Limited (currently Sumitomo Rubber Industries, Ltd.) Chairman and Director of SRI Sports Limited Mar. 2015 Counselor to Sumitomo Rubber Industries, Ltd. Jun. 2015 Outside Director of Sekisui Plastics Co., Ltd. (incumbent) Jun. 2017 Director of the Company (incumbent)

## Independent Director

#### Yumiko Ito

Number of Company shares owned:



Apr. 1984 Legislation Staff (Sanji), The Legislative Bureau of the House of Representatives of Japan Admitted to the bar in Japan Sakawa Law Office

Jul. 1991 Tanabe & Partners

Apr. 2001 General Counsel, Legal & Patent Operation, GE Yokogawa Medical Systems, Ltd. (currently GE Healthcare Japan Corporation)

May. 2004 Staff Counsel, Legal & Intellectual Property, IBM Japan, Ltd. Mar. 2007 Executive Officer, Legal & Corporate Affairs, Microsoft Co., Ltd.

(currently Microsoft Japan Co., Ltd.)

Apr. 2013 Executive Officer and General Counsel, Sharp Corporation Jun. 2013 Director, Executive Officer and General Counsel Sharp Corporation

Director, Executive Managing Officer and General Counsel, Sharp Corporation

Executive Managing Officer and General Counsel, Sharp Corporation

Retired from Executive Managing Officer and General Counsel, Sharp Corporation Established Ito Law Office

Director of the Company (incumbent)

#### **Directors, Audit & Supervisory Committee Members**

Audit & Supervisory Committee Member

Hiroshi Ishikawa

Number of Company shares owned: 15,400

Apr. 1982 Joined the Company

Apr. 2014 Officer

Apr. 2016 Managing Executive Officer Jun. 2018 Director, Audit & Supervisory

Committee Member (incumbent)

Audit & Supervisory Committee Member Yasushi Tsushima

> Number of Company shares owned: 8,600

Apr. 1982 Joined the Company

Apr. 2013 Officer

Jun. 2015 Director, Managing Executive Officer of Kobelco Construction Machinery Co., Ltd.

Apr. 2018 Director of Kobelco Construction Machinery Co., Ltd.

Jun. 2018 Director, Audit & Supervisory Committee Member of the Company (incumbent)

Independent Director, Audit & Supervisory Committee Member

# Yoshiiku Mivata

Number of Company shares owned: 6.200



Jun. 2011 Senior Managing Director, Member of the Board. Panasonic Corporation Jun. 2014 Corporate Advisor. Panasonic Corporation

Mar. 2015 Outside Director, TonenGeneral Sekiyu K.K. Dec. 2015 Retired from Corporate Advisor,

Panasonic Corporation Jun. 2016 Director, Audit & Supervisory Committee Member of the Company (incumbent)

Apr. 2017 Outside Director, JXTG Holdings, Inc. (incumbent)

Audit & Supervisory Committee Member

## Hidero Chimori

Number of Company



May 2002 Representative Partner, Miyake & Partners Jun 2002 Outside Audit & Supervisory Board Member, OMRON Corporation Outside Audit & Supervisory Board Jun. 2006 Member, Duskin Co., Ltd.

Outside Audit & Supervisory Board Jun. 2011 Member, NAITO Securities Co., Ltd. (incumbent)

Director, Audit & Supervisory Committee Member of the Company (incumbent) ROHM Co. Ltd.

Partner of Miyake & Partners (incumbent)

Outside Director, Audit & Supervisory Committee Member of ROHM Co., Ltd. (incumbent)

Independent Director, Audit & Supervisory Committee Member

#### Takashi Okimoto

Number of Company shares owned: 9,200



Apr. 1973 Joined The Dai-Ichi Kangyo Bank,

Executive Officer of The Dai-Ichi Kangyo Bank, Limited

Executive Officer of Mizuho Corporate Bank, Ltd. Managing Executive Officer of

Mizuho Corporate Bank, Ltd. Deputy President of Mizuho Corporate Bank, Ltd.

> Retired from Deputy President of Mizuho Corporate Bank, Ltd.

> Advisor of Orient Corporation Representative Director, Chairman and Corporate Officer

of Orient Corporation Jun. 2008 Outside Director of Daiichi Sankvo

> Company, Limited Retired from Representative Director. Chairman and Corporate Officer

of Orient Corporation Audit & Supervisory Board Member of the Company Outside Director of Fujitsu Limited

Jun. 2012 Outside Director of Fuji Electric Co.. Ltd. President and Representative

Director, Chuo Real Estate Co., Ltd. Jun. 2013 Outside Audit & Supervisory Board Member of Shindengen Electric Manufacturing Co., Ltd.

Audit & Supervisory Board Member of Seiwa Sogo Tatemono Co., Ltd. Chairman and Representative Director, Chuo Real Estate Co., Ltd.

Retired from Chairman and Representative Director, Chuo Real Estate Co., Ltd.

Director, Audit & Supervisory Committee Member of the Company (incumbent)

## **Executive Officers**

#### Senior Managing Executive Officers

Yukimasa Miyashita Makoto Mizuguchi Kazuto Morisaki Hiroaki Matsubara Yoshihiro Oka Shoji Miyazaki Kazuaki Kawahara

Managing Executive Officers

Yasushi Okubo Akira Yamamoto Masamichi Takeuchi Hajime Nagara Kunio Uchiyamada Yutaka Yamaquchi Hiroki Iwamoto

Shoji Nakamura Hiroyuki Mori

Hideki Asada Shuji Kitayama

## **Executive Officers**

Seiji Hirata Ryosaku Kadowaki Yoshinori Kurioka Yuichiro Goto Kazuhiko Kimoto Masahiro Motoyuki Yoichi Kamiyauchi Koichi Sakamoto

# The Kobe Steel Group's **Sustainability Management**

















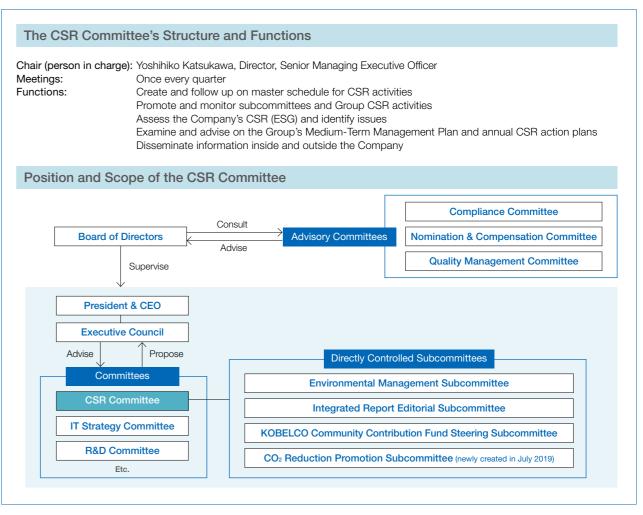
## **Promoting Sustainability Management**

For the Kobe Steel Group, sustainability management goes beyond compliance with external regulations, systems, and standards to also encompass the development of business that helps resolve social issues and ensure the sustainability of social capital that supports our business. Sustainability management is an initiative that is absolutely essential for the continuity and development of the Group.

The Group strives to provide technologies, products, and services that help reduce environmental impact, such as reducing the weight of vehicles and conserving energy, in addition to taking action to preserve the environment and other CSR activities. To further advance sustainability management, Kobe Steel revised its systems in 2019.

Under this new structure, the Company is moving forward on identifying materiality and creating a new road map for sustainability management in the next medium-term management plan.





## Quality

The Kobe Steel Group is undertaking initiatives to strengthen quality management and improve the quality management process in line with its foremost priority of advancing measures to prevent a recurrence of the quality misconduct.

While striving to instill the Quality Charter of the Six Pledges of KOBELCO Men and Women in all employees, from the standpoint of customers and business partners, the Company aims to deliver quality that is trusted by and satisfies the expectations of its customers and all other stakeholders.

#### Six Pledges of KOBELCO Men and Women

2. Contribution to the Society by **Providing Superior Products and Services** 

Guided by our "Quality Charter", we provide safe, sound, and innovative products and services to our customers, and thereby ensure customer satisfaction and contribute to the advancement of the society.

#### Quality Charter

The KOBELCO Group will comply with all laws, public standards, and customer specifications, and make continuous efforts to improve quality. with the goal of providing Trusted Quality in our products and services.

#### Rotation and Development of Quality Assurance Personnel / In-House Education Programs on Quality

#### Rotation and Development of **Quality Assurance Personnel**

#### **Rotation of Quality Assurance Personnel**

As the kick-off phase to our new personnel rotation practice across Kobe Steel's business divisions and Group companies, the Company assigned Quality Management staff to each business division effective May 2019.

#### **Development of Quality Assurance Personnel**

• We will streamline definitions of skills FFMA training at a business and evaluation of skill levels required for quality assurance staff throughout the Company, systematize quality-related education (including obtaining qualifications), and reflect them in the Group's fiscal 2019 training program.

As for quality risk management and preventive measures, we are engaging in a pilot training program on FMEA (Failure Mode and Effect Analysis)/FTA (Fault Tree Analysis)/DR (Design Review), focusing on the products made at our manufacturing sites.

#### In-House Education Programs on Quality

- Line managers (about 600 people) at Kobe Steel and domestic Group companies receive quality and compliance training. This training is also being developed for overseas Group companies.
- The "Quality" page was opened on Kobe Steel's intranet in September 2018, on which the progress report on the Project for Restoring Trust is shared periodically.
- DEducation on quality was offered via e-learning (November 2018) and circulation of relevant information via internal newsletters (starting in December 2018).
- A video message from the Director in charge of quality was created and shown to employees of Kobe Steel and domestic Group companies during Quality Month in November 2018.

#### **Quality Control Circle Activities**

As the basis for its on-site manufacturing capabilities, the Kobe Steel Group considers 5S\* activities to be of utmost importance, and is working to strengthen such activities for all manufacturing workplaces.

We also proactively promote on-site quality control circle activities. In particular, we hold a KOBELCO Quality Control

Circle Conference once per year, aiming to improve the level of activities through Groupwide, cross-functional information sharing and education.

\* 5S stands for seiri (sort, classify), seiton (set in order, straighten up), seiso (shine, clean), seiketsu (standardize cleanups), and shitsuke (sustain discipline). 5S activities stress the importance of improving the work environment on the manufacturing floor.



#### Audits by Quality Audit Section of Quality Management Department

Audit Item		Schedule	
i) Review of compliance status (on-site audit)	<ul> <li>Cross-reference inspection results of subject products are audited on-site against legal specifications and customer specifications.</li> <li>Disposal of reserved and nonconforming products are also audited.</li> </ul>	Started in May 2018, the Quality Management Department completed	
ii) Review of quality manage- ment systems from anti-fraud perspective	<ul> <li>Review laws and regulations related to quality, review the means of determining customer specifications, and confirm the administrative department in charge.</li> <li>Assess consistency between the instructions given to manufacturing lines and how they are actually carried out.</li> </ul>	audits at all 117 locations by the end of March 2019.	
iii) Assessment of compliance awareness	Assess the level of awareness of top management as well as factory workers through interviews in order to prevent misconducts.     Check whether training on quality compliance is properly provided.	The Quality Management Department is scheduled to conduct document	
iv) Review of implementation status of preventive measures	<ul> <li>Plants where misconducts were identified: Review status and effectiveness of the implementation of the preventive measures.</li> <li>Plants where there was no misconduct: Review the implementation status and effectiveness of measures that were recommended after quality audits.</li> </ul>	reviews at 124 locations and perform on-site audits at 85 locations in fiscal 2019.	

#### The Quality Caravan Team

- The Quality Caravan Team comprises Head Office departments such as the MONODZUKURI (Production System Innovation) Planning and Promoting Department, the IT Planning Department, and the Technical Development Group, and is tasked to provide consultation to business divisions on their issues.
- The team visited a total of 113 locations in fiscal 2018 and proposed solutions to various challenges and issues.
- The team will continue its activities in fiscal 2019, aiming to follow up on the existing inquiries and

identify new issues (e.g. improvement of process capability, etc.) through efforts to help each business location overcome various challenges.



#### Eliminating Improper Handling Opportunities, Unifying Shipping Standards / Understanding and Utilizing Process Capabilities

#### Eliminating Improper Handling Opportunities in Tests/Inspections and Unifying Shipping Standards

Automation of Test/Inspection Recording and Elimination of Manual Data Entry by Individuals

Approximately 760 automation projects were completed by the end of fiscal 2018. Plans call for automating about 1,500 testing and inspection systems (about 80%) by the end of fiscal 2019, and 1,800 systems by the end of fiscal 2020.

Total number of systems automated / to be automated (cumulative) Approx. 300 Approx. 760 Approx. 1,500 Approx. 1,800

We are continuing to conduct extra measures such as confirmation of work logs and four-eye check process for the tests and inspections not yet automated.

#### Adjustment of Shipping Standards

We are in the process of eliminating opportunities for any improper conduct caused by the existence of double standards (customer specifications and internal standards). ⇒ Under the new rules, customer specifications are used as the default standard for shipment approval in lieu of Kobe Steel's internal standards (internal standards are used for the objective of stabilizing quality management).

#### **Understanding and Utilizing Process Capabilities** (in materials businesses)

Application and Utilization of Process Capability Index

- Understanding the Process Capability Index: Understand how quality properties deviate from the required standards in manufacturing processes for each category (i.e., production lines, product types, tests/inspections, and customers).
- Utilizing the Process Capability Index: The degree of deviation found in the quality properties of manufacturing processes will be used for deciding whether to accept or reject orders.

#### Review of Approval Process / Promotion of Quality Risk Assessment

#### Reviewing the Approval Process for New Orders and Changes in the Manufacturing Process

#### Reevaluation of Approval Process for New Orders

While understanding the process capability for each order, we are in the process of adopting, restructuring, and implementing Design Review (hereinafter, "DR": examination of designs as defined by the JIS and ISO 9000). The implementation of DR for domestic locations is scheduled in fiscal 2019.

An Example of Design Review (DR)

#### Review of Approval Process for Changes in the Manufacturing Process

- We will prevent potential defects by assessing beforehand the effect on quality when the 4Ms (man, machine, material, method) are changed and conformity with customer specifications.
- Specifically, we will assess risks and clarify the authorization process when changing the 4Ms in the manufacturing process.

DR0 Assess whether Assess whether the Assess whether mass Review quality process Review standardizatio product may move to the prototype phase the product plan production of prototype produced prototypes Product Planning Mass Production

The relevant departments from sales, technology, manufacturing, quality assurance, and R&D participate in the DR meeting and assess whether a product may move onto the next phase of the DR process

#### Promoting Quality Risk Assessment in Capital Investments

Some plants and offices have begun considering qualityrelated capital investment by evaluating quality risks from quantitative factors such as impact, frequency, and detection rate. The Company will start utilizing the quality assessments in decisions for key capital investments going forward, beginning in fiscal 2019.

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## Compliance

To evolve into a company that genuinely respects compliance, and to enhance corporate value and sustain Group development, Kobe Steel carries out initiatives to improve compliance awareness among personnel, ensure the effective use of its internal reporting system, and promote risk management activities.

#### Compliance Awareness Survey

The Company periodically conducts a Compliance Awareness Survey to better understand employee awareness of compliance, and takes the necessary measures based on this survey. In fiscal 2019, the scope of the survey will be expanded to include domestic Group companies to promote initiatives across the entire Group.

Results of Fiscal 2018 Compliance Awareness Survey

Date implemented	July 2018
Purpose	Understand level of employee awareness for compliance
Scope / All employees who work at Kobe Steel locations (including employees on assignment, contract employees) / 89.4% response rate	
Questions	<ul> <li>Awareness of practice of compliance</li> <li>Awareness of internal reporting system</li> <li>Awareness of compliance training</li> </ul>
Issues identified in results	<ul> <li>High level of individual employee awareness for compliance, but relatively low ability to take action and get managers, subordinates, and coworkers to practice compliance.</li> <li>High level of recognition for the internal reporting system, but hesitancy among some employees to use it.</li> </ul>
Countermeasures	<ul><li>(1) When all employees were informed of the survey results, the President attached a message calling upon them to not hesitate on using the internal reporting system. At the same time, we shared information about the number and category of reports as well as the process to protect whistle-blowers in order to facilitate use of the system.</li><li>(2) We are examining revisions to training programs to nurture a workplace atmosphere where employees can point out problems to each other.</li></ul>

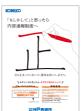
#### Initiatives to Effectively Use the Internal Reporting System

The Company encourages employees to use the internal reporting system by displaying posters in workplaces and through compliance training. Overseas, we have started operating internal reporting systems in each region. The number of reports received has increased as a result, enabling the early discovery and resolution of compliance issues, which should lead to improvement in corporate value.

Number of Reports Received via the Group's Internal Reporting System (Including overseas reports)

	FY2016	FY2017	FY2018
Number of reports received	18	62	83

Poster encouraging employees to use the internal reporting system



#### **Risk Management Activities**

Risk management activities comply with Risk Management Regulations to identify risks that obstruct the sustainable development of the Group and improvements in corporate value, and then taking countermeasures. In terms of the scope of Companywide risk management, Top Risks and Significant Risks are defined as risks that would require a Groupwide action and that have a major impact on the Group and its stakeholders. Under this framework, the President is the person ultimately responsible for risks across the Group, and the Senior Managing

Types and Definitions of Risk

Type of Risk

Of Significant Risks, risks that are likely to have a rather large impact if they materialize

Significant Risks

Risks that have a major impact on the Group and its stakeholders

Risks identified by departments and companies that are not Top Risks or Significant Risks

Executive Officer in charge of the Corporate Planning Department is the person responsible for risks across the Group. Meanwhile, individual risks are managed by the relevant Executive Officers in charge (the Risk Owners) as the persons responsible for Groupwide management activities, and the countermeasures to these risks are executed by the heads of businesses and the Directors in charge of the Head Office. This embodies the risk management system of the entire Group.

Framework

Board of Directors

risks across the Group (President & CEO)

Risk Owner (Executive Officers in charge)

Chief executor of risk management (Heads of businesses, Director in charge of Head Office)

Risk management executor

Internal departments, Group compani

Executive ultimately responsible for

Direction of risk management activities for individual
Top Risks and Significant
Risks for which they are responsible

Executive responsible

for risks across

the Group

(Senior Managing Executive Officer in

charge of Corporate

Planning Dept.)

## **Health and Safety**

We believe that health and safety are fundamental to management and take priority over all business activities. Under this principle, we take various steps to create a vital workplace where employees can safely pursue their careers with peace of mind.

As a result, Kobe Steel has been able to reduce the number of accidents and maintain a low frequency of occurrences. We recognize that protecting the lives and health of our employees is the utmost priority in fulfilling our corporate social responsibilities. To this end, the Company established the Health & Safety Department in April 2019 as an organization dedicated to occupational health and safety. In terms of personnel, facilities, and supervision, the Health & Safety Department makes every effort to improve the level of safety throughout the entire Kobe Steel Group.

## Code of Conduct for Safety Based on the Core Values of KOBELCO

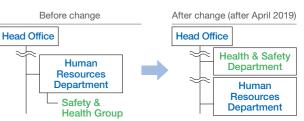
- I shall follow workplace rules, and be someone trusted by my coworkers and family.
- I shall care for my coworkers and show respect to them.
- I shall aim for higher levels of safety and well-being by improving workplace facilities and systems.

#### Main Initiatives of Health & Safety Department

- Conduct health and safety diagnoses, identify issues, and make improvements at each workplace
- Create Group standards for occupational health and safety
- Organize occupational health and safety education programs and assist with training at business locations
- Facilitate improvements to workplace issues

Key Objectives Accidents leading to death or serious injury (involving three or more people at the same time): Zero

Frequency of accidents resulting in absence from work: 0.10 or less



Frequency of Accidents Resulting in Absence from Work



## Initiatives to Help Employees Maintain and Improve Their Health

We aim to create a comfortable work environment where employees can maintain and improve their mental and physical well-being.

#### **Mental Healthcare Activities**

- All of our business locations have consultation offices staffed by industrial counselors.
- We also conduct stress checks organizationally in a bid to create more pleasant work environments.

#### Augmenting Health Checkups (Health insurance associations)

- ▶ Blood tests are given at certain ages (20, 25, and 30 years old) when undergoing periodic health checkups.
- Imployees aged 35 and older receive blood tests and endoscopic

checkups (camera in stomach), and infected persons are treated to eradicate helicobacter pylori bacteria.

Employees reaching 50 years of age receive full compensation for optional costs at health screening clinics (tumor markers, breast cancer checkups, brain disease checkups, etc.) (KOBELCO Medical Check 50). In addition, employees of at least 50 years of age and their dependents are partially compensated for medical costs (Spouse Health Check 50).

# Activities to Help Employees Maintain and Improve Their Health

> Health challenges: Employees who achieve their goals for

exercising, quitting tobacco, losing weight, etc., over a period of time receive presents.

Health classes: A qualified health and exercise instructor guides classes on stretching, relaxation, and office yoga.



Health class (pole stretching)

#### Selected for Health & Productivity Stock Selection and as Certified Health and Productivity Management Organization

For three years running since receiving its first award in fiscal 2015, Kobe Steel has been selected for the Health & Productivity Stock Selection by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange. Moreover, Kobe Steel was also recognized by the Ministry of Economy, Trade and Industry as a Certified Health and Productivity Management Organization in 2017.

#### TOPICS

## Received Best GP (Good Practice) Award from Japan Society for Occupational Health

Kakogawa Works undertook health management activities related to dental care that were recognized with the 10th Best GP Award from the Japan Society for Occupational Health (award theme: efforts in occupational dental health and health education by occupational health nurses).



Best GP Award by Japan Society for Occupational Health

## Coexisting with Society and Raising the Next Generation

At the Kobe Steel Group, we carry out various activities that contribute to local communities. We contribute to society through sports while our business locations participate through community interaction centered on supporting the next generation of athletes, regional development, and environmental activities.

#### Contributions to Society through Sports

A typical example of CSR at the Kobe Steel Group is its contributions to society through sports. We continue to take an independent approach to activities that make communities more vibrant through sports, such as assisting high school rugby clubs, which is a major force behind Japan's rugby teams, interacting with communities and society through the Kobe Steel Rugby Club, the Kobelco Steelers, and supporting other sports activities.

# KOBELCO Cup for Men's and Women's Rugby Clubs at High Schools

With the aim of increasing the popularity of rugby and raising the next generation of athletes, the Kobe Steel Group is an exclusive sponsor of the KOBELCO Cup (the all-Japan high school division men's rugby football tournament and all-Japan high school division women's rugby football tournament). In 2019, the KOBELCO Cup was held for the 15th time. The first one was held in 2005 in Yubari, Hokkaido, in connection with the 100th anniversary of the founding of Kobe Steel. Since 2008, it has been held every summer at Sugadaira Kogen near the city of Ueda in Nagano Prefecture

The KOBELCO Cup consists of the women's club, the U17 Club of handpicked players aged 17 and under from nine blocks across the nation (Hokkaido, Tohoku, Kanto, Hokushinetsu, Tokai, Kinki, Chugoku, Shikoku, and Kyushu), and the U18 Club of high school students who did not make it to the all-Japan high school division rugby football tournament as members of individual teams. Some current athletes and alumni from the Kobe Steel Rugby Club also provide instruction with the aim of boosting the skills and knowledge of these high school rugby players.



KOBELCO Cup 2019 group photo

#### Support for Men's and Women's High School Rugby

With the aim of increasing the popularity of rugby and supporting rugby players, and in addition to holding the KOBELCO Cup, a men's and women's tournament every summer for high school players, the Kobe Steel Group is an exclusive sponsor of the Hanazono National High School Rugby Tournament.

In fiscal 2018, the U18 Hanazono Women's 15-Player Tournament was held to strengthen and promote 15-player

women's rugby. Moreover, an East vs. West match was held with 44 female students selected from high schools across the country.

The U18 All-Star Team East Vs. West Match (known as "The Other Hanazono") was held before the finals for high school

rugby players who did not make it to Hanazono due to an insufficient number of players. The 50 players selected from eastern and western regions of Japan faced off in a heated match.



U18 Hanazono Women's 15-Play Tournament match

#### **Donating to the Japan Spinal Cord Foundation**

In September 2018, the Kobe Steel Rugby Club donated \$\foat310,762\$ to the Japan Spinal Cord Foundation (an NPO). These funds came from fundraising activities held at match venues during the 2017 season and a portion of the proceeds came from the KOBELCO Rugby Festival 2018, which was held in July 2018.

As spinal cord damage is an injury to which rugby players are particularly susceptible, the Kobe Steel Rugby Club has been donating to the foundation for 16 years and plans to continue carrying out fundraising activities for this cause.



#### **Holding Tag Rugby Workshops**

The Kobe Steel Rugby Club aims to introduce the joy of rugby by providing children with opportunities to become more familiar with the sport in local communities. As a part of these activities, the Kobe Steel Rugby Club has coordinated with the Kobe City

Board of Education since fiscal 2015 to conduct tag rugby workshops for elementary school children in Kobe. In fiscal 2018, we visited 28 elementary schools and one junior high school, and around 1,600 students enjoyed playing tag rugby.



#### Social Contributions in Japan and Overseas

The Kobe Steel Group's domestic business locations proactively clean up surrounding areas and roads as a way of giving back to the local community. At overseas business locations, we contribute to society as a member of that country and region, while respecting local cultures and customs. Below, we introduce some of the social contribution activities we undertook in Japan and overseas.

#### Nadahama Science Square (Hyogo Prefecture)

Classes on Nature Held to Familiarize Students

with Nature and Science

A community exchange facility operated by the Kobe Steel Group, Nadahama Science Square, holds biotope walks, nature craft classes, and other classes on nature for children



with a view to fostering an appreciation of the importance of the environment through contact with natural areas nearby. We have been conducting these classes for 15 years, since the opening of the Nadahama Science Square in 2004. In fiscal 2018, around 1,850 people participated in the classes.

Further, we conduct study tours of the Kobe Power Plant and Kobe Works. Also, we offer opportunities for members of local communities to learn about the environment.

# Kobelco Construction Machinery Co., Ltd. (Hiroshima Science Classes Held at

Elementary Schools

As children have been losing interest in science, personnel of the Hiroshima Factory have been

conducting science classes for elementary school children since 2010. In fiscal 2018, at nearby elementary schools and a transportation museum we conducted classes that used hydraulic excavators as a starting point for exploring balance and levers. The readily understandable explanations of the classes earned them a favorable reception from educators and museum staff. Therefore, we plan to offer these classes at our other factories.

#### **KOBELCO Community Contribution Fund**

On its 100th anniversary in fiscal 2006, Kobe Steel established the KOBELCO Community Contribution Fund, which conducts activities to support children.



#### Kobe Aluminum Automotive Products, LLC (USA)

Industrial Park Cleanup
We work with neighboring
companies to clean up our
industrial park.



#### Kobe CH Wire (Thailand) Co., Ltd. (Thailand)

Visits to Local Schools and Support Activities

Every year since fiscal 2009, employees from an in-house welfare committee have led the collection of donations inside and outside the company for use in support activities such as visiting and donating sup-



plies to local schools. In fiscal 2018, the 10th year of the initiative, 14 of our employees visited a preschool and elementary school in a Bangkok suburb.

#### Kobe Precision Technology Sdn. Bhd. (Malaysia)

Shoreline Cleanup and Plant Tours for College Students

As part of the CSR activities led by the ESH Committee, we cleaned up the shoreline and conducted plant tours for local college students.



## Thai-Kobe Welding Co., Ltd. (Thailand)

Participation in Mangrove Restoration Project

Since 2016, we have been participating in a mangrove restoration project. In addition, we sponsor a welding competition organized by the Ministry of Labour's Department of Skill Development.



## **Communication with Capital Markets**

As well as realizing the obvious importance of returning profits to shareholders, the Kobe Steel Group recognizes that communication with shareholders, investors, and all other stakeholders and further enhancement of management transparency are important tasks. Accordingly, we are enhancing the timeliness, appropriateness, and extent of our disclosure.

We view the General Meeting of Shareholders as an important opportunity to communicate with shareholders. For this reason, we mail convocation notices and post them on our website early and issue them in English. In addition, we avoid holding meetings during busy periods when many companies tend to schedule their general meetings of shareholders, and we enable the exercise of voting rights via the Internet.

To enhance communication with institutional investors, shareholders, and individual investors, Kobe Steel engages in the activities shown below. In addition to our previous activities, we are increasing and improving disclosure as well as opportunities for dialogue with capital markets as part of our efforts to restore trust.

#### Main Activities for Institutional Investors

- Financial results briefings (held four times a year)
- Theme-based briefings (held once or twice a year) Rolling of the Medium-Term Management Plan for Fiscal Years 2019-2020



Small meetings with the President (held about once a year)



Plant tours (held usually twice a year)

Itsukaichi Factory, Kobelco Construction Machinery	October 2018	
Kakogawa Works and Kobe Works	October 2018	
Moka Plant and Moka Power Plant	April 2019	





Moka Plant (left and right)

- Meetings with institutional investors (held about 120 times a year)
- Individual meetings with overseas investors, overseas IR activities (held several times a year)

#### Main Activities for Shareholders and Individual Investors

- Direction Briefings for individual investors (held about two times a year)
- Plant tours for shareholders (held about two times a year at

Moka Plant and Moka Power Plant	November 2018
Kobe Works and Kobe Power Plant	February 2019
Kobe Corporate Research Laboratories	March 2019





Kobe Power Plant (top) and Kobe Works (bottom)

- Dialogues with institutional investors (ESG managers and managers responsible for the exercise of voting rights) and proxy advisory firms (held about 20 times a year)
- Issuance of shareholder newsletter "To Our Shareholders"
- Disclosure of information on our website

Information for shareholders and investors https://www.kobelco.co.jp/english/ir/





## Environmental Management and Reduction in CO<sub>2</sub> Emissions

Through environmental management based on three corporate visions,

## Kobe Steel aims to be a leading environmental corporate group.

The Kobe Steel Group believes that it is its duty to pass on to future generations a healthy global environment in which all forms of life can thrive. To this end, we have established our Basic Environmental Management Policy as well as six initiatives for implementation. We strive to implement environmental management that takes the environment into consideration at every stage of our operations, and have set up a dedicated Environmental Management Subcommittee to explore and make recommendations on these six areas. With the participation of all Group employees, we are dedicated to becoming a leading environmental corporate group.

friendly manufacturing



with society

#### **Basic Environmental Management Policy**

As a leading environmental corporate group, the Kobe Steel Group will fulfill its social responsibilities as described in this policy, improve its environmental capabilities, and enhance its corporate value.



technologies, products, and services

Enhance corporate value further through Group environmental management (improving Group environmental capabilities)

#### Six Pledges of KOBELCO Men and Women and Six Initiatives for Environmental Management

Based on its Basic Environmental Management Policy, the Kobe Steel Group has identified the following initiatives for environmental management that align with the Six Pledges of KOBELCO Men and Women, which embody its standard of conduct.

	x Pledges of KOBELCO en and Women	Six Initiatives for Environmental Management			
1	Heightened Sense of Ethics and Professionalism	Comprehensive risk management procedures	In addition to thorough compliance with environmental laws and regulations, properly implement environmental management by identifying environmental risks in business activities and striving to mitigate these risks.		
2	Contribution to the Society by Providing Superior Products and Services	Contributing to the environment through technologies, products, and services	Contribute to the environment by providing environmentally friendly technologies, products, and services.		
3	Establishing a Comfortable but Challenging Work Environment	Promoting environmental initiatives with full employee participation	Initiatives are taken to foster a workplace culture where all employees participate in environmental education and study to ensure that they always conduct themselves by taking the environment into consideration, and eco-office activities are undertaken to create work environments that conserve energy and are conducive to work.		
4	Living in Harmony with Local Community	Coexisting and cooperating with society	Through forest preservation activities and the KOBELCO Forest Fairy Tale Prize, we engage in activities to contribute to the environment in each region and contribute to local communities by cleaning up areas near business locations.		
5	Contribution to a Sustainable Environment	Environmentally friendly manufacturing	We take a comprehensive approach to environmentally friendly manufacturing, including reducing environmental load, preventing global warming, and promoting resource recycling.		
6	Respect for Each Stakeholder	Disclosure of environmental information	Activities related to environmental management are accurately conveyed to stakeholders through the disclosure of environmental information and facilitation of communication with local communities and customers.		



Please visit our website for a list of organizations subject to reporting under our "Environmental Management and Reduction in CO2 Emissions." https://www.kobelco.co.jp/english/about\_kobelco/outline/integrated-reports/subordinate2019/index.htm

# Medium- to Long-Term Environmental Objectives and Initiatives

	Initi	atives for Implementation	Long-Term Policies	Medium-Term Targets			
VISION 1	En	Measures against global warming	Save energy, reduce CO <sub>2</sub> emissions, and combat global warming in every aspect of the Group's operations.	Continue implementing energy-saving initiatives, working toward achievement of each industry's Commitment to a Low Carbon Society.			
	vironmentally fri	Promoting resource recycling	Continue activities aimed at zero landfill waste.	<ul> <li>Continue reducing the amount of waste disposed and achieve the industry's newly established voluntary action plan targets.</li> <li>Carry out appropriate disposal in accordance with the Guidelines Related to Management of Iron and Steel Slag Products.</li> </ul>			
	Environmentally friendly manufacturing	Appropriate management of chemical substances	Reduce hazardous substances in accordance with the "Kobe Steel Group Policy on Controlling Hazardous Chemical Substances."	Properly manage and reduce or replace chemical substances, and properly comply with the PCB Special Measures Law and the Law Concerning the Discharge and Control of Fluorocarbons.			
	ring	Reducing environmental impact	Make continuous efforts toward reducing the impact on the environment through comprehensive voluntary controls.	Continue meticulous operational management and facility management in an effort to reduce environmental impact from air emissions, etc.			
	Comprehensive risk management procedures		Pursue systematic and deliberate efforts to reduce risks.	<ul> <li>Continue on-site environmental audits by the Head Office and expand audits to Group companies and affiliated companies in an effort to improve independent environmental management systems.</li> <li>Instill in overseas Group companies the same level of environmental management as in Japan and improve risk management through such activities as on-site environmental inspections.</li> </ul>			
	env	moting ironmental initiatives with employee participation	Constantly improve the environmental awareness of all Kobe Steel Group employees.	Continue initiatives such as stratified training, e-learning, and environmental training for Group companies, and encourage use of the KOBELCO Eco-Life Notebook (household eco-account book), in efforts to increase environmental awareness.			
VISION 2	Contributing to the environment through technologies, products, and services		Keep all product and technical development environmentally friendly, and create environmentally sustainable products and new businesses.	Contribute to the creation of a low-carbon society through the efforts of the entire Kobe Steel Group by working on issues in the environment and energy fields, such as weight reduction of transportation vehicles, the creation of a hydrogen-based society, and the diversifi- cation of power sources.			
VISION 3			Promote coexistence and cooperation with local communities in regard to the environment.	Promote the KOBELCO GREEN PROJECT, centered on the three key activities of the KOBELCO Forest Fairy Tale Prize, forest development, and environ- mental education outreach to children's centers, in an effort to cooperate and coexist in harmony with local communities.			
			Take active steps to disclose environmental information and improve communication with stakeholders.	Continue disclosing information in an effort to communicate with all stakeholders.			

The Kobe Steel Group is committed to environmentally friendly business practices. We established the Fiscal 2016–2020 Medium-Term Environmental Management Plan and are implementing activities in the six key areas of our Basic Environmental Management Policy.

	: Progres	sing as planned △: Some issues remaining X: Plan not	achieved
▶ In addition to initiatives for energy-saving investments to meet the Commitment to a Low Carbon Society objectives in each industry, we proceeded steadily with increased energy-saving efforts.	Evaluation	Initiatives for Fiscal 2019  ▶ Establish the CO₂ Reduction Promotion Subcommittee and the CO₂ Reduction Technology Study Working Group. Set goals, conduct scenario analysis, and undertake other initiatives.	<u>П</u> Р100
<ul> <li>Waste reduction plans established for each business proceeded smoothly, with positive prospects for meeting voluntary action plan objectives by fiscal 2020.</li> <li>Guidelines for the two production sites in the Iron &amp; Steel Business were adhered to and carried out appropriately.</li> </ul>	Evaluation	<ul> <li>Engage in waste treatment plans established for each business.</li> <li>Carry out appropriate disposal in accordance with the Guidelines Related to Management of Iron and Steel Slag Products.</li> </ul>	П Р106
Disposal of transformers and other high-concentration PCB waste proceeded according to plan. Some low-concentration PCB waste was disposed, and a survey was started to identify low-concentration PCB equipment currently in use. Regarding compliance with the Act on Rational Use and Proper Management of Fluorocarbons, we strove to thoroughly and appropriately manage alerts and on-site inspections for relevant business sites.	Evaluation	Carry out disposal of high-concentration PCB waste based on plans, conduct surveys to identify low-concentration PCB equipment currently in use, and formulate plans for its disposal. Carry out thorough on-site inspections and other measures regarding appropriate disposal of fluorocarbons.	Our web- site
<ul> <li>Continued to control air emissions and wastewater through their thorough management.</li> <li>Achieved voluntary targets every month (3t/km²/month) for dust fall at Kakogawa Works.</li> </ul>	Evaluation	Continue meticulous operation management and facility management, with efforts to reduce the environmental impact from air emissions, etc.	Д Р106
<ul> <li>Aimed to increase environmental management levels at production sites through use of environmental management systems and carried out environmental audits and other measures to confirm progress.</li> <li>Carried out on-site environmental surveys and other measures at Group companies in the Netherlands and South Korea to increase environmental management levels.</li> </ul>	Evaluation	<ul> <li>Increase environmental management levels through training of production site employees, implement environmental audits, and confirm progress.</li> <li>Carry out on-site environmental assessments for Group companies in Thailand, India, and Vietnam, and increase environmental management levels at each company.</li> </ul>	<u>П</u> Р104
<ul> <li>Increased employees' environmental awareness and knowledge through environmental conferences, stratified training, and e-learning.</li> <li>Promoted environmental awareness at employees' homes through the KOBELCO Eco-Life Notebook.</li> </ul>	Evaluation	Raise environmental awareness by continuing measures such as stratified training and environmental training for Group companies, as well as promoting use of the KOBELCO Eco-Life Notebook.	<u>П</u> Р104
<ul> <li>Helped reduce CO<sub>2</sub> emissions by 27.04 million tons by providing the MIDREX® Process, which uses raw materials with low CO<sub>2</sub> emissions, and by improving fuel economy with ultrahigh-strength steel and wire rods for suspension springs.</li> <li>Commenced sales of KOBELION oil injection screw compressors, which feature improved basic performance and 5% energy savings compared with previous models.</li> </ul>	Evaluation	Contribute to a low-carbon society through sales of technologies and services to promote the spread of hydrogen stations, increase sales of high-strength steel, and advance R&D in multi-materials to lighten the weight of transportation vehicles.	П Р103
<ul> <li>Collected submissions for sixth annual KOBELCO Forest Fairy Tale Prize, with backing from all municipalities in which our 12 domestic business locations are located, and received over 500 submissions.</li> <li>Environmental education outreach to children's centers was held in three locations, while forest development and activities to preserve countryside forests and agricultural land were conducted in three locations.</li> </ul>	Evaluation	▶ Promote the KOBELCO GREEN PROJECT, which comprises three major initiatives—participation in the KOBELCO Forest Fairy Tale Prize, forest development, and environmental education outreach to children's centers—and better coexist and cooperate with local communities.	П Р107
Disclosed environmental information via the Integrated Report, Company website, environmental monitors, and other sources. Introduced Group environmental technologies and products at exhibitions.	Evaluation	Continue disclosing information and enhance communication with all stakeholders.	Д Р107

## Initiatives to Reduce CO<sub>2</sub> Emissions

The Kobe Steel Group views initiatives to reduce CO<sub>2</sub> emissions as one of its most important management issues. Since signing the Paris Agreement in 2015, the Japanese government has been working on the Long-term Strategy under the Paris Agreement in 2019 amid the growing importance of contributing to a decarbonized society through corporate business activities.

Based on its Basic Environmental Management Policy, the Kobe Steel Group will continue to be mindful of the environment in its manufacturing activities, and help companies reduce CO<sub>2</sub> emissions through its technologies, products, and services.

#### Governance and Risk Management

Kobe Steel has a structure in place whereby important matters related to  $CO_2$  reduction that could have a major impact on management are deliberated and decided by the Executive Council and monitored by the Board of Directors. In fiscal 2019, the Company established the  $CO_2$  Reduction Promotion Subcommittee under the CSR Committee, which is an advisory body to the Executive Council, to examine methods for reducing  $CO_2$  emissions. The Company also created the  $CO_2$  Reduction Technology Study Working Group under the R&D Committee, which also advises the Executive Council, to examine technological methods for reducing  $CO_2$  emissions. This put into place a structure for facilitating Companywide activities to reduce  $CO_2$  emissions.

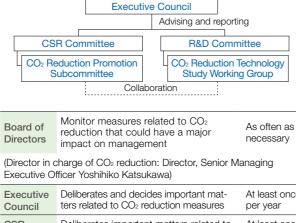
## Process for Identifying and Managing Risks from Climate Change

The Kobe Steel Group examines both risks and opportunities associated with climate change, based on the flowchart shown below, centered on the CO<sub>2</sub> Reduction Promotion Subcommittee.

The results of these examinations will be reported to and deliberated by the CSR Committee, and then determined by the Executive Council.







**Board of Directors** 

President & CEO

Executive Council	Deliberates and decides important matters related to CO <sub>2</sub> reduction measures	At least once per year
CSR Committee	Deliberates important matters related to CO <sub>2</sub> reduction measures	At least once per year
R&D Committee	Deliberates plans and strategies for developing new products and technologies for reducing CO <sub>2</sub> emissions	At least once per year

0



Design and execute action plans

#### Strategy

Over 90% of the Kobe Steel Group's CO<sub>2</sub> emissions\* come from the Iron & Steel Business, making the reduction of CO<sub>2</sub> emissions from the ironmaking process a key issue.

If new regulations on  $CO_2$  emissions are introduced in the medium to long term, these regulations could negatively impact the Kobe Steel Group's earnings by restricting its business activities, especially in steel.

A tightening of regulations entails risks but also presents opportunities to reduce CO<sub>2</sub> emissions through our business activities.

More specifically, the Kobe Steel Group's ironmaking plant technologies, including the MIDREX® Process, as well as its high-performance materials and industrial and construction machinery, which help conserve energy, contribute to the reduction of  $CO_2$  emissions when they are used. The Company refers to this as "contributing to reductions in  $CO_2$  emissions through technologies, products, and services" (see  $\square$  P103).

In the electric power business, Kobe Steel contributes to increasing the efficiency of thermal-fired power plants across the country by constructing high-efficiency gas- and coal-fired power plants using the best available technology (BAT) standards set by the government. Furthermore, Kobe Steel also intends to comply with the average power generation efficiency standards stipulated in the revised Act on the Rational Use of Energy, also known as the Energy Conservation Act (power generation efficiency standard to achieve national targets: at least 44.3% by fiscal 2030). The Company believes it can play a role in reliably supplying electric power and achieving the Japanese government's target for reducing greenhouse gas emissions by 26.0% by fiscal 2030 (versus the fiscal 2013 level).

\* CO<sub>2</sub> emissions in the electric power business are calculated based on the Ministry of the Environment's Manual for Calculating and Reporting Greenhouse Gas Emissions (Version 4.3.2) (June 2018), and do not include CO<sub>2</sub> emissions (about 6.2 million tons) related to electric power transmitted from its power plants.

#### R&D

To play a role in reducing  $CO_2$  emissions across society, the Kobe Steel Group engages in innovative research and development related to reducing  $CO_2$  emissions in production processes and contributing to reductions in  $CO_2$  emissions through its technologies, products, and services.

With regard to reducing CO<sub>2</sub> emissions from production processes, although Japan's steelmaking technologies are already at the most advanced levels in the world, Kobe Steel is participating with other steelmakers in the two developments outlined below that are being promoted by the New Energy and Industrial Technology Development Organization (NEDO) in a bid to further reduce CO<sub>2</sub> emissions in the blast furnace ironmaking process and to make these developments a commercial success.

In addition, the Company is advancing R&D in an aim to increase energy efficiency in the reduction and melting processes.

Regarding contributions to the reduction of CO<sub>2</sub> emissions through technologies, products, and services, Kobe Steel is developing microbinary generators that utilize industrial waste heat and geothermal heat and energy storage systems using compressed air, while improving hydrogen station compressors already on the market. As a member of the Global CCS Institute, Kobe Steel is keen to obtain new information on carbon capture utilization and storage (CCU/S), and will engage in the development and investigation of technologies related to the separation, capture, recycling, and fixation of CO<sub>2</sub> in commercial applications for the future.

Innovative Technology Development	Participating Companies	Technologies Being Developed
CO <sub>2</sub> Ultimate Reduction System for COOL EARTH 50 (COURSE 50)	Nippon Steel Corporation JFE Steel Corporation Kobe Steel, Ltd. Nippon Steel Engineering Co., Ltd. Nippon Steel Nisshin Co., Ltd.	<ul> <li>Hydrogen-reduction technology that reduces iron ore by increasing the hydrogen concentration in high-temperature coke oven gas (COG) emitted during coke production as a partial alternative to coke</li> <li>Technology for separating and capturing CO<sub>2</sub> from blast furnace gas (BFG) with underutilized waste heat within steelworks</li> </ul>
Development of Innovative Steelmaking Process (Ferrocoke)	JFE Steel Corporation Kobe Steel, Ltd. Nippon Steel Corporation	Energy-saving technology that can reduce the amount of coke fed into blast furnaces by dramatically increasing reduction efficiency within blast furnaces by utilizing the catalytic reaction of metallic iron contained in ferrocoke formed from the blend molding and carbonization of thermal coal and low-grade iron ore

#### Scenario Analysis

Kobe Steel analyzes scenarios within the context of its medium- and long-term strategies.

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#### **Product TOPICS**

#### New H<sub>2</sub>BOX-II Model Added to HHOG Line of Water Electrolysis High-Purity Hydrogen Oxygen Generators

Kobelco Eco-Solutions Co., Ltd. provides the HHOG line of water electrolysis high-purity hydrogen oxygen generators that can produce hydrogen using renewable energy. Its new model, the H<sub>2</sub>BOX-II, takes up 33% less floor space than its predecessors and is 15% more compact in

total volume, making it easier to incorporate this generator in cases and buildings.

This generator can supply hydrogen to fuel-cell vehicles using renewable energy. In this way, the Kobe Steel Group is contributing to a hydrogen-based society through continuous efforts in R&D activities.

# Commenced Sales of KOBELION Energy-Saving Oil Injection Screw Compressors

In 1963, Kobe Steel became the first company in Japan to produce and sell standard screw air compressors. Since then, the industry has been driven by the pursuit of screw technologies to conserve energy. The next-generation KOBELION features a screw component, the heart of the system, that was optimally engineered from scratch, an ultra-high-efficiency IPM (permanent magnet) motor, and proprietary energy-saving logic, for best-in-class specific energy performance\* that conserves up to 5% more energy than previous models.

\* Specific energy is an indicator that expresses the amount of electricity consumed to generate 1m³/min of compressed air, calculated as electricity consumed by the compressor divided by the volume of compressed air generated. The lower the number, the better the energy-saving performance.



#### Initiatives to Reduce CO<sub>2</sub> Emissions

#### **Indicators and Targets**

#### Indicators

The Kobe Steel Group uses specific management indicators to represent reduction in CO<sub>2</sub> emissions, comprising reductions in CO<sub>2</sub> emissions from its production processes Indicator A and contributions to reductions in CO2 emissions through its technologies, products, and services Indicator B

#### Indicator A Reduction in CO<sub>2</sub> Emissions from Production Processes

#### Targets

Kobe Steel contributes to the achievement of targets in the Commitment to a Low Carbon Society, which is being promoted by industry groups and to which the Group belongs, by promoting energy conservation and reductions in CO2 emissions from

production processes. The Kobe Steel Group is currently drawing up its own targets for reducing CO2 emissions over the medium to long term, and will disclose these targets as soon as they have been determined.

Industry Cycyn	Industry Targets for Reducing CO <sub>2</sub> Emissions from Production Processes in the Commitment to a Low Carbon Society						
Industry Group	Fiscal 2020 Target	Fiscal 2030 Target					
Japan Iron and Steel Federation	Eco process: Reduction*1 of over 3 million tons versus BAU*2	Eco process: Reduction of 9 million tons versus BAU					
Japan Aluminium Association	Reduction of 1.0 GJ/t per energy unit per unit of rolled volume versus BAU in fiscal 2005	Reduction of 1.2 GJ/t per energy unit per unit of rolled volume versus BAU in fiscal 2005 (best effort target)					
Japan Copper and Brass Association	Reduction of 4% per energy unit versus BAU with production activity volume of 380,000 tons	Reduction of 6% per energy unit versus BAU with production activity volume of 380,000 tons					
The Japan Society of Industrial Machinery Manufacturers	Average annual improvement of at least 1% per energy consumption unit (kL/¥100 million)	Reduction of 10% in CO <sub>2</sub> emissions versus fiscal 2013					

<sup>\*1</sup> While working to achieve reductions of 3 million t-CO2 based on one's own efforts to conserve energy, for waste plastic, the only amount counted as an actual reduction is the amount of increase in cargo volume versus fiscal 2005

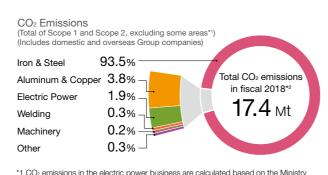
#### 2 Past Emissions of CO<sub>2</sub>

The Kobe Steel Group released 17.4 million tons of CO2 in fiscal 2018. Of this amount, 94% was emitted from the Iron & Steel Business, 4% from the Aluminum & Copper Business, and 2% from the electric power business.

Following the oil crisis, which spanned from the 1970s to the 1990s, Japan's steel industry moved to more effectively utilize energy by installing waste heat collection systems and conserving energy by switching to continuous processes and shortening processes. From the 1990s, the steel industry focused on upgrading waste heat collection systems and increasing the efficiency of equipment while taking steps to effectively use waste materials. In recent years, industry players have installed highly efficient gas turbine power plants.

As a result, Kobe Steel was able to reduce its CO<sub>2</sub> emissions by approximately 1.6 million tons compared with fiscal 2005, to 16.5 million tons as of fiscal 2018, thanks in part to the consolidation of upstream operations in the Iron & Steel Business.

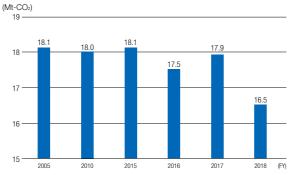
In addition to this initiative, the Kobe Steel Group is working to build and achieve a steelmaking industry with low CO2 emissions in the future, through collaboration between the Iron & Steel Business of the materials businesses and the Engineering Business of the machinery businesses.



of the Environment's Manual for Calculating and Reporting Greenhouse Gas Emissions (Version 4.3.2) (June 2018), and does not include CO<sub>2</sub> emissions (about 6.2 million tons) related to electric power transmitted from its power plants.

\*2 Emission coefficients for purchased electric power in fiscal 2017 were used, as the emission coefficients for fiscal 2018 have yet to be published.

## Change in CO<sub>2</sub> Emissions (Total of Scope 1 and Scope 2) (Kobe Steel, Ltd.)

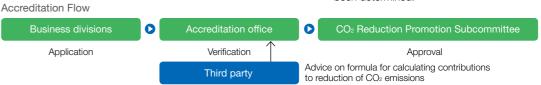


## Indicator B Contributions to reductions in CO2 emissions through its technologies, products, and services

The Kobe Steel Group contributes to the reduction of CO2 emissions in various areas of society through its innovative technologies, products, and services. In fiscal 2019, the Company created and began operating an internal certification system for the amount of contributions it makes to reducing CO2 emissions through its related technologies, products, and services.

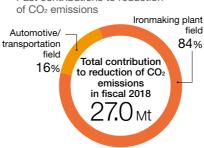
For the formulas used in accreditations, we receive advice from Kiyotaka Tahara, the laboratory leader of the Research Laboratory for IDEA at the Research Institute of Science for Safety and Sustainability at the National Institute of Advanced Industrial Science and Technology.

We are currently formulating medium- and long-term targets for the Kobe Steel Group's contributions to the reduction of CO2 emissions, and will disclose these targets as soon as they have been determined.



#### ② Contributing to Reduction of CO<sub>2</sub> Emissions

Past contributions to reduction of CO<sub>2</sub> emissions



The CO<sub>2</sub> Reduction Promotion Subcommittee estimates that the Kobe Steel Group's technologies. products, and services contributed to a reduction in CO<sub>2</sub> emissions totaling 27.04 million tons.

Technologies, Pro and Services	oducts,	Contribution to Reduction (10,000 tons / year)	Concept behind Reduction
Ironmaking plant field	MIDREX® Process	2,274	Direct reduction ironmaking process that uses natural gas, resulting in lower CO <sub>2</sub> emissions
Automotive/	Ultra-high-strength steel for automobiles	409	Improvements in fuel economy from the use of high-strength materials
transportation field	Wire rods for suspension springs	21	to reduce the weight of automobiles
Total		2,704	

In addition, our website provides a list of contributions made by the following technologies, products, and services to reducing CO<sub>2</sub> emissions.

Key Technologies, Products, and Services That Contribute to Reductions in CO₂ Emissions (contribution amounts to be calculated at a future date

Technologies, Product	s, and Services	Concept behind Reduction
Automotive/ transportation field	Wire rods for automotive suspension springs, aluminum sheets for automotive closure panels, aluminum forged suspension products, aluminum shapes for rolling stock, crankshafts for ships, titanium for aircraft components	Improve fuel economy by reducing the weight of automobiles / transportation equipment, replace materials starting with next generation of gasoline engine automobiles
Air conditioner field	Inner-grooved copper tubes for air conditioners	Reduction in electricity used thanks to higher efficiency
Industrial/ construction machinery field	Heat pumps, standard compressors, screw compressors, steam compressors, steam-driven compressors (SDC), compressors for LNG carriers, Eco-Centri, SteamStar, standard refrigerators, microbinary and binary generators, energy-saving construction machinery, microbinary generators for ships*	Energy conserved from higher efficiencies and use of underutilized energy
Hydrogen utilization field	HHOG line of water electrolysis high-purity hydrogen oxygen generators, fuel-cell separator materials, hydrogen station compressors	Reduction in volume of fossil resources used to produce hydrogen
Fuel production field	Produce city gas (methane gas) from digestion gas emitted from organic waste and sludge	Reduction in volume of fossil resources used by switching to waste for fuel
Electric power gen- eration/storage field	Waste power generation, woody biomass power generation, turn wastewater sludge into fuel for coal-fired power plants (see P21), compressed air energy storage system*	Reduction in volume of fossil resources used by utilizing carbon-neutral resources Use excess electricity
Other	Blast furnace cement, steel slag	Reduction in energy used to produce cement by utilizing recycled resources as inputs

<sup>\*2</sup> BAU: Business As Usual; emissions of greenhouse gases, or emissions per unit, assuming no additional measures are taken

#### Thorough Risk Management

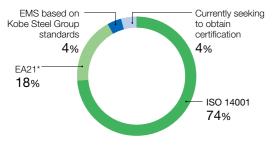
Kobe Steel identifies environmental risks in its business activities and takes steps to reduce these risks, and properly manages risks with daily operating procedures. Through environmental audits and other activities, the Company continues to ensure thorough compliance with laws and regulations, and reinforces environmental management.

# Strengthening Environmental Management (Promoting an environmental management system)

The Kobe Steel Group aims to reinforce environmental management through a PDCA cycle and the introduction of environmental management systems (EMS) based on ISO 14001. Kobe Steel has acquired certification at all 12 business locations and for the Engineering Business, in addition to 20 domestic Group company business locations and 12 overseas Group companies. The percentage of major production business sites that have certified environmental management systems is 92%.

Each business location periodically conducts drills for possible emergency situations. Issues are identified in follow-up meetings after drills and steps are taken to improve responsiveness.

Percentage of Kobe Steel Group Companies (Including overseas companies) with EMS Certification



\* EA21 (Eco Action 21): An environmental management system accredited by the Ministry of the Environment for which certification is easier to obtain than ISO 14001

#### Implementation of Environmental Audits

Paper audits based on checklists of risks are conducted every year to ascertain compliance with laws and regulations at Kobe Steel and all business locations of domestic Group companies.

Local environmental audits are periodically conducted at 12 business locations of Kobe Steel and 28 business locations of 20 domestic Group companies with high environmental risks. These strict local environmental audits check documents, such as measurement records and various reports, inspect work sites for waste storage and other conditions, and also entail interviews with managers.

Results of Measures in Fiscal 2018
Paper audits: 12 business locations of Kobe Steel,
413 business locations of 97 domestic Group companies
Local environmental audits: 6 business locations of
Kobe Steel, 9 domestic Group companies



Emergency response training for oil spills (Harima Plant)



On-site environmental audit (Hiroshima Factory of Kobelco Construction Machinery Co., Ltd.)

# Promoting Environmental Initiatives with Full Employee Participation

The Kobe Steel Group Environmental Conference
The Kobe Steel Group Environmental Conference is held every
year for the purpose of sharing environmental information and
promoting cross-development of environmental initiatives. In fiscal
2018, participants shared useful examples of ways to reduce
environmental burden at the business locations where they work
and reviewed changes to environmental laws and regulations.



Kobe Steel Group Environmental Conference

#### Environmental Training and Study

Since fiscal 2006, Kobe Steel has continually incorporated environmental training and study into its stratified (by office/facility organization) training program. Additionally, regular e-learning sessions are held via the Company intranet so as to raise environmental awareness among employees and guarantee a thorough knowledge of environmental laws and regulations.

In fiscal 2018, study sessions on environmental laws and regulations were held four times, and training sessions for practitioners of waste management were held six times.



Waste management training

# Environmental Management Systems at Overseas Locations

Our overseas locations have environmental management systems in place, just like our business locations and Group companies in Japan. Kobe Steel aims to strengthen environmental management further by sharing information among business divisions at Kobe Steel and with overseas locations.

In China and the U.S., where many Group production sites are located, the regional headquarters for each region, Kobelco (China) Holding Co., Ltd. (KCHD) and Kobe Steel USA Inc. (KSU), have environmental managers who are well-versed in local laws and regulations to assist other Group companies and take steps to mitigate risks.

#### **Environmental Audits**

Kobe Steel implements local environmental audits once every two to five years at overseas business locations. During these audits, the environmental manager at the regional headquarters, who is well-versed in local laws and regulations, or a local consultant are enlisted to check compliance with laws and regulations and recommend steps to reduce risks.

A total of 30 overseas Group companies have been subject to local environmental audits, comprising seven in the U.S., nine in China, 13 in Asia (excluding China), and one in Europe. In fiscal 2018, we conducted local audits at a total of eight companies in the Netherlands, South Korea, and the U.S. to ascertain the state of environmental management and look for any problems, and took the necessary corrective measures based on the results of these audits. Kobe Steel will continue to conduct these audits in order to strengthen its environmental management at overseas business sites.

## Environmental Training and Study at Overseas Locations

In China and the U.S., employees in charge of environmental management participate in environmental seminars and networking events in order to advance the skills of environmental managers at Group companies and share information on the latest developments in environment-related laws and regulations. Employees leaving for posts at overseas locations are given environmental training prior to their departure with the aim of enhancing their sensitivity to environmental risks, raising their awareness of local laws and regulations, and preventing environmental problems from manifesting.



Environment networking event (Chin



On-site environmental audit (South Korea)

# Understanding Environmental Risks in Investment Projects

The Kobe Steel Group has introduced an investment project risk checklist system for use in the planning stages of major investment projects, and relies on this system to check and evaluate risks, including environmental risks, before making an investment. In fiscal 2018, the Company began operating an environmental checklist system with more items to check for environmental risks, in a bid to eliminate environmental risks and thoroughly comply with environmental laws and regulations. For example, these checks include making sure chemical storage tanks are not resting directly on the ground in principle in order to prevent soil contamination, and that chemical storage tanks are not located near rainwater drainage channels in order to prevent leaks.

These systems apply to investments in both Japan and overseas. In fiscal 2018, approximately 60 investment projects were checked against the environmental checklist and appropriately managed.

#### Pursuing Environmentally Friendly Manufacturing

#### **Reducing Environmental Impact**

#### ■ Water Pollution Measures

The Kobe Steel Group strives to conserve water through measures such as improvements to manufacturing processes and wastewater recycling. Additionally, by purifying drainage from manufacturing processes using specialized treatment systems, we reduce polluting substances in public water resources.

At Kobe Steel's business locations, drainage from production processes undergoes coagulative precipitation, sand filtration, and other purification processes, and is reused on-site. As a result, approximately 96% of the water is recycled on premises.

#### Air Pollution Measures

We take measures to limit SOx (sulfur oxide) emissions during manufacturing processes, such as conserving energy to reduce fuel consumption, using low-sulfur fuels, and switching to city gas, while also implementing exhaust-related measures such as desulfurization. Likewise, in order to reduce NOx (nitrogen oxide) emissions, we have implemented low NOx combustion technology and energy-saving measures.

#### **Promoting Resource Recycling**

In order to make effective use of limited resources, the Kobe Steel Group implements measures to control waste. We add value to by-products created during manufacturing processes, develop and introduce new applications for materials, and actively pursue recycling.

In fiscal 2018, a total of 4.51 million tons of by-product materials were generated by the Kobe Steel Group, and approximately 0.16 million tons were disposed in landfill. The recycling ratio was 99.4% for the key by-products of slag, dust, and sludge, reflecting aggressive efforts to improve yields and reduce the use of secondary materials in the Iron & Steel Business, the main producer of by-products. These measures will also contribute to the achievement of new targets (350,000 tons as of fiscal 2020) based on voluntary action targets set by the steelmaking industry (numerical targets for final landfill disposal volume and recycling).

The recycling ratio for the Kobe Steel Group (Japan) was 95.6%. We will continue to reduce final landfill disposal volume by controlling the amount of waste produced, increasing recycling, and developing and adding value to new recycling technologies.

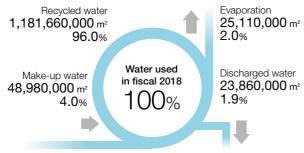
# Measures against Global Warming (Energy use in production processes)

In response to global warming, the Kobe Steel Group promotes rationalization and R&D to reduce energy consumption throughout its operations.

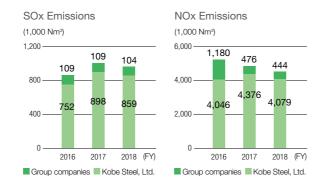
In fiscal 2018, we took measures to conserve energy by installing inverters, upgrading to high-efficiency equipment, and switching to LED lights at business sites.

The Kobe Steel Group used 202 PJ of energy in fiscal 2018 (equivalent to 5.2 million kl of crude oil). Of this total, approximately 92% was used in the Iron & Steel Business and approximately 5% in the Aluminum & Copper Business.

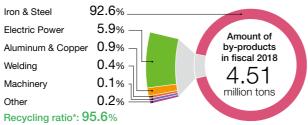
#### Water Recycling (Kobe Works)



\* As the percentages have been rounded off to their second decimal place, they do not add up to the total

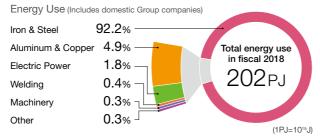


By-products (Includes domestic Group companies)



- \* Recycling ratio = amount recycled / total amount of by-products
- \* As the percentages have been rounded off to their second decimal place,

they do not add up to the total.



\* As the percentages have been rounded off to their second decimal place they do not add up to the total.

 $\Rightarrow$  For details on initiatives to reduce CO<sub>2</sub>, please see  $\bigcirc$  P102–103

#### Coexisting and Cooperating with Society

The Kobe Steel Group aims to coexist and cooperate with society, including from an environmental angle. With the aim of taking care of the environment by working to preserve and maintain CO<sub>2</sub>-absorbing forests, we implemented the KOBELCO GREEN PROJECT in fiscal 2013 as a Groupwide program for contributing to the environment. Our initiatives also include the KOBELCO Forest Fairy Tale Prize, designed to foster environmental awareness in children, forest development programs carried out by Group employees, and environmental education outreach to children's centers.

#### KOBELCO GREEN PROJECT

Forest Development Activities to Conserve and Promote Biodiversity

Since 2011, Kobe Steel employees have volunteered to take care of forests in two locations.

At the KOBELCO Forest in Miki City, we participate in the Corporate Forest Creation Project promoted by the *Hyogoken Ryokka Suishin Kyokai* (Hyogo Greening Promotion Association), and help with activities at the Hyogo Prefectural Mikiyama Forest Park to create more abundant forests.

At the ECOWAY Forest in Kobe's Nada Ward, we participate in the Ministry of Land, Infrastructure, Transport and Tourism's Rokko Mountain Range Green Belt Development Project to help prevent landslide disasters as well as preserve and nurture diversity in ecosystems and seeds, while promoting better urban environments and scenic views. These activities are carried out with guidance from the NPO Rokko Nature Learning with the aim of developing forests with a good balance between tall trees and undergrowth, and a diverse mix of tree ages and varieties. By trimming trees, clearing out undergrowth, and planting new trees,

we help preserve and promote biodiversity in forests.

We also help conserve socioecological production landscapes in the Zenihara district of Ibaraki City, Osaka.



Forest maintenance activities

■ Environmental Education Outreach to Children's Centers
Kobe Steel is a member of the Kobe Children's Eco Challenge 21
Club, sponsored by the city of Kobe. The club operates environmental education outreach programs to get children interested in the environment so that environmentally friendly activities will continue.

Since 2011, Kobe Steel has offered programs for learning about steel and electricity, the importance of the environment and electricity, and the conveniences provided by steel. In fiscal 2018, these learning programs were offered in three locations (lbukikita After-school Childcare Corner, Kodera After-school Childcare Corner, and Ozo Children's Center), and attended by 118 children.

The Sixth KOBELCO Forest Fairy Tale Prize

The Kobe Steel Group collects stories about the forest from students in elementary, junior high, and high schools across Japan with the aim of raising a generation of children who will carry with them an appreciation for all the many blessings that forests have to offer. The winning stories are transformed into picture books with illustrations by professional picture book authors. Around 2,000 sets of the finished picture books were donated to elementary schools, junior high schools, high schools, special needs schools, and public libraries in jurisdictions supported by local governments.

The sixth annual award, held in fiscal 2018, garnered a total of 518 submissions. *Daisugi no Shita no Den* ("The Snail under the Big Japanese Cedar"), written by Rin Mori (Elementary School Division), and *Ippon no Kashi no Ki* ("A Single Oak Tree"), written by Miria Higashita (Junior High and Senior High School Division), were selected as the grand prize winners.

#### Judge's Comments

The KOBELCO Forest Fairy Tale Prize is more than just a picture book contest. It is an opportunity to learn more about forests, the importance of their existence, and what we can do to help preserve them. As children's thoughts are turned into picture books, they play a major role in passing these thoughts onto other people as they journey from hand



Moe Nagata
Judging Panel
Chairwoman

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to hand. In this sense, students in the elementary school division did a wonderful job putting their books together from scratch, combining these elements together into a marvelous presentation. I think their writing strongly conveys the boundless feelings, creativity, curiosity, and excitement felt by the elementary school students.



Winning stories for the sixth award

Sixth award ceremony

#### Disclosure of Environmental Information

#### **Communicating with Local Communities**

In order to gain the understanding of local residents in the area of Kakogawa Works and Kobe Works regarding its environmental conservation efforts, Kobe Steel held information sessions, which were attended by a total of 111 people.

Toll-free (within Japan) phone numbers have also been set up at Kakogawa Works and Kobe Works to answer questions related to the environment. Going forward, we will continue to value the opinions of people in local communities.

## 10-Year Financial and Non-Financial Data

(Fiscal year)		2009	2010	2011	2012	2013	2014	2015	2016	2017	(Millions of yen)
For the fiscal	Net sales	¥1,671,021	¥1,858,574	¥1,864,691	¥1,685,529	¥1,824,698	¥1,886,894	¥1,822,805	¥1,695,864	¥1,881,158	¥1,971,869
year	Cost of sales	1,475,461	1,570,779	1,635,862	1,510,511	1,537,249	1,581,527	1,548,384	1,465,577	1,595,229	1,704,972
	Operating income	46,015	124,550	60,555	11,234	114,548	119,460	68,445	9,749	88,913	48,282
	Ordinary income (loss)	10,258	89,082	33,780	(18,146)	85,044	101,688	28,927	(19,103)	71,149	34,629
	Net income (loss) attributable to owners of the parent	6,304	52,939	(14,248)	(26,976)	70,191	86,549	(21,556)	(23,045)	63,188	35,940
	Cash flows from operating activities	172,893	177,795	39,486	45,401	194,294	153,078	97,933	141,716	190,832	67,136
	Cash flows from investing activities	(120,324)	(96,686)	(85,267)	(123,513)	(62,105)	(73,674)	(104,618)	(137,833)	(161,598)	(28,603)
	Cash flows from financing activities	(29,641)	(98,196)	(40,233)	127,644	(138,501)	(156,027)	93,883	16,545	(66,598)	(9,561)
	Capital expenditures	128,739	91,378	96,085	114,935	101,402	103,522	109,941	160,297	128,653	133,471
	Depreciation	118,835	114,819	118,037	106,725	82,936	89,881	94,812	96,281	102,032	102,589
	Research and development expenses	28,255	29,832	31,436	30,763	28,494	29,920	29,843	30,102	32,014	34,495
At fiscal	Total assets	2,249,345	2,231,532	2,159,512	2,226,996	2,288,636	2,300,241	2,261,134	2,310,435	2,352,114	2,384,973
year-end	Net assets	557,002	597,367	571,258	569,922	734,679	851,785	745,492	729,404	790,984	803,312
	Outside debt	837,770	769,839	746,471	907,656	748,138	650,991	776,073	789,632	726,013	724,221
	Outside debt including IPP project financing	925,119	845,483	810,172	959,179	787,246	677,447	789,493	796,927	738,865	760,364
Per-share	Net income (loss)	20.9	176.3	(47.4)	(89.8)	226.2	238.1	(59.3)	(63.5)	174.4	99.2
data*1	Net assets	1,720.87	1,828.13	1,718.40	1,706.34	1,841.10	2,137.00	1,903.80	1,860.36	2,049.95	2,041.29
	Cash dividends	15.00	30.00	10.00	-	40.00	40.00	20.00	_	30.00	20.00
Financial	Operating income ratio (%)	2.8	6.7	3.2	0.7	6.3	6.3	3.8	0.6	4.7	2.4
indicators	Ordinary income ratio (%)	0.6	4.8	1.8	(1.1)	4.7	5.4	1.6	(1.1)	3.8	1.8
	ROA (%)	0.5	4.0	1.5	(0.8)	3.8	4.4	1.3	(0.8)	3.1	1.5
	ROE (%)	1.3	9.9	(2.7)	(5.2)	11.9	12.0	(2.9)	(3.4)	8.9	4.8
	Equity ratio (%)	23.0	24.6	23.9	23.0	29.2	33.8	30.6	29.2	31.6	31.0
	Debt/equity ratio (times)	1.60	1.36	1.37	1.75	1.11	0.88	1.10	1.17	0.98	0.98
	Dividend payout ratio (%)	71.4	17.0			17.7	16.8	_	_	17.2	20.2
Number of sha	ares issued (in thousands)	3,115,061	3,115,061	3,115,061	3,115,061	3,643,642	3,643,642	3,643,642	364,364	364,364	364,364
Non-financial	Number of employees										
data	Consolidated	33,629	34,772	35,496	36,018	36,019	36,420	36,338	36,951	37,436	39,341
	Non-consolidated	10,129	9,933	10,370	10,398	10,586	10,609	10,833	11,034	11,191	11,401
	Men	9,356	9,393	9,725	9,728	9,891	9,881	10,090	10,241	10,304	10,422
	Women	773	540	645	670	695	728	743	793	887	979
	Non-Japanese	21	21	23	30	34	40	57	60	70	69
	Ratio of female managers (non-consolidated)*2 (%)	0.6	0.7	0.8	1.0	1.2	1.4	1.5	1.6	1.9	2.4
	Employment rate of people with disabilities (non-consolidated)*3 (%)	2.24 (1.8)	2.17 (1.8)	2.07 (1.8)	2.11 (1.8)	2.02 (1.8)	2.28 (2.0)	2.31 (2.0)	2.38 (2.0)	2.30 (2.0)	2.35 (2.2)
	Number of employees taking childcare leave (non-consolidated)*4										
	Men	1	3	3	1	0	1	5	7	8	13
	Women	40	41	40	40	45	48	38	54	40	40
	Ratio of employees returning from childcare leave (non-consolidated) (%)	94.1	100.0	100.0	100.0	89.5	100.0	94.7	96.0	96.7	98.2
	Number of new graduates employed (non-consolidated)										
	Men	396	106	278	374	336	294	362	344	421	350
	Women	20	3	19	24	19	14	26	50	64	50
	Turnover of employees within 3 years (non-consolidated)*5 (%)	5.0	5.5	5.7	5.8	9.0	5.2	12.1	12.8	6.6	2.0
	Use of annual paid leave (non-consolidated) (days per year/person)	7.6	8.6	8.9	9.1	8.4	9.1	11.8	14.9	15.5	16.3
	Overtime (non-consolidated) (hours per month/person)	14.3	19.3	20.0	19.6	20.2	22.9	22.7	16.5	18.4	18.4

<sup>\*1</sup> The Company carried out a 1-for-10 reverse stock split of its shares on October 1, 2016. Per-share data has been recalculated as if the reverse stock split had been carried out at the beginning of fiscal 2009.

\*2 At Kobe Steel, managers or above are considered to be managerial staff.

\*3 Figures in parentheses are the statutory employment rate.

\*4 The Company's childcare leave has a limit of three years, and the number of people includes those who have remained on leave from the previous year.

\*5 Of the employees who joined the Company during these fiscal years through the regular hiring process, the percentage of those who retired with less than three years of continuous service.

## Global Locations of the Kobe Steel Group

## The Kobe Steel Group's Expanding World Presence



#### **Europe and the Middle East**

Kobelco Welding of Europe B.V. - Netherlands

#### Machinery

Quintus Technologies AB - Sweden Kobelco Europe GmbH - Germany Kobelco Machinery Middle East FZE. - UAE

Midrex UK Ltd. - UK

Kobelco Construction Machinery Europe B.V. - Netherlands Kobelco Construction Machinery Middle East & Africa FZCO. - UAE

#### Headquarters

Kobelco Europe GmbH - Germany

#### Asia and Oceania

#### Iron & Steel

Kobelco Angang Auto Steel Co., Ltd. - Liaoning, China Jiangyin Sugita Fasten Spring Wire Co., Ltd. - Jiangsu, China Shinko Wire (Guangzhou) Sales Co., Ltd. - Guangdong, China Kobelco Spring Wire (Foshan) Co., Ltd. - Guangdong, China Kobe Wire Products (Foshan) Co., Ltd. - Guangdong, China Kobe Special Steel Wire Products (Pinghu) Co., Ltd. - Zhejiang, China Tesac Shinko Wirerope Consulting (Shanghai) Co., Ltd. - Shanghai, China Microfine Trading (Shanghai) Co., Ltd. - Shanghai, China Kobe Steel Asia Pte. Ltd. - Singapore Kobe CH Wire (Thailand) Co., Ltd. - Thailand Kobelco Millcon Steel Co., Ltd. - Thailand Mahajak Kyodo Co., Ltd. - Thailand

Kobe Welding of Shanghai Co., Ltd. - Shanghai, China Kobe Welding of Qingdao Co., Ltd. - Shandong, China Kobe Welding of Tangshan Co., Ltd. - Hebei, China Kobelco Welding Marketing of Korea Co., Ltd. - Republic of Korea Kobe Welding of Korea Co., Ltd. - Republic of Korea Kobelco Welding Asia Pacific Pte. Ltd. - Singapore Kobe MIG Wire (Thailand) Co., Ltd. - Thailand Thai-Kobe Welding Co., Ltd. - Thailand Kobe Welding (Malaysia) Sdn. Bhd. - Malaysia Kobelco Welding India Pvt. Ltd. - India

India

Kobelco Automotive Aluminum Rolled Products (China) Co., Ltd. - Tianjin, China Kobe Aluminum Automotive Products (China) Co., Ltd. - Jiangsu, China Suzhou Kobe Copper Technology Co., Ltd. - Jiangsu, China Ulsan Aluminum, Ltd. - Republic of Korea Singapore Kobe Pte. Ltd. - Singapore Kobe Electronics Material (Thailand) Co., Ltd. - Thailand Kobelco & Materials Copper Tube (Thailand) Co., Ltd. - Thailand Kobelco & Materials Copper Tube (M) Sdn. Bhd. - Malaysia Kobe Precision Technology Sdn. Bhd. - Malaysia

Thailand

Singapore

Malaysia

Vietnam

Indonesia

Republic

Philippines

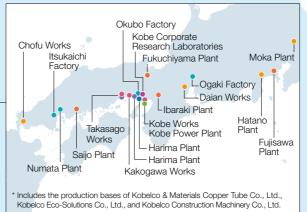
of Korea

Japan

Yiyang Yishen Rubber Machinery Co., Ltd. - Hunan, China Kobelco Compressors Manufacturing (Shanghai) Corporation - Shanghai, China Kobelco Machinery System Engineering (Qingdao) Co., Ltd. - Shandong, China Shinwa Wood Works (Wuxi) Co., Ltd. - Jiangsu, China Wuxi Compressor Co., Ltd. - Jiangsu, China Kobelco Advanced Lube-system Asia Co., Ltd. - Republic of Korea Kobelco Machinery Asia Pte. Ltd. - Singapore Kobelco Compressors (Thailand) Ltd. - Thailand Kobelco Machinery Philippines Inc. - Philippines Kobelco Compressors (Vietnam) Ltd. - Vietnam Kobelco Compressors (Malaysia) Ltd. - Malaysia Kobelco Compressors India Pvt. Ltd. - India Kobelco Industrial Machinery India Pvt. Ltd. - India

Midrex Metallurgy Technology Services (Shanghai) Ltd. - Shanghai, China Kobelco Eco-Solutions Vietnam Co., Ltd. - Vietnam Midrex Technologies India Pvt, Ltd. - India

## Main Domestic Locations\*



Hangzhou Kobelco Construction Machinery Co., Ltd. - Zhejiang, China Kobelco Construction Machinery (China) Co., Ltd. - Sichuan, China Chengdu Kobelco Construction Machinery Financial Leasing Ltd. - Sichuan, China PT. Dava Kobelco Construction Machinery Indonesia - Indonesia Kobelco International (S) Co., Pte. Ltd. - Singapore Ricon Pte. Ltd. - Singapore

Kobelco Construction Machinery Southeast Asia Co., Ltd. - Thailand Kobelco Construction Machinery Vietnam Co., Ltd. - Vietnam Kobelco Construction Machinery Malaysia Sdn. Bhd. - Malaysia Kobelco Construction Equipment India Pvt. Ltd. - India Kobelco Construction Machinery Australia Pty. Ltd. - Australia

Kobelco (China) Holding Co., Ltd. - Shanghai, China Kobelco South East Asia Ltd. - Thailand

Shanghai Shinsho Trading Co., Ltd. - Shanghai, China Kobelco Logistics (Shanghai) Ltd. - Shanghai, China Kobelco Financial Consulting (Shanghai) Co., Ltd. - Shanghai, China Kobelco Trading (Shanghai) Co., Ltd. - Shanghai, China Shinsho Osaka Seiko (Nangtong) Corporation - Jiangsu, China Kobelco Precision Parts (Suzhou) Co., Ltd. - Jiangsu, China Suzhou Shinko-Shoii Material Co., Ltd. - Jiangsu, China Beijing Oriental Shentong Expert Training Co., Ltd. - Beijing, China Thai Escorp Ltd. - Thailand



For details about the Kobe Steel Group, please visit our websites below.

#### Overseas and Domestic Locations https://www.kobelco.co.jp/english/ about\_kobelco/kobesteel/locations/index.htr





Brazil



#### North and South America

#### Iron & Steel

Grand Blanc Processing, LLC - Michigan, USA PRO-TEC Coating Company, LLC - Ohio, USA Kobelco CH Wire Mexicana, S.A. de C.V. - Guanajuato, Mexico

Kobelco Welding of America Inc. - Texas, USA

Kobe Aluminum Automotive Products, LLC - Kentucky, USA Kobelco Aluminum Products & Extrusions Inc. - Kentucky, USA

Kobelco Advanced Coating (America), Inc. - Illinois, USA Kobelco Compressors America, Inc. - California, USA Kobelco Compressors Manufacturing Indiana, Inc. - Indiana, USA Kobelco Stewart Bolling, Inc. - Ohio, USA Kobelco Machinery do Brasil Servicos Empresariais Ltda. - Brazil

Midrex Technologies, Inc. - North Carolina, USA

Kobelco Construction Machinery U.S.A. Inc. - Texas, South Carolina, USA

#### Headquarters

Kobe Steel USA Inc. - Michigan, USA

#### Other Businesses

Kobe Steel International (USA) Inc. - New York, USA Kobe Steel USA Holdings Inc. - Delaware USA Shinsho American Corporation - Michigan, USA

## Corporate Data (As of March 31, 2019)

#### **Corporate Profile**

Name:

Kobe Steel, Ltd.

(Japanese Name: Kabushiki Gaisha

Kobe Seikosho)

Group Brand: **KOBELCO** 

Founded: September 1, 1905

Incorporated: June 28, 1911

Capital: ¥250.9 billion

Employees: 39,341 (consolidated)

11,401 (non-consolidated)

#### Major Shareholders (10 largest shareholders)

Name of Shareholder	Number of Shares Held (Thousands of shares)	Shareholding Ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	18,079	4.97
Japan Trustee Services Bank, Ltd. (Trust Account)	13,334	3.66
Nippon Steel & Sumitomo Metal Corporation	10,735	2.95
Nippon Life Insurance Company	10,119	2.78
Japan Trustee Services Bank, Ltd. (Trust Account 5)	7,100	1.95
Mizuho Bank, Ltd.	6,467	1.78
Mitsubishi UFJ Trust and Banking Corporation	5,233	1.44
J.P. MORGAN BANK LUXEMBOURG S.A. 1300000	4,980	1.37
STATE STREET BANK WEST CLIENT - TREATY 505234	4,847	1.33
JP MORGAN CHASE BANK 385151	4,613	1.27
*1 Koha Stool holds 238 thousand of its own shares in treasury stock. Treasur	in ctock is evaluate	d in the calculation

<sup>\*1</sup> Kobe Steel holds 238 thousand of its own shares in treasury stock. Treasury stock is excluded in the calculation of the major shareholders' shareholding ratio in the Company.

#### **Stock Information**

Authorized: 600,000,000 shares

Issued: 364,364,210 shares

Number of Shareholders: 185,008

Listing: Tokyo Stock Exchange, First Section

(Ticker Code: 5406)

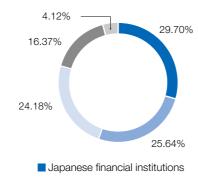
Nagoya Stock Exchange, First Section

(Ticker Code: 54060)

Transfer Agent & Office: Mitsubishi UFJ Trust and Banking Corporation

## Breakdown of Shareholders

by Investor Type



Japanese individuals and others

Foreign investors

■ Other Japanese corporations

Securities companies

#### Trends in Stock Price and Volume



<sup>\*1</sup> Kobe Steel's share price and TOPIX are indexed with closing prices in March 2014 equal to 100.

#### Head Offices / Branch Offices / Sales Offices

Kobe Head Office	2-4, Wakinohama-Kaigandori 2-chome, Chuo-ku, Kobe, Hyogo 651-8585, Japan Tel: +81-78-261-5111 Fax: +81-78-261-4123
Tokyo Head Office	ON Building, 9-12, Kita-Shinagawa 5-chome, Shinagawa-ku, Tokyo 141-8688, Japan Tel: +81-3-5739-6000 Fax: +81-3-5739-6903
Osaka Branch Office	Midosuji Mitsui Building, 1-3, Bingomachi 4-chome, Chuo-ku, Osaka, Osaka 541-8536, Japan Tel: +81-6-6206-6111 Fax: +81-6-6206-6101
Nagoya Branch Office	Nagoya Prime Central Tower, 27-8, Meieki 2-chome, Nishi-ku, Nagoya, Aichi 451-0045, Japan Tel: +81-52-584-6111 Fax: +81-52-584-6105
Hokkaido Sales Office	Nippon Seimei Kitamonkan Building, 1-3, Kita-Shijo Nishi 5-chome, Chuo-ku, Sapporo, Hokkaido 060-0004, Japan Tel: +81-11-261-9331 Fax: +81-11-251-2533
Tohoku Sales Office	Sendai NS Building, 2-25, Ichibancho 1-chome, Aoba-ku, Sendai, Miyagi 980-0811, Japan Tel: +81-22-261-8811 Fax: +81-22-261-0762
Niigata Sales Office	Nippon Seimei Niigata Building, 4-10, Higashiodori 2-chome, Chuo-ku, Niigata, Niigata 950-0087, Japan Tel: +81-25-245-8681 Fax: +81-25-243-1645
Hokuriku Sales Office	Urban Place, 18-7, Ushijimacho, Toyama, Toyama 930-0858, Japan Tel: +81-76-441-4226 Fax: +81-76-442-4088
Shikoku Sales Office	Takamatsu Kogin Building, 6-8, Bancho 1-chome, Takamatsu, Kagawa 760-0017, Japan Tel: +81-87-823-7222 Fax: +81-87-823-7333
Chugoku Sales Office	GRANODE Hiroshima, 5-7 Futabanosato 3-chome, Higashi-ku, Hiroshima, Hiroshima, 732-0057, Japan Tel: +81-82-258-5301 Fax: +81-82-258-5309
Kyushu Sales Office	Shinkansen Hakata Building, 1-1, Hakataeki Chuogai, Hakata-ku, Fukuoka, Fukuoka 812-0012, Japan Tel: +81-92-431-2211 Fax: +81-92-432-4002
Okinawa Sales Office	Naha Shintoshin Media Building-West, 3-31, Omoromachi 1-chome, Naha, Okinawa 900-0006, Japan Tel: +81-98-866-4923 Fax: +81-98-869-6185



Please refer to the website below for an introduction to Kobe Steel, Ltd.'s business locations in Japan.

https://www.kobelco.co.jp/english/ about\_kobelco/kobesteel/locations/ domestic/index.html



#### Our Website

Please see the Company's website for supplementary materials for Integrated Report 2019 (data on environmental management, CO<sub>2</sub> reductions, etc.) and more detailed information on sustainability and other matters.



**Investor Relations** 

https://www.kobelco.co.jp/english/ir/

Sustainability Management

https://www.kobelco.co.jp/english/about\_kobelco/csr/

Supplementary Material for Integrated Report 2019

https://www.kobelco.co.jp/english/about\_kobelco/outline/integrated-reports/subordinate2019/index.html



? Inquiries

Corporate Communications Department, Kobe Steel, Ltd.

<sup>\*2</sup> On April 1, 2019, Nippon Steel & Sumitomo Metal Corporation changed its registered trade name to Nippon Steel Corporation.

<sup>\*2</sup> The Company carried out a 1-for-10 reverse stock split of its shares on October 1, 2016. Stock price and volume have been recalculated based on the assumption that the reverse stock split was carried out at the beginning of fiscal 2014.