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For People, Society and the Earth

**Mitsubishi Materials Corporation
Integrated Report 2018**
2017.4 ▶ 2018.3

Mitsubishi Materials Corporation Integrated Report 2018



Quality Issues Occurred in Our Group

As we announced in November 2017 and February 2018, it was discovered that certain products manufactured and sold by five MMC subsidiaries in the past had been shipped in conditions that deviated from customer standards or internal company specifications due to misconduct, including the rewriting of inspection records data.

An issue related to quality control methods in copper slag aggregate manufacture at our Naoshima Smelter & Refinery was also occurred, leading to revocation of JIS certification of the product in June of 2018.

We implemented measures to prevent recurrences at the five subsidiaries and Naoshima Smelter & Refinery.

We also conducted a thorough analysis of the root causes and backgrounds of these issues, and derived the following themes for the entire Group.

1. Main causes of the shipment of non-conforming products

- ◆ Inadequate framework for exerting influence on product development and order receiving processes at order receiving stage
- ◆ Attitude excessively prioritizing “order receiving” and “delivery date”
- ◆ Order received and mass production that the specifications exceeding manufacturing capability
- ◆ Insufficient framework of quality assurance system
- ◆ Pressure on quality assurance departments from other departments
- ◆ Low awareness of compliance with specifications
- ◆ Arrogance in thinking that quality control is being achieved
- ◆ Low sensitivity to risk in relation to quality issues
- ◆ Insufficient business resources (insufficient inspectors, inspection equipment, etc.)
- ◆ Audit procedures that has become a mere facade

2. Recognition of Group Governance Issues

1. Communication
 - Harmful effects of the vertically-segmented organizations
 - Insufficient control over subsidiaries
 - Insufficient sharing and communication of information regarding governance-related matters
2. Compliance Framework and Awareness
 - Compliance awareness is insufficient at each level; necessary knowledge has not been acquired
 - Awareness of our responsibilities as an organization and business is shallow
 - Insufficient capacity to discover misconducts, take initiatives to resolve issues, and make timely reports
3. Resource Allocation
 - Insufficient process capabilities that are adequate for received orders or insufficient inspection and quality assurance framework
 - Unsuitable resource allocation due to priority on earnings, postponement of necessary capital investment, etc.

Based on this awareness of the issues concerned, we formulated “Restructuring Measures of the Governance Framework for Quality Control in the MMC Group” and “MMC Group Governance Framework Enhancement Measures” and initiated their implementation.

We intend to proceed with these measures with a stronger sense of crisis at an accelerated speed to prevent recurrence of the problems and restore trust in our Group.
(See pages 34-37 for details of the measures.)

Greeting

We would like to express our deep and sincere apologies for causing our customers, shareholders and other stakeholders enormous trouble and concern as a result of a series of quality issues that arose in the Mitsubishi Materials Group.

Regarding these issues, we provided explanations to our customers and have been placing the first priority on confirming product safety with our customers' cooperation. Likewise, we will promptly and securely take steps to prevent any recurrence of the quality issues and to strengthen our group governance structure. In order to put our stakeholders' minds at ease and earn their trust, as president I will stand at the forefront to ensure that all officers and employees of the Mitsubishi Materials Group join forces, reforming our corporate culture and raising the awareness of employees.

Working on responding appropriately to these issues and restoring the trust of society in the Mitsubishi Materials Group in the future is our most important management issue in achieving our sustainable growth. To realize the quality policy of the Mitsubishi Materials Group of “manufacturing and providing the first class quality products that meet customers' requirements and that guarantee their satisfaction,” each of us in the Mitsubishi Materials Group has a strong commitment to steadily implement our initiatives. Never constrained solely by our own corporate logics and customs, we will strive to always take customers' point of view and develop initiatives by uniting the entire Mitsubishi Materials Group in the aim of providing quality products and services that satisfy our customers.

Concerning the Issuance of This Integrated Report

Mitsubishi Materials Corporation will begin issuing an integrated report in 2018. We consider it important to show the sustainable growth potential of our businesses by disclosing our comprehensive Group strategy in response to today's accelerating trend toward assessing corporations from a medium- to long-term perspective and stakeholders' increasing emphasis on matters involving the corporate vision and contributions to the society.

The process of preparing this integrated report has also revealed certain insufficiencies and cast light on areas that require improvement to facilitate further advancement. We are convinced that overcoming these issues will enhance the Group's competitive strength and our corporate value.

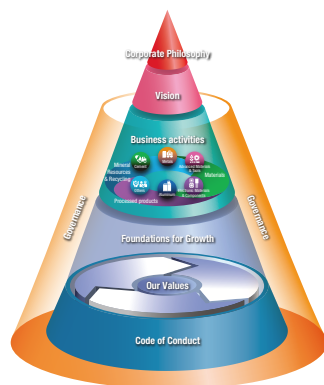
Mitsubishi Materials Corporation
President
Naoki Ono



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Editorial Policy

We are issuing this report for the first time to help our diverse stakeholders, including customers, shareholders, and investors understand our financial and non-financial business direction. Taking advantage of the Group's strengths to meet various social requirements, we will create new values to convey our efforts for sustainable growth. This report is intended as a tool for communicating such in an easy-to-understand format.

In editing the report, we have referred to the "International Integrated Reporting Framework" and the Global Reporting Initiatives (GRI) Standard as recommended by the International Integrated Reporting Council (IIRC). The description of performance is based on information current as of May 10, 2018.

Boundary

Including group companies, with Mitsubishi Materials Corporation playing a central role. Please refer to CSR data book for coverage area of non-financial performance data.

Period

Fiscal 2018 (1st April, 2017 - 31st March, 2018)
*This report may also include information from April 2018 onwards, in an effort to provide the most up-to-date information.

Date of Publication: August 2018

Caution Regarding Forecasts and Forward-Looking Statements

The final decision, including any investment decisions, rests with individuals. The Company assumes no responsibility or liability whatsoever for any losses or damages resulting from investments or other actions based on information in this report.

Adoption of the stocks that make up stock indexes for ESG investment (As of August 2018)



Our stocks have been selected as part of the stocks making up the DJSI Asia Pacific, the Asia-Pacific version of the Dow Jones Sustainability Indices, or DJSI.



We are included in the stocks comprising the MSCI Japan ESG Select Leaders Index and MSCI Japan Empowering Women Index (WIN), which are both administered by MSCI.

Made up of companies demonstrating outstanding initiatives with respect to ESG and gender diversity, respectively, we have been selected as part of the operation index for ESG investment operated by the Government Pension Investment Fund, Japan (GPIF).

*MSCI: Morgan Stanley Capital International Inc.



Overview of Corporate Activities under the Corporate Philosophy System

The Mitsubishi Materials Group Philosophy is
“For People, Society and the Earth.”

We pursue business operations by applying our corporate resources and contributing to the sustainable development of society to realize the Corporate Philosophy.

Vision: The image of what we want to be

Governance: Long-term activities implemented to increase our corporate value through efficient operation that improves our competitive power and profitability and prevents inappropriate and dishonest practices

Business activities: Our main operations for sustainable corporate growth

Foundations for growth: Initiatives and corporate resources responding to continually changing times and supporting our business activities

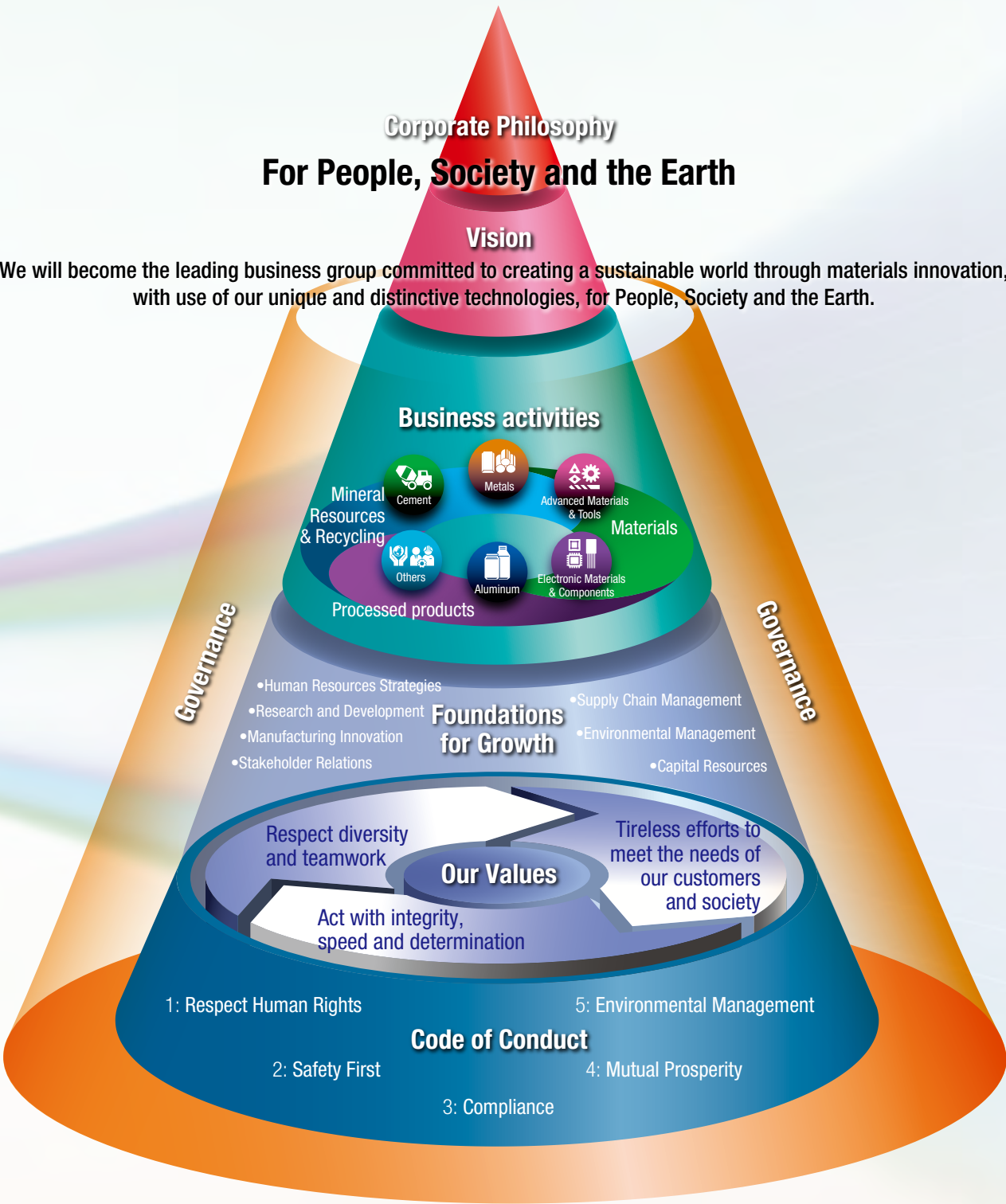
Our Values: Values we should cherish as daily guidelines toward realizing our Corporate Philosophy and Vision

Code of Conduct: Rules we abide by



Corporate Philosophy
For People, Society and the Earth

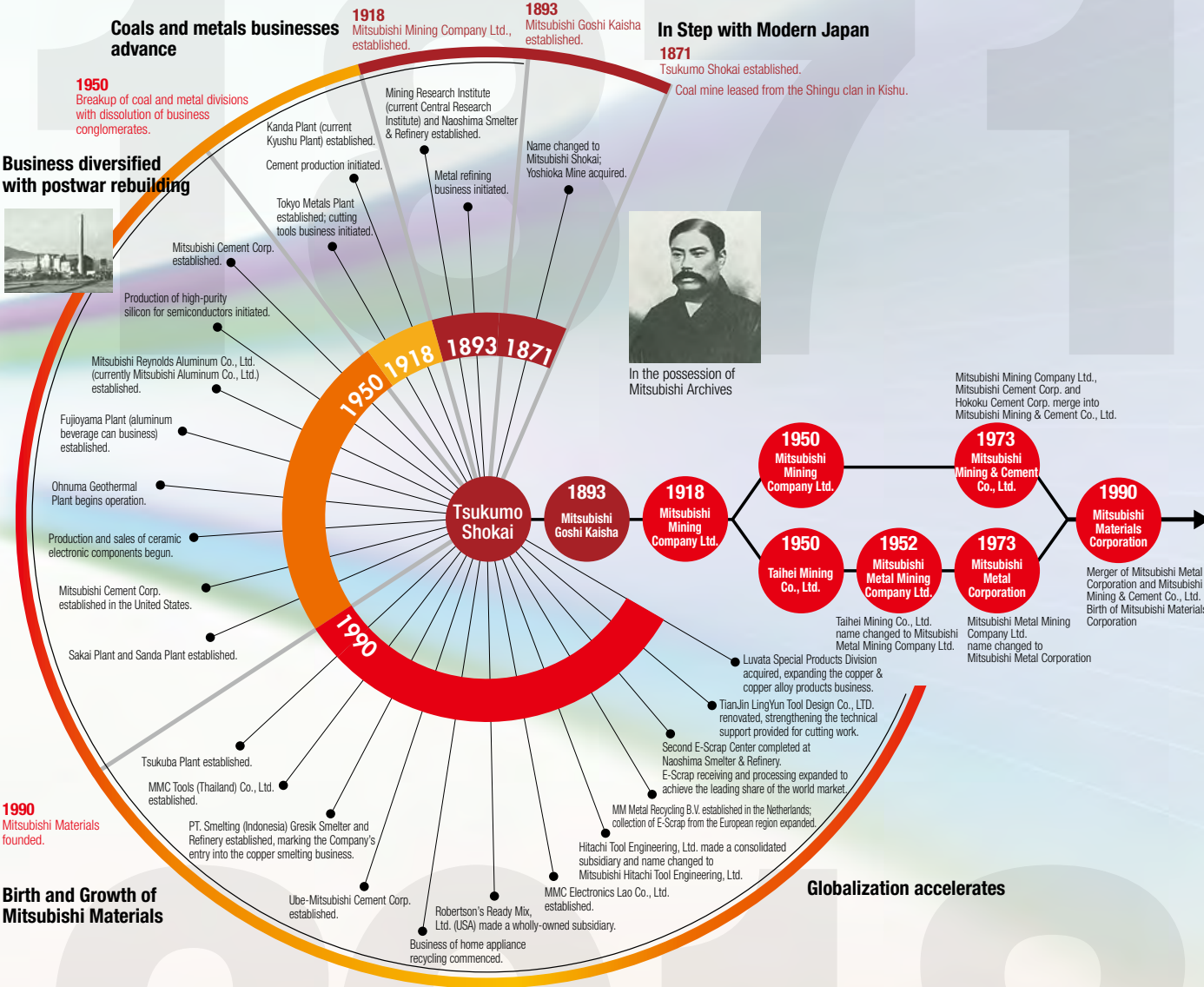
We will become the leading business group committed to creating a sustainable world through materials innovation, with use of our unique and distinctive technologies, for People, Society and the Earth.



Mitsubishi Materials DNA of Transformation

From the past & into the future.
Mitsubishi Materials will achieve “Transformation for Growth”
by meeting social needs that change with the times.

The Mitsubishi Group was born when Tsukumo Shokai, the forerunner of Mitsubishi Materials Corporation, entered the coal and metal mining business.
For nearly 150 years, the Company has supported Japan’s rapid development as it has grown by diversifying its operations and reforming its business structures to meet social needs that changed with the times.
We will continue our tradition of creating new raw materials, products and solutions, and contribute to the sustainable development of society.



Business Growth Model

We are committed to creating a sustainable world through materials innovation making use of our unique and distinctive technologies, “for People, Society and the Earth.”

Mitsubishi Materials Corporation is a diversified materials manufacturer operating according to its Corporate Philosophy, “For People, Society and the Earth.” We have been providing superior products in response to increasingly diversified global needs. Through our fair business operations we continue to meet the expectations of our stakeholders and contribute to the sustainable development of society.

Perception of external environment <10 years from now>

Japan

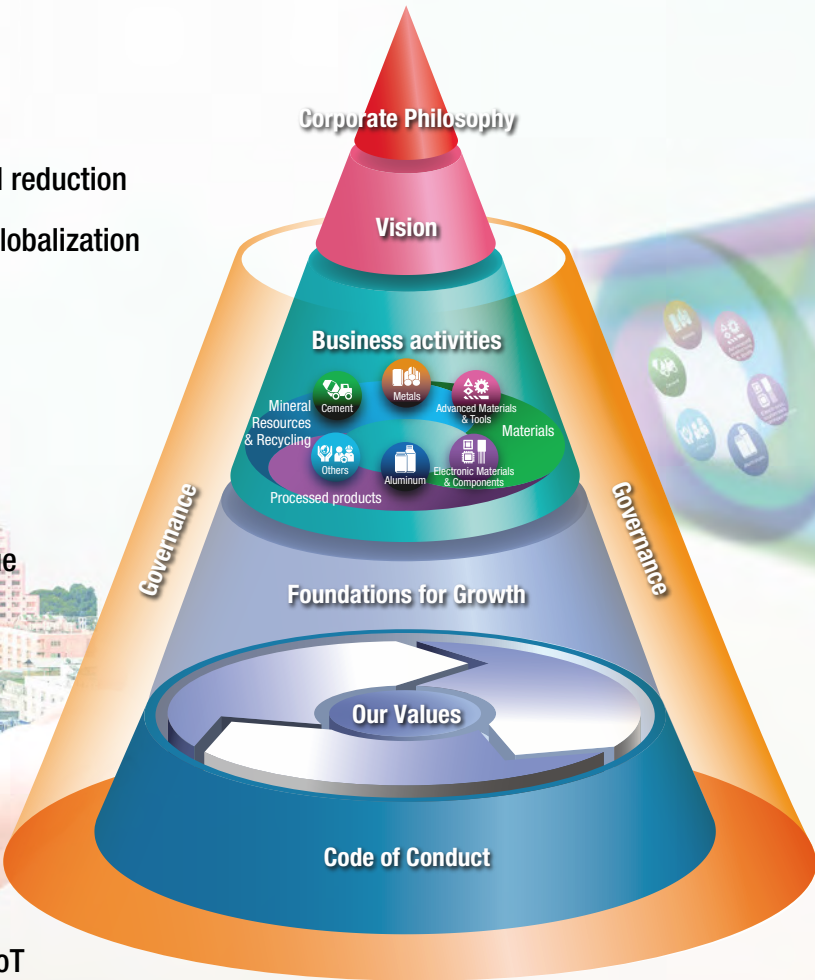
- Super-aged society
- Infrastructure development for disaster prevention and reduction
- Hollowing out of domestic market due to progress of globalization

Overseas

- Changes in international order
- Increase in protectionism
- Growth of demand in emerging countries
- Increase in the need for infrastructure development due to growing population

Global

- Increasing environmental consciousness (increase in EVs, recycling needs, etc.)
- Super-advanced information society based on AI and IoT (accelerated speed of change)



Sustainable Development of Corporate Values

Transformation for Growth



Business Operations & Sustainable Development Goals (SDGs)

The Mitsubishi Materials Group conducts business on a global scale in a manner that contributes to the Sustainable Development Goals (SDGs) set by the United Nations in a number of areas.

Universal Long-term Goals for the International Community

In September 2015, all 193 members of the United Nations signed onto the 2030 Agenda for Sustainable Development, a plan aimed at combating poverty, inequality and injustice, preserving the global environment and creating a better future in various other ways. As the centerpiece of the Agenda, the SDGs present a vision of the world as it should be by the year 2030. Formulated to replace the Millennium Development Goals (MDGs), toward which the international community had been working for 15 years since 2001, the SDGs are positioned as universal goals to which every country should aspire.



The Group’s Business Operations and the SDGs

The Mitsubishi Materials Group is a diversified materials manufacturer — operating according to its Corporate Philosophy, “For People, Society and the Earth.” The Group’s operations are defined further in its Vision: “We will become the leading business group committed to creating a sustainable world through materials innovation, with use of our unique and distinctive technologies, for People, Society and the Earth.”

The United Nations’ adoption of the SDGs has reaffirmed that we have followed an appropriate course in our Group business operations, and have provided us with a perspective from which to assess future long-term risks and opportunities, and to identify the issues we should address and the paths we should follow going forward.

Among the 17 goals comprising the SDGs, numbers 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), 7 (Affordable and Clean Energy) and 5 (Gender Equality) are of particular relevance to the areas on which we are focusing attention as a Group.

We are incorporating the SDG perspective into our strategies for the dual purposes of strengthening our current operations’ competitiveness and creating new products and businesses. We are also working in partnership with various other companies to create value over the medium- to long-term.

Priority Initiatives



Worldwide Supply of Essential Materials for Industry, Innovation and Infrastructure

As a diversified materials manufacturer, our Group supplies the world with indispensable basic materials. Our wide-ranging products, systems and services support infrastructure development and industry worldwide, while at the same time providing a constant flow of innovative solutions to society’s energy and resource conservation and cleaner processing needs.

In addition to conducting wide-ranging product and technological development in our various businesses, the Central Research Institute pursues basic research and development from a medium- to long-term perspective. The Institute deploys an abundance of accumulated technologies to this end, from materials analysis technologies and basic technologies employing computer analysis in support of materials, process and product development to core technologies in such fields as reaction processes, metals, processing, interfaces and thin films. These operations place a special priority on developing environmental products and technologies over the medium term.



Contributing to a Recycling-oriented Society from a Global Perspective

In its ongoing concern for assuring the most effective possible use and reuse of the limited resources required for product manufacturing, the Group engages in development of recycling operations in all its fields of business. Besides making careful use of resources and materials supplied by nature, we recycle waste and byproducts in an effort to contribute to creation of a recycling-oriented society.

We have positioned this objective as a key aspect of our Corporate Philosophy, Vision and management strategies with an eye to creating value that can contribute to resolving social issues. We are pursuing ongoing efforts to achieve further advances in recycling technologies, and to develop more efficient collection and processing methods in order to expand the possibilities for resources recycling.



Efforts to Increase the Availability of Renewable Energy and Improve Energy Efficiency

Mitsubishi Materials has a long history of supplying renewable energy. We leveraged the technologies accumulated through our mining business to enter the geothermal development business and commenced operation of our Ohnuma Geothermal Plant (Kazuno, Akita Prefecture) in this field in 1974.

We are currently also promoting efforts to harness ground-source heat, which is regarded as a promising new source of renewable energy. We have developed a commercial system that uses heat pump technology to produce heat, and we have already supplied over 100 of these systems to customers in Japan. We are developing technologies with a focus on improving work efficiency as well.

We have set targets for steady improvement by 2020 of energy efficiency at major production plants in each of our businesses.



Expanding Opportunities for Female Employees to Maximize their Potential

We are promoting the advancement of women in the workplace as a means of securing a stable domestic workforce despite Japan’s declining birthrate, and of creating new added value from diverse human resources working together.

We consider these efforts to create more opportunities for female employees as part of the reformation of our corporate culture. We are intent on creating a company in which women as well as a diverse selection of other human resources, including seniors, employees with disabilities and people from other countries, can work together effectively and in good physical and mental health.

We are determined to keep these efforts from ending as a temporary surge in momentum, but rather to extend their pursuit continuously into the future.

Internal Dialogue Concerning the SDGs

We employ the SDGs as guidelines to help clarify the medium- to long-term needs of the international community (and the global marketplace).

In fiscal 2017, After exploring the SDGs’ relevance to our business and the most appropriate ways for the relevant departments to respond to them in the future, the CSR Dept. communicated its findings to the various business divisions and top management. It also held stakeholders’ meetings that included experts from outside the Group.

Upon analyzing the results of these investigations, the CSR Dept. shared its findings with members of the CSR Committee and related departments. We plan to incorporate this process, which has strengthened awareness of the importance of a long-term perspective to both management and operations, more effectively into our future business activities to facilitate our responsiveness to social issues.

Exploring ways of incorporating the SDGs into Group operations (CSR and related departments)

Communicating with the various business divisions and top management

Convening of stakeholder meetings

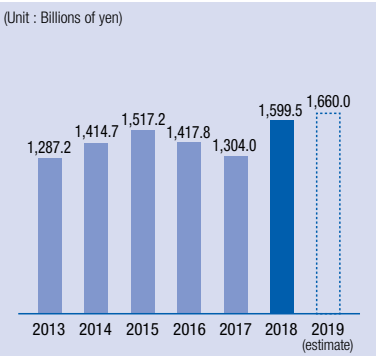
Analyzing the findings and sharing the results with members of the CSR Committee

Performance Highlights

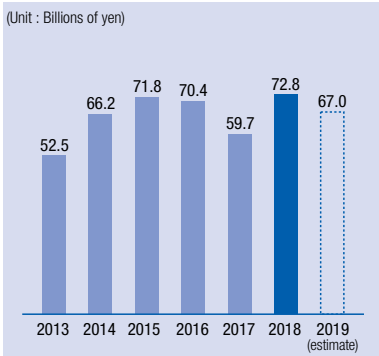
Financial Performance (Consolidated)

"2019 (estimate)" figures are announced on May 10, 2018.

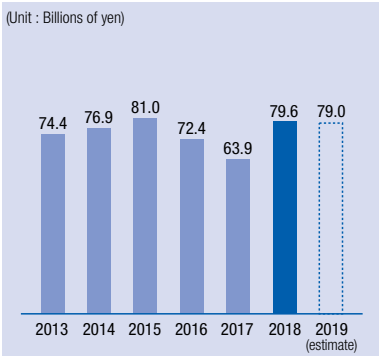
Net sales



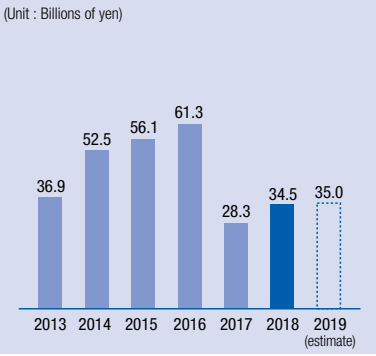
Operating profit



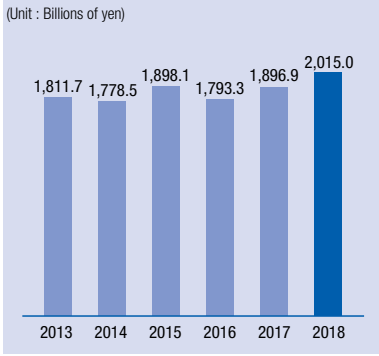
Ordinary income



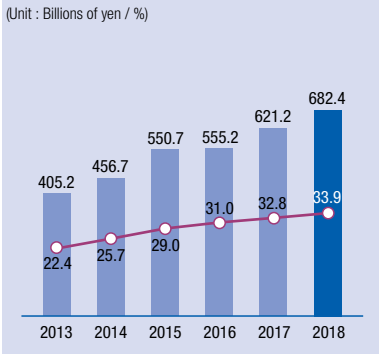
Net income attributable to owners of parent



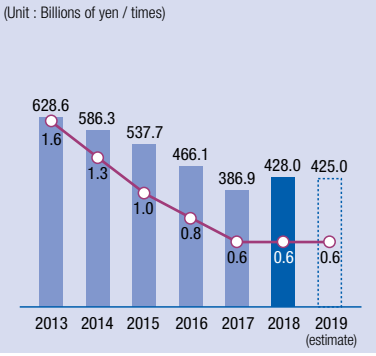
Total assets



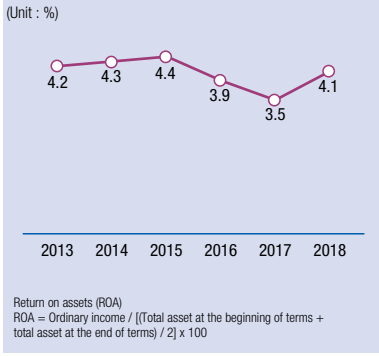
Shareholders' equity / Shareholders' equity ratio



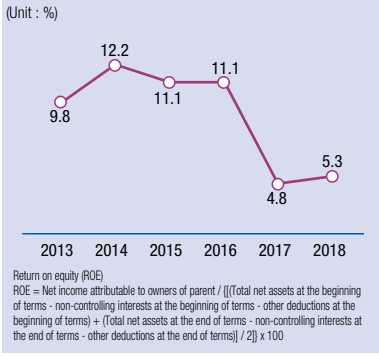
Net interest-bearing debt Net D/E ratio



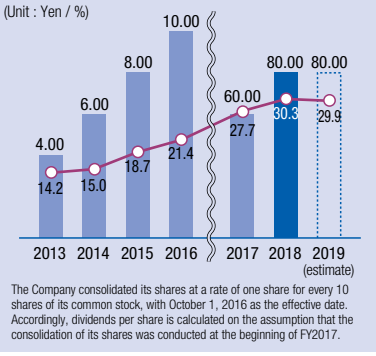
Return on asset (ROA)



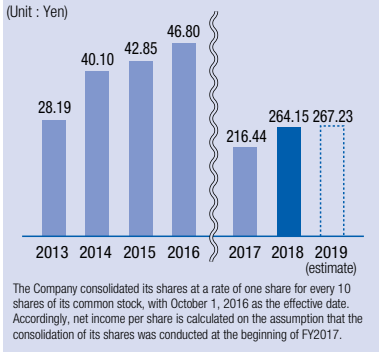
Return on equity (ROE)



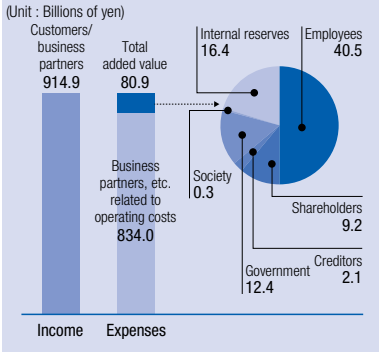
Dividends per share / Dividend payout ratio



Net income per share

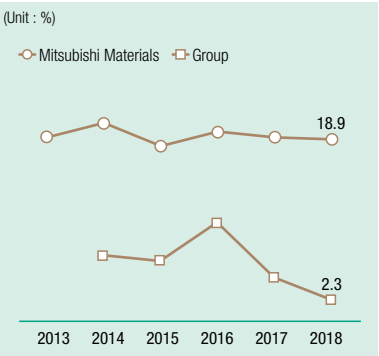


Economic added value

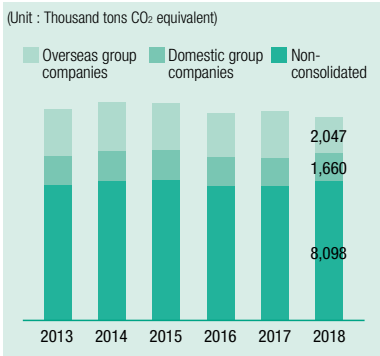


Non-Financial Performance (Non-consolidated unless stated otherwise)

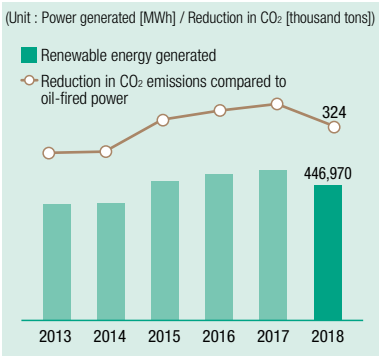
Percentage of recycled raw materials used



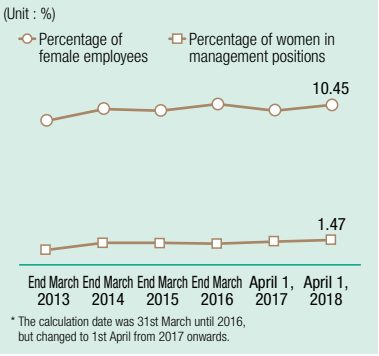
Total greenhouse gas emissions



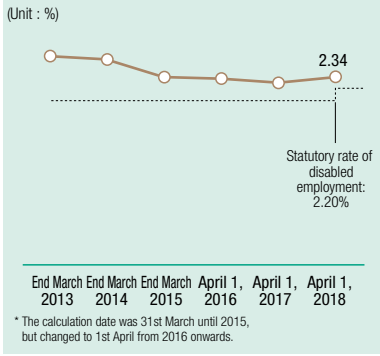
Renewable energy generated/Reduction in CO₂ emissions



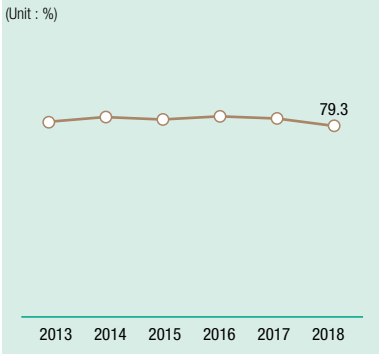
Percentage of female employees Percentage of women in management positions



Disabled persons' employment rate

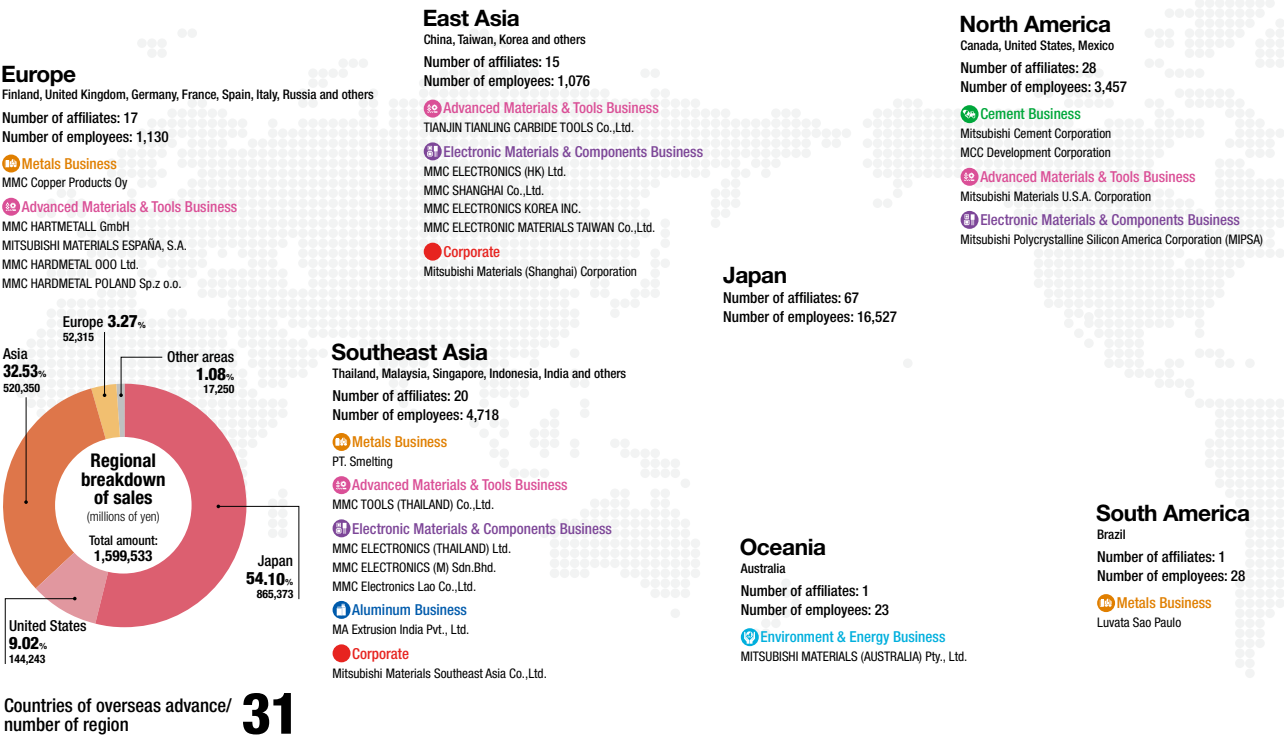


Percentage of paid holidays taken (union members)



Sales by areas / Numbers of affiliates / Numbers of employees

(As of March 2018)



MMC wonder of society Materials Innovation

Needs that the Company Should Meet (Creation of New Products and Businesses)

Next-Generation Vehicles, IoT and AI

We will support society by responding to growing global demand for electric vehicles (EVs) and needs generated by the information society through our ongoing creation of new materials.

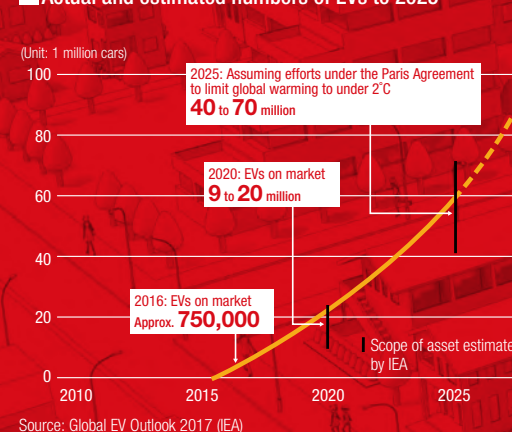


Forecast Demand for EVs in Major Countries and Changes in Global Semiconductor Market Size

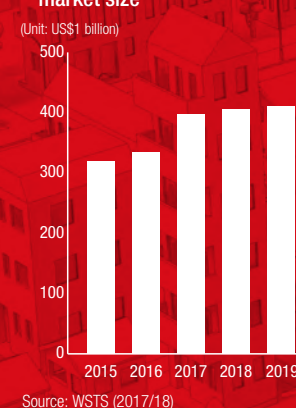
The cost gap between electric motors and internal-combustion engines is narrowing with progress in R&D and steady efforts toward mass production, leading to lower prices for batteries and increases in their energy density. Based on an analysis of car manufacturers' country targets and sales scenarios for EVs, it is expected that the number of EVs on the market will be from 9 to 20 million by 2020 and from 40 to 70 million by 2025.

The global semiconductor market is growing steadily thanks to expanding demand for semiconductors for use in electronic devices of all kinds.

Actual and estimated numbers of EVs to 2025

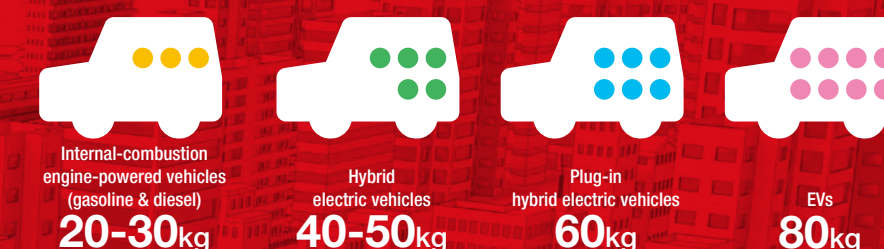


Changes in semiconductor market size

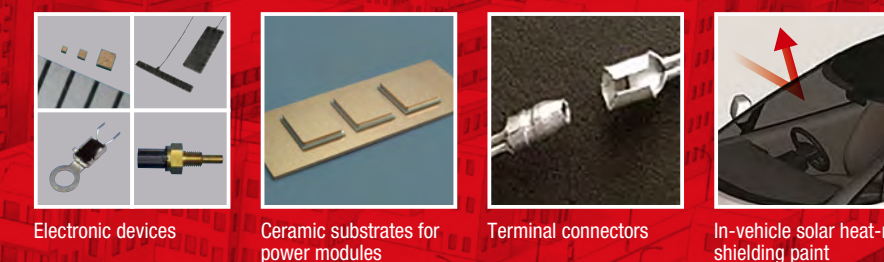


Copper requirements for vehicle manufacture

EV manufacture requires up to 80 kg of copper, about four times the amount used in vehicles with internal-combustion engines.

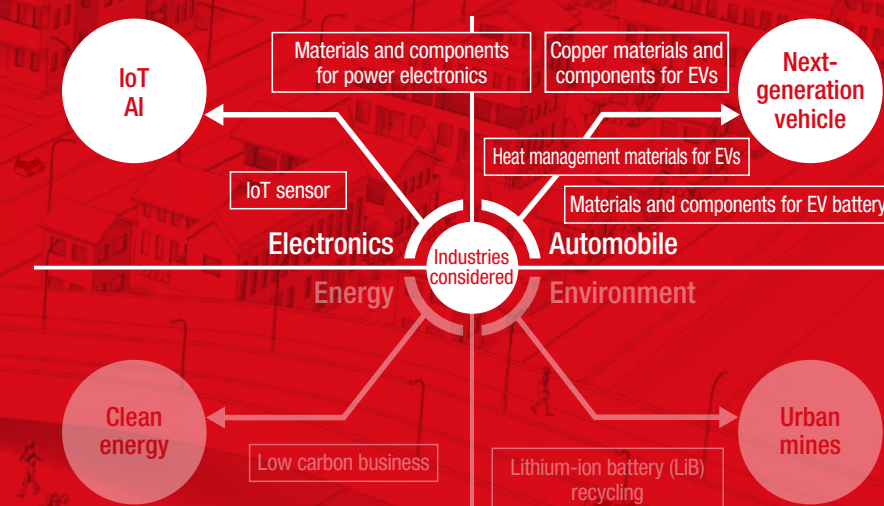


Needs requiring response: next-generation vehicles, IoT & AI



Creation of new products and businesses targeting social issues

Needs that the Company should meet: next-generation vehicle, IoT and AI



Needs that the Company should meet: building a rich, sustainable society

MMC wonder of society

Materials Innovation

Needs that the Company Should Meet (Creation of New Products and Businesses)

Building a Rich, Sustainable Society

We contribute to realization of a recycling-oriented society by processing waste and recycling used products.

About half the raw materials we use in cement production come from waste detoxified by high-temperature treatment during the manufacturing process.

Volume of raw materials recycled per ton of cement

436 kg/t

(Amount of waste and byproducts: 4,137 thousand tons)

Treatment of various types of waste is a major issue facing society today. Waste including the following is now being recycled as resources for use in safe, stable cement production.



Waste gypsum board

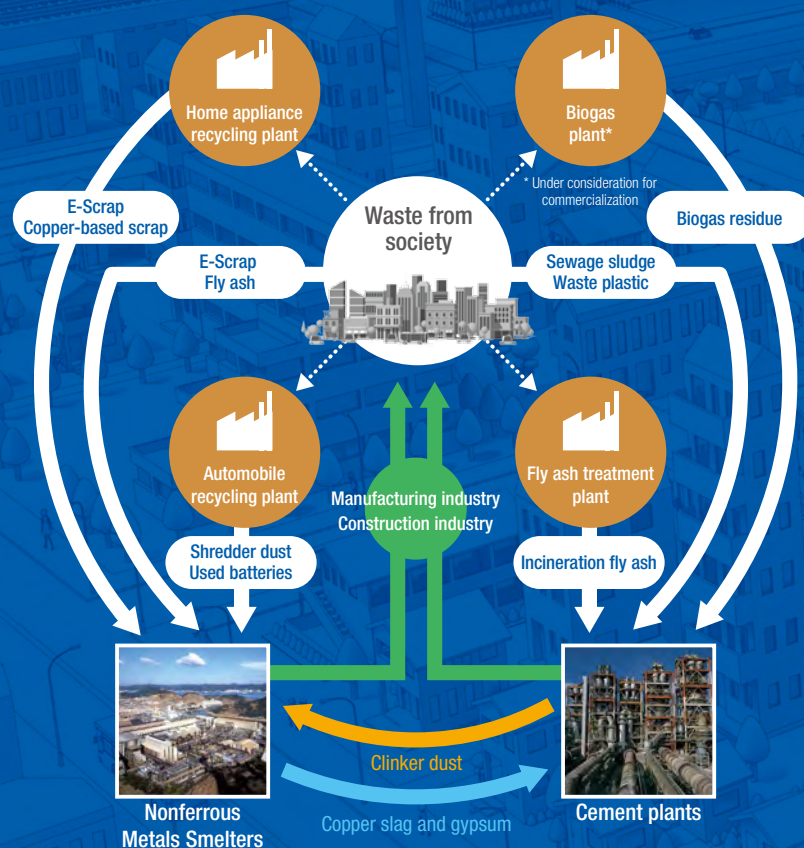


Waste plastic



Waste soil from construction

■ Recycling of waste from society



Volume of E-Scrap generated worldwide: 700 kt (in-house estimate)

MMC Group's processing capacity: 160 kt (approx. 23%)

E-Scrap

World's leading processing capacity

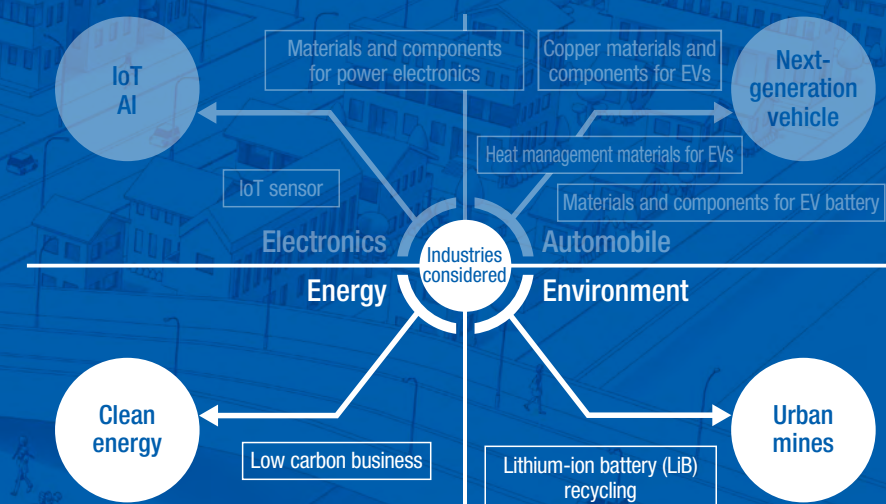
160 kt/700kt



E-Scrap is recyclable materials picked out of dismantled and crushed waste electrical and electronic equipment, such as TVs, computers and mobile phones, mainly from printed circuit boards. We reclaim valuable metals for reuse through recycling of various wastes, including E-Scrap, shredder dust and used batteries from scrapped vehicles, by applying our proprietary recycling technologies and rich fund of expertise acquired over many years.

■ Creation of new products and businesses targeting social issues

Needs that the Company should meet: next-generation vehicle, IoT and AI



Needs that the Company should meet: building a rich, sustainable society



Mitsubishi Material will deploy its unique strengths to create new value in partnership with society and achieve sustainable growth.

Preventing a Recurrence of Quality Issues

We would like to express our deep and sincere apologies for causing our customers, shareholders and other stakeholders enormous trouble and concern as a result of a series of quality issues.

In light of the facts and issues uncovered, and to prevent reoccurrence, the business sites are implementing preventive measures. Also we are implementing “Group Governance Framework Enhancement Measures” which includes quality control. On

April 1, 2018, the Company newly established the “Group Governance Enhancement and Promotion Division” as a cross-sectional organization to steadily implement and confirm the status of the main prevention measures and main enhancement and other measures; “Governance Deliberative Council” as a body that deliberates on business divisions’ governance-related policies and plans (including main enhancement measures) for the fiscal year; and the “Governance

Division (which oversees the Safety & Environment Dept., CSR Dept., Quality Management Dept., and Internal Audit Dept.)”, which is tasked with governance-related administrative and support functions. Thus, we are working quickly and steadily to strengthen our governance structures, drawing on the full strength of our Group, in order to restore the trust of our stakeholders and society.

Our Role in Society

As an integrated raw materials manufacturer, Mitsubishi Materials Corporation conducts business in the fields of cement, non-ferrous metals such as copper, advances materials and tools such as cemented carbide products, electronic materials and aluminum as well as of the environment and energy. We have been supplying society with essential raw materials, products and services since our foundation nearly a century and a half ago.

We are also making effective use of our business infrastructure comprising cement plants, copper smelters and other facilities, along with our extensive knowledge of raw materials cultivated over many years, to make significant contributions to society in such areas as recycling and waste treatment. Today, at a time when conservation and efficient use of resources are of very much importance, contributing to the recycling-oriented society has been an important reason for our existence and

also our mission as a corporate group. We conduct business according to the philosophy adopted by our Group as whole, “For people, society and the earth.” Our highest priority is to fulfill the expectations of our stakeholders with fair business activities, as we contribute to the sustainable development of society by meeting the unprecedented challenges of the times with new materials imbued with the full value we can provide in terms of raw materials, products, services and solutions.

Responding to Social Issues from a Long-term Perspective

The social conditions surrounding us will undergo dramatic changes in the decade to come. With IoT and AI technologies advancing rapidly and the transition to electric vehicles (EVs) and other next-generation vehicles accelerating, an ability to adopt new technologies will be increasingly important, and we will face more intense competition of technology and cost. Markets will be more diverse as well. Environmental awareness is also certain to rise more and more against the background of global environmental issues. In Japan, meanwhile, the population will continue to decline due

to an aging society with fewer children, while the global population expands and concerns about the lack of various resources grow.

While misreading the trends amid dramatically changing market needs will pose huge risks for businesses, accurately grasping the trends and promptly incorporating these insights into business strategies can expand opportunities immensely.

The accelerated transition from automobiles to EVs, for example, will present the Company with a tremendous opportunity. Not only does EV manufacture require a

substantially greater amount of copper than manufacture of gasoline-powered cars, but we will also be able to use our technical capabilities related to copper and aluminum as well as to products such as sensors and antennas to develop new materials and components for use in EVs.

While the global expansion of environmental awareness in recent years has encouraged us to improve and advance our manufacturing processes in consideration of the environment, it has at the same time presented us with an opportunity to expand our recycling businesses. We responded by launching the new business of recycling incineration fly ash in Kyushu in April 2018. We will also accelerate our preparations to commence business, on conversion of food waste to energy.

The EU strengthened its environmental regulations with the adoption in 2003 of the Waste Electrical and Electronic Equipment (WEEE) Directive to restrict generation of waste from home appliances and electronic equipment and promote reuse and recycling. Also in Japan there are regulations of recycling of home electrical appliances and automobiles. While regulatory requirements are not yet well developed in emerging countries, where resources are commonly disposed and not recycled, implementation of regulations can be expected over time. Looking to an era in which virtuous circle of resources recycling and reuse will become essential, we foresee inevitable expansion of areas in which our technologies and business structure can contribute to solving global environmental and resources issues.

As the scale of our domestic business shrinks, moreover, we must give serious consideration to effective use of our corporate resources overseas. The MMC Group has already made inroads in other countries, and we consider it essential to advance our overseas businesses with appropriate timing in appropriate ways, from a broader perspective and with deeper insight.



Progress of the Medium-term Management Strategy

The theme of our Medium-term Management Strategy is “Transformation for Growth.”

Our efforts toward reformation of our business structures will continue to focus on expansion and reformation of our existing businesses, accompanied by efforts to realize Group evolution by optimization of business portfolio, comprehensive efforts to increase business competitiveness and creation of new products and businesses in accordance with our Long-term Management Policy.

The Company’s business performance in the term ended March 2018, the first fiscal year of our Medium-term Management Strategy, resulted in the net sales of 1,599.5 billion yen, an increase of 295.4 billion yen from the previous year. This was attributed to an increase in the price of copper and an expanded volume of sales, primarily of cemented carbide products. Operating profit rose by 13 billion yen over its year-before level to 72.8 billion. The primary contributions to this increased profit came from our metals business, which achieved upturns in production and sales

of electrolytic copper, and our advanced materials & tools business, which saw growth in sales of cemented carbide products. Ordinary income grew by 15.6 billion yen from the previous term to 79.6 billion yen, pushed upward by a rise in operating profit and higher dividends from mines. Net income increased by 6.2 billion yen to 34.5 billion yen, boosted by growth in ordinary income and other factors. We raised our annual dividend by 20 yen per share to 80 yen in accordance with the capital policy set out in our Medium-term Management Strategy.

Our projected business performance for the full fiscal year ending March 2019, the second term of our Medium-term Management Strategy, anticipates an increase in net sales of 60.4 billion yen from the fiscal year ended March 2018 to 1,660 billion yen. This will mainly reflect increased net sales by the metals business primarily due to higher copper prices. Projections show a downturn in operating profit to 67 billion yen, a decrease of 5.8 billion yen from the term ended March 2018. Although we anticipate growth in revenues from the Cement Business led by our ready-mixed

concrete operations in the United States and the Advanced Materials & Tools Business supported by our cemented carbide products, we expect this to be offset by such external environmental factors as rising heat energy costs and appreciation of the yen, leading to an overall reduction in profit. Ordinary income is expected to register 79 billion yen, a 0.6 billion yen decrease from the term ended March 2018. The decline will be smaller than at the operating profit stage, chiefly due to an improvement in equity in earnings of affiliates. Net income, on the other hand, is expected to rise to 35 billion yen, a 0.4 billion yen upturn from the term ended March 2018, due to an improvement in extraordinary profit and loss. We plan to pay an annual dividend of 80 yen per share, unchanged from the term ended March 2018, in accordance with the capital policy set out in our Medium-term Management Strategy.

Going forward, we will increase our Group’s corporate value through steady implementation of the various measures specified in our Medium-term Management Strategy.

Pass ON the “DNA of Transformation” to the Next Generation

Maintaining the Company’s growth over the medium- to long-term while contributing to the sustainable development of society will require implementing new measures that use our strengths to full advantage.

The first of these strengths is our technical capabilities accumulated through long years of experience and supported by abundant human resources. As an integrated business entity, we have access to an extremely broad range of technologies. We use simulation technology, a special strength of our Central Research Institute, for example, with considerable effect to enhance the efficiency of our cement factories’ manufacturing processes and conserve energy.

Our rich pool of human resources is another significant advantage, and the synergistic creative force generated by the convergence of our employees’

diverse range of knowledge and experience is a formidable source of strength. “Strengthening and improving our product manufacturing capabilities” is the mission of our Technology Div., which is leveraging our diverse range of technologies, experience and expertise across corporate divisions to create structures for early resolution of issues at the various business sites.

The Company was established nearly 150 years ago in 1871 to conduct the coal and metals mining business. We have encountered a great many changes and difficulties due to social and economic conditions over the years, but we have overcome every obstacle by reforming our businesses through hard work and a challenging spirit. We established our cement business after World War II, for example, at the time of an energy revolution accompanying the transition

from coal to oil. Today, the Cement Business is one of mainstays of our business. We have repeatedly deployed the technological capabilities that are our great strength to embark on new businesses, which is how our cement, metals, processing, electronic materials, aluminum, environment & energy and other businesses of today were formed. We are where we are today because we have continued to adapt and to change our business portfolio in response to changing times.

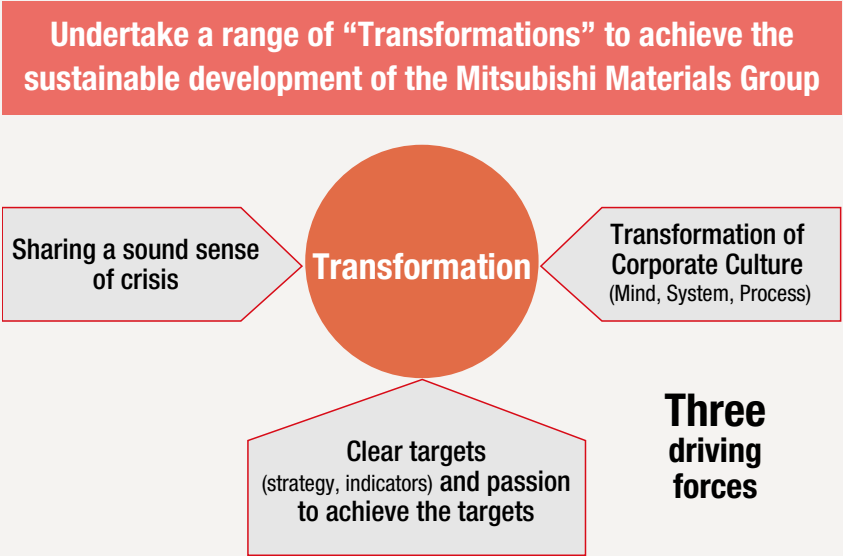
Our predecessors exhibited an ability to read the times that might be called the “DNA of Transformation.” As heirs to this DNA, we must avoid complacency and press on with reforms of our business structures, especially in these times of drastic change. Failing this, I fear the Company will not endure for another 50 or 100 years.

“Transformation for Growth” of Every Individual Employee

It is people who generate innovations. To this end, we are pursuing corporate cultural reform that encourages every single MMC employee to maintain a sense of crisis and make the effort to innovate. Corporate cultural reform is a matter of acting to fortify the foundations supporting sustainable growth, which is where “activation of people and organizations” becomes crucial. We will activate our employees and build organizations in which they are constantly taking up new challenges. I intend to make proactive efforts myself as well by visiting our business sites and communicating much more closely with our leaders and employees on the front lines. Acquiring the broader perspective is essential to realizing reform. It is important to establish close personal relationships that deepen communication among divisions and

Group companies, and that lead to unity, cooperation and sharing of wisdom across boundaries separating organizations. Acquiring experience, especially while young, broadens people’s perspectives and enriches their creative imaginations. These will lead to cultivating an optimal leadership perspective that takes the whole picture into consideration.

Transformation for Growth



Action from a “The Next Processes are our Customers” Perspective

In response to the quality issues, I have asked all our employees to “adopt an attitude of ownership and take the initiative, remembering what we learned through our quality control and improvement activities” and to act according to the concept that the “The next processes are our customers” in every aspect of business. Employees assigned to workplaces with no direct contact with customers have few opportunities to hear customers’ ideas and opinions. Also, we have very limited chance to receive feedback from end-users of our products and services. Since we seldom hear complaints or criticism directly from customers, therefore, we tend to begin thinking unconsciously in terms only

of our own convenience and priorities, gradually adopting the patterns of logic we share among ourselves. The best way to avoid falling into this bad habit is to act according to the “The next processes are our customers” perspective at all times. A worker’s responsibility for an assigned process at a manufacturing work site is fulfilled only when the quality of the product passed on to the next process is properly assured. The worker responsible in the next process must also demand that “only good quality products can be accepted from the previous process” and provide appropriate feedback if anything seems to be amiss. We believe that such pride, way of thinking, and communication,

when spread thoroughly, can make an immense contribution to preventing any recurrence of quality issues. Nor should this attitude be limited to manufacturing work sites. Rather, I believe it should extend to all our duties. I therefore ask employees to identify the customer in every aspect of their work and consider the best way of providing satisfaction, and to speak as if to the customer whenever they give an explanation.

In Conclusion

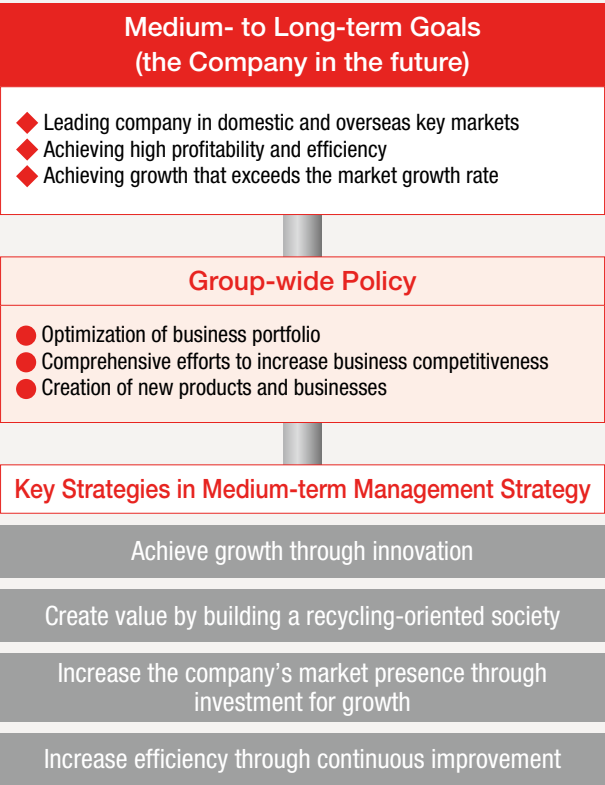
We will seek to thoroughly strengthen group governance and will work to strive together as a group to execute the programs in the Medium-term Management Strategy, with a resolute determination to show results that will be recognized widely as those produced by a genuinely excellent group. As a group engaging in

manufacturing, the Mitsubishi Materials Group will continue to explore ways to secure a steady supply of products that customers can use with peace of mind, together with ways to maintain customer satisfaction. Based on this concept and through fair business operations, we will take on the challenge of meeting the emerging demands of the times and promoting “materials innovation.” Moreover, by maintaining these activities, we will strive to meet the expectations of our shareholders and other stakeholders, as we seek to become “the leading business group committed to contributing to creating a sustainable world.”



Overview of Medium-term Management Strategy

We have reviewed our long-term management policy in accordance with changes in the external environment, and have formulated a new Medium-term Management Strategy, with an emphasis on our growth strategies. We continue to stand up to the challenge of becoming a “leading business group committed to creating a sustainable world.”



Overview of Medium-term Management Strategy

As shown in the table below, the four key strategies under our Medium-term Management Strategy are to “achieve growth through innovation,” “create value by building a recycling-oriented society,” “increase the company’s market presence through investment for growth,” and “increase efficiency through continuous improvement.” We intend to roll out these strategies to individual business divisions and implement specific measures to achieve them.

Growth strategies and investment plans will no longer be limited to three-year terms based on our Medium-term Management Strategy as in the past. Instead, they will be revised annually and reassessed for three years into the future to facilitate flexible responsiveness to changes in the external environment.

We made no major changes in our basic strategy, investment plans, capital policies or other such factors with respect to the Company or its individual business units during FY2018, since no major changes occurred in the business environment.

As for the financial indicators, there are no major changes in the numeric value as of the end of FY 2020.

Optimization of business portfolio

We will classify our business into three categories: stable growth business, growth promotion business and profitability restructuring business. We will promote selection and concentration and improve capital efficiency after determining a direction geared to the characteristics of each business and clarifying any issues.

Stable growth business consists of the Cement, Metals (smelting), Recycling and Renewable energy businesses, and in this category, we will aim to strengthen our business foundations by maintaining and improving cost competitiveness.

Growth promotion business consists of the Metals (copper & copper alloy products) and Advanced Materials & Tools businesses, and here we will seek business development in adjacent fields and global markets to outperform market growth.

Profitability restructuring business consists of the Electronic Materials & Components and Aluminum businesses. In this category, we will work promptly to solve issues and define the future direction of growth.

In 2017 we reclassified our businesses into the above-mentioned three categories and set a KGI* for each business as a suitable evaluation indicator for its respective field of operations. We also set a KPI as an evaluation indicator designed specifically to facilitate achievement the KGI. These indicators are currently operational.

Whether or not we can fully apply the functions of our Corporate Governance framework will be one of the important criteria in determining our responses to current quality issues as we proceed with our “Optimization of business portfolio” process.

*KGI: Key Goal Indicator

Reinforcing business competitiveness by creation of new products and businesses

As part of our strategy for creation of new products and businesses, we established a New Business Development & Promotion Div. at Headquarters and an EV Material Development & Recycling Business Promotion Dept. in the Technology Div. on April 1, 2018.

We must create new businesses that will support profitability in the future in order to achieve sustainable growth in a dramatically changing external environment.

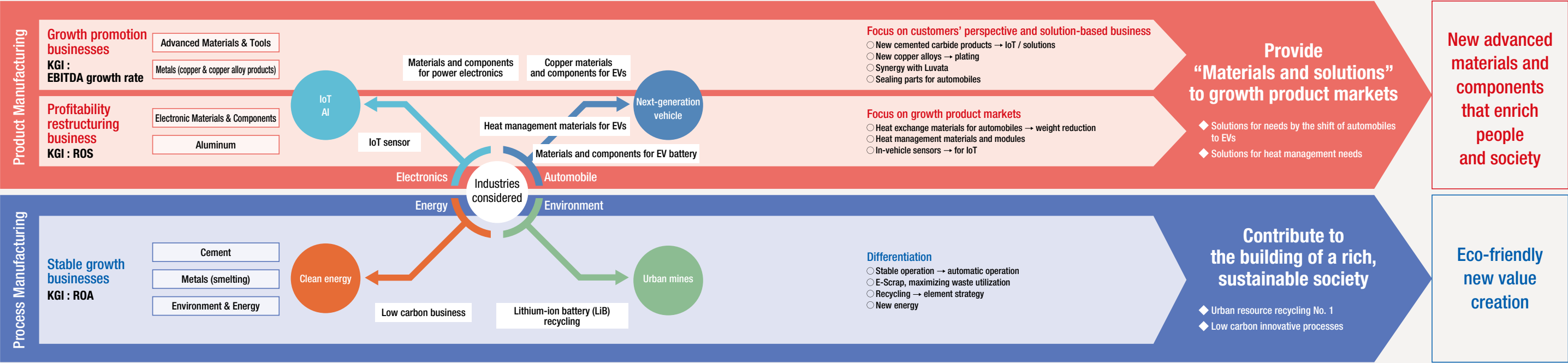
The New Business Development & Promotion Div. focuses primarily on product manufacturing business organized to formulate business models and launch business operations.

The EV Material Development & Recycling Business Promotion Dept. takes responsibility for the Group’s contact and information collection functions, including PR and marketing activities related to EVs.

With regards to creation of new products and businesses, we have identified next-generation vehicles, the Internet of Things (IoT), artificial intelligence (AI) and building a rich, sustainable society as important social needs we should meet.

These two new entities will work in unison with the Group’s divisions and development organizations to create new products and businesses in the areas of assorted EV parts and materials, sensors for the IoT and recycling operations.

Optimization of business portfolio / Creation of new products and businesses



Directors and Audit and Supervisory Board Members (As of June 22, 2018)



1 Akira Takeuchi Chairman

Apr. 1977 Joined the Company
Apr. 2009 Senior Executive Officer; General Manager, Legal & General Affairs Div.
Jun. 2009 Managing Director
Apr. 2014 Executive Vice President
Apr. 2015 President
Jun. 2018 Chairman (to present)

2 Naoki Ono Representative Director
President

Apr. 1979 Joined Mitsubishi Mining & Cement Co., Ltd.
Jun. 2012 Executive Officer of the Company; Vice Chairman, Mitsubishi Cement Corporation; Vice Chairman, MCC Development Corporation
Apr. 2014 Managing Executive Officer; President, Cement Company
Jun. 2014 Managing Director; President, Cement Company
Apr. 2016 Executive Vice President; President, Cement Company
Jun. 2016 Director; Executive Vice President, Cement Company
Apr. 2017 Director; Executive Vice President; General Manager, Corporate Strategy Div.
Jun. 2018 President (to present)

3 Osamu Iida Representative Director
Executive Vice President
General Manager, Technology Div.

Apr. 1980 Joined the Company
Apr. 2013 Managing Executive Officer; President, Metals Company
Jun. 2013 Managing Director; President, Metals Company
Apr. 2014 Managing Director; President, Metals Company
Apr. 2016 Executive Vice President; President, Metals Company
Jun. 2016 Director; Executive Vice President; President, Metals Company
Apr. 2017 Director; Executive Vice President, General Manager, Technology Div. (to present)

4 Yasunobu Suzuki Representative Director
Senior Managing Executive Officer / President,
Metals Company / Aluminum Business; New
Business Development and Promotion

Apr. 1982 Joined the Company
Jun. 2011 Executive Officer; Vice President, Metals Company
Oct. 2013 Executive Officer; Vice President, Metals Company; Executive Vice President, PT. Smelting in Indonesia
Apr. 2014 Executive Officer; Vice President, Metals Company; Executive Vice President, PT. Smelting in Indonesia
Apr. 2015 Managing Executive Officer; General Manager, Corporate Strategy Div.
Jun. 2016 Director; Senior Managing Executive Officer; General Manager, Corporate Strategy Div.
Apr. 2017 Director; Senior Managing Executive Officer; President, Metals Company (to present)

5 Kazuhiro Kishi Representative Director
Managing Executive Officer / President, Cement Company

Apr. 1984 Joined Mitsubishi Mining & Cement Co., Ltd.
Jun. 2011 General Manager, Production Dept., Cement Company of the Company
Apr. 2014 Executive Officer; General Manager, Kyushu Plant
Apr. 2016 Executive Officer; Vice President, Cement Company
Apr. 2017 Managing Executive Officer; President, Cement Company
Jun. 2018 Director; Managing Executive Officer; President, Cement Company (to present)

6 Makoto Shibata Representative Director
Managing Executive Officer
General Manager, Governance Div.
Environment & Energy Business

Apr. 1984 Joined the Company
Apr. 2013 General Manager, Energy Business Div., Mineral Resources & Recycling Business Unit
Apr. 2016 Executive Officer; General Manager, Environment & Energy Business Unit
Apr. 2017 Managing Executive Officer; General Manager, General Administration Div.
Apr. 2018 Managing Executive Officer; General Manager, Governance Div.
Jun. 2018 Director; Managing Executive Officer; General Manager, Governance Div. (to present)

7 Mariko Tokuno Outside Director

Jan. 1994 Joined Louis Vuitton Japan K.K.
Apr. 2002 Senior Director, Sales Administration
Mar. 2004 Vice President, Tiffany & Co., Japan Inc.
Aug. 2010 President and Representative Director, Christian Dior K.K.
Sep. 2013 President, Representative Director and CEO, Ferragamo Japan K.K.
Jun. 2016 Director of the Company (to present)

8 Hiroshi Watanabe Outside Director

Apr. 1972 Joined the Ministry of Finance Japan (MOF)
Jul. 1998 Deputy Director-General, MOF
Jul. 1998 Personal Secretary to the Minister, MOF
Jul. 2001 Deputy Director-General, MOF
Jul. 2002 Senior Deputy Director-General, International Bureau, MOF
Jan. 2003 Director-General, International Bureau, MOF
Jul. 2004 Vice Minister of Finance for International Affairs, MOF
Jul. 2007 Special Advisor to the Minister of Finance
Oct. 2007 Special Advisor, Japan Center for International Finance
Apr. 2008 Professor, Hitotsubashi University-Graduate School of Commerce and Management / Faculty of Commerce and Management
Oct. 2008 Deputy Governor, Japan Finance Corporation
Apr. 2012 CEO, Executive Managing Director, Japan Bank for International Cooperation
Dec. 2013 Governor, Japan Bank for International Cooperation
Oct. 2016 President, Institute for International Monetary Affairs (to present)
Jun. 2017 Director of the Company (to present)

9 Hikaru Sugi Outside Director

Apr. 1974 Joined Nippondenso Co., Ltd. (currently DENSO CORPORATION)
Jun. 2002 Executive Director, Member of the Board; General Manager, Air-Conditioning Product Div.
Jun. 2004 Executive Director; General Manager, Air-Conditioning Product Div.
Jun. 2005 Executive Director; General Manager, Thermal Systems Business Div.
Jun. 2008 Senior Executive Director, Member of the Board; General Manager, Engineering Research & Development Center
Jun. 2011 Senior Executive Director, DENSO CORPORATION; President and CEO, DENSO INTERNATIONAL AMERICA, INC.
Jun. 2013 Executive Vice President, DENSO CORPORATION; President and CEO, DENSO INTERNATIONAL AMERICA, INC.
Jun. 2014 Advisor, Senior Technical Executive, DENSO CORPORATION
Jun. 2016 Advisor
Jun. 2018 Director of the Company (to present)



10 Hiroshi Kubota Standing Audit & Supervisory Board Member

Apr. 1981 Joined Mitsubishi Mining & Cement Co., Ltd.
Jun. 2011 General Manager, Internal Audit Dept., Business Ethics Div.
Apr. 2012 General Manager, Business Ethics Div.
Jun. 2012 General Manager, Internal Audit Dept.
Apr. 2014 General Manager, Internal Audit Dept., Fellow
Jun. 2016 Standing Audit & Supervisory Board Member (to present)

11 Soichi Fukui Standing Audit & Supervisory Board Member

Apr. 1983 Joined the Company
Jun. 2011 General Manager, Sanda Plant
Apr. 2013 Executive Officer; General Manager, Advanced Materials Div., Electronic Materials & Components Company
Apr. 2014 Executive Officer; Vice President, Electronic Materials & Components Company
Apr. 2015 Managing Executive Officer; President, Electronic Materials & Components Company
Apr. 2017 Executive Councilor
Jun. 2017 Standing Audit & Supervisory Board Member (to present)

12 Hiroshi Sato Standing Audit & Supervisory Board Member
Outside Audit & Supervisory Board Member

Apr. 1980 Joined The Mitsubishi Bank, Ltd. (currently The Bank of Tokyo-Mitsubishi UFJ, Ltd.)
Jun. 2007 Executive Officer; Manager, Credit Div.
Apr. 2008 Executive Officer; Senior Superintendent
Jun. 2008 Standing Audit & Supervisory Board Member
Jun. 2011 Managing Director, Mitsubishi Steel MFG. Co., Ltd.
Jun. 2017 Standing Audit & Supervisory Board Member of the Company (to present)

13 Naoto Kasai Outside Audit & Supervisory Board Member

Apr. 1990 Registered as a lawyer
Joined Kashiwagi Sogo Law Offices
Apr. 1995 Joined Kasai Sogo Law Office
Jan. 2006 Representative Lawyer, Kasai Sogo Law Office (to present)
Apr. 2010 Vice President, Daini Tokyo Bar Association
Jun. 2014 Audit & Supervisory Board Member of the Company (to present)
Apr. 2018 Chairman, Daini Tokyo Bar Association (to present)
Vice President, Japan Federation of Bar Associations (to present)

14 Tatsuo Wakabayashi Outside Audit & Supervisory Board Member

Apr. 1977 Joined Mitsubishi Trust Bank (currently Mitsubishi UFJ Trust and Banking Corporation)
Jun. 2008 Managing Director, Mitsubishi UFJ Trust and Banking Corporation (MUTB)
Jun. 2009 Senior Managing Director, MUTB
Jun. 2010 Senior Managing Director and Chief Executive, Trust Assets Division, MUTB; Managing Officer and Group Head, Integrated Trust Assets Business Group, Mitsubishi UFJ Financial Group, Inc. (MUFG)
Jun. 2011 Senior Managing Director, MUTB; Director, MUFG
Apr. 2012 President, MUTB; Director, MUFG
Apr. 2013 Deputy Chairman, MUFG
Dec. 2013 President, CEO and Chairman, MUTB; Deputy Chairman, MUFG
Jun. 2015 President, CEO and Chairman, MUTB; Director and Deputy Chairman, MUFG
Apr. 2016 Chairman, MUTB; Director, MUFG
Jun. 2016 Chairman, MUTB (to present)
Jun. 2018 Audit & Supervisory Board Member of the Company (to present)

Reasons for Appointment

1 Akira Takeuchi
Mr. Akira Takeuchi's primary experience stems from his involvement in the general affairs and personnel departments, and he has served as General Manager of the Administration & Legal Affairs Division and the Legal & General Affairs Division. Following his appointment as Managing Director in 2009, he has been responsible for corporate communications, general affairs, the environment, human resources and the affiliated corporations business. He was appointed to the position of President in April 2015. Mr. Takeuchi has promoted numerous overseas business development and domestic business restructuring efforts that have been central to the group's structure, played a role in strengthening its business foundations and overseen the overall operations of the Company. In addition, he has extensive knowledge and experience of the Company's business and operations, as well as insight into corporate management. The Company believes that Mr. Takeuchi is suitable for the position of Chairman to oversee important operations.

2 Naoki Ono
Mr. Naoki Ono's primary experience stems from his involvement in departments related to the cement business. He has served as General Manager of the Higashitani Mine and Vice Chairman of Mitsubishi Cement Corporation in the United States. Following his appointment as Managing Director in June 2014, he was appointed to the positions of Executive Vice President in April 2016 and Director and Executive Vice President in June 2016. As President of the Cement Company, he has been instrumental in achieving vertical integration in the ready-mixed concrete business, thereby expanding operations in the U.S. cement business. As General Manager of the Corporate Strategy Division since April 2017, he has been instrumental in promoting a raft of measures based on the Medium-term Management Strategy. As a Corporate Strategy Committee member, he has taken part in overall management of the Company. He has extensive knowledge and experience related to the Company's business and operations, both domestic and overseas. His good sense of balance, fair and sincere personality, and integrity are also some of the reasons why the Company believes that Mr. Ono is suitable for the position of President to oversee the overall operations of the Company.

3 Osamu Iida
Mr. Osamu Iida's primary experience stems from his involvement in the metals business. He has served as General Manager of the Metallurgy Department of the Metals Company and General Manager of the Naoshima Smelter & Refinery. Following his appointment as Managing Director in June 2013, he was appointed to the positions of Executive Vice President in April 2016 and Director and Executive Vice President in June 2016. As President of the Metals Company, he has been instrumental in establishing an earnings foundation in recycling operations. As General Manager of the Technology Division since April 2017, he has been instrumental in promoting improvements and innovation in "Production Technology." As a Corporate Strategy Committee member, he has taken part in overall management of the Company. He has extensive knowledge and experience related to the Company's business and operations. The Company believes that Mr. Iida is suitable for the position of Director & Executive Vice President.

4 Yasunobu Suzuki
Mr. Yasunobu Suzuki's primary experience stems from his involvement in departments related to the metals business, and he has served as General Manager of the Raw Materials Department of the Metals Company, as well as Executive Vice President of PT. Smelting in Indonesia. Following his appointment as Managing Executive Officer in April 2015, he was appointed to the positions of Director and Senior Managing Executive Officer in June 2016. As General Manager of the Corporate Strategy Division, Mr. Suzuki planned and formulated the Medium-term Management Strategy. As President of the Metals Company since April 2017, he has been instrumental in pursuing synergistic effects with the Special Products Division of the Luvata Group acquired from Luvata Espoo Oy and its two subsidiaries. As a Corporate Strategy Committee member, he has taken part in overall management of the Company. He has extensive knowledge and experience related to the Company's business and operations. The Company believes that Mr. Suzuki is suitable for the position of Director & Senior Managing Executive Officer.

5 Kazuhiro Kishi
Mr. Kazuhiro Kishi's primary experience stems from his involvement in departments related to cement production technology, and he has served as General Manager of the Iwate Plant, General Manager of the Production Department of the Cement Company, and General Manager of the Kyushu Plant. After being appointed to the position of Managing Executive Officer in April 2017, as President of the Cement Company, he has been instrumental in promoting the restructuring and enhancement of overseas business and in improving production efficiency to strengthen the competitiveness of domestic business. As a Corporate Strategy Committee member, he has taken part in overall management of the Company. He has extensive knowledge and experience related to the Company's business and operations. The Company believes that Mr. Kishi is suitable for the position of Director & Managing Executive Officer.

6 Makoto Shibata
Mr. Makoto Shibata's primary experience stems from his involvement in departments related to nuclear power and corporate strategy. He has served as General Manager of the Planning and Administration Department and then of the Energy Business Division of the Mineral Resources and Recycling Business Unit (currently Environment and Energy Business Unit) as well as General Manager of the Environment and Energy Business Unit. After being appointed to the position of Managing Executive Officer in April 2017, as General Manager of the General Administration Division, he has been instrumental in establishing systems to support various workstyles and to accelerate communications throughout the Group. As a Corporate Strategy Committee member, he has taken part in overall management of the Company. He has extensive knowledge and experience related to the Company's business and operations. The Company believes that Mr. Shibata is suitable for the position of Director & Managing Executive Officer.

7 Mariko Tokuno
Ms. Mariko Tokuno has insight into international corporate strategy and general management gained through her extensive experience as a manager of the Japanese operations of leading international firms. The Company, therefore, believes that Ms. Tokuno is suitable for the position of Outside Director to appropriately monitor the management of the Company and to provide effective advice.

8 Hiroshi Watanabe
Mr. Hiroshi Watanabe has knowledge of domestic and overseas finance, economics, and other general aspects of management gained through his experience in key positions at the MOF and government-affiliated financial institutions. The Company believes that Mr. Watanabe is suitable for the position of Outside Director to appropriately monitor the management of the Company and to provide effective advice.

9 Hikaru Sugi
Mr. Hikaru Sugi has technical knowledge in a wide range of fields, from development and design to manufacturing processes and quality control. He also has insight into international corporate strategy and overall management through his experience as a manager of a manufacturer that develops its business all over the world. The Company believes that Mr. Sugi is suitable for the position of Outside Director to appropriately monitor the management of the Company and to provide effective advice.

10 Hiroshi Kubota
Mr. Hiroshi Kubota's primary experience stems from his involvement in departments related to finance and accounting. He has served at Mitsubishi Cement Corporations in the United States and the Southeast Asian Business Support Center (now Mitsubishi Materials Southeast Asia Co., Ltd.). Following his appointment as General Manager of the Internal Audit Department, Business Ethics Division in 2011, he was appointed General Manager of the Internal Audit Department in 2012. He has been instrumental in introducing internal audit consulting procedures and establishing an audit system for overseas operations, thereby developing a high level of specialization and proficiency in general management auditing. Mr. Kubota has extensive knowledge and experience related to the Company's business and operations, and specialized insight in finance and accounting. The Company believes that Mr. Kubota is suitable for the position of Audit & Supervisory Board Member to appropriately monitor the management of the Company.

11 Soichi Fukui
Mr. Soichi Fukui's primary experience stems from his involvement with the Electronic Materials & Components business, as General Manager of the Sanda Plant, and then as Vice President of Electronic Materials & Components Company. Following his appointment as Managing Executive Officer in April 2015, Mr. Fukui served as President of the Electronic Materials & Components Company and was responsible for safety & health. He has been instrumental in strengthening the foundation for safe operating systems, expanding sales channels to domestic and overseas customers, and establishing a timely and appropriate production system in line with changes in the business environment. As a Corporate Strategy Committee member, he has taken part in overall management of the Company. Mr. Fukui has extensive knowledge and experience related to the Company's business and operations. The Company believes that Mr. Fukui is suitable for the position of Audit & Supervisory Board Member to appropriately monitor the management of the Company.

12 Hiroshi Sato
Mr. Hiroshi Sato has insight in finance, accounting, and other aspects of corporate management from his experience as a corporate auditor at a financial institution and in management at a manufacturer. The Company believes that Mr. Sato is suitable for the position of Outside Audit & Supervisory Board Member to appropriately monitor the management of the Company and to provide effective advice.

13 Naoto Kasai
Mr. Naoto Kasai has long experience of working as a lawyer and broad perspectives supported by his broad knowledge of the law. The Company believes that Mr. Kasai is suitable for the position of Outside Audit & Supervisory Board Member to appropriately monitor the management of the Company.

14 Tatsuo Wakabayashi
Mr. Tatsuo Wakabayashi has insight in finance, accounting and other aspects of corporate management from his experience as a manager of a financial institution. The Company believes that Mr. Wakabayashi is suitable for the position of Outside Audit & Supervisory Board Member to appropriately monitor the management of the Company.

Corporate Governance

We make every effort to further the sustainable development of the society and maximize the corporate value through fair business activities in adherence to the corporate philosophy, vision, values and code of conduct of the MMC Group.

Basic Approach

We have established a corporate philosophy, vision, values and code of conduct that apply to the entire MMC Group, and make every effort to further the sustainable development of the society and maximize the corporate value through fair business activities. We recognize that for this purpose, it is vital that we engage in efficient and transparent management, and have long implemented a range of measures aimed at enhancing our corporate governance.

Decision-Making and Executive Framework

All important matters relating to our business are overseen and determined by the Board of Directors, which currently consists of nine Directors in total, six inside and three outside. As well as having the ideal size to enable us to make decisions quickly, we feel that this is the right composition in terms of management objectivity and transparency.

Outside Directors also oversee the execution of duties by directors to ensure validity from an objective standpoint, and offer a wide range of perspectives on company management based on their own specialist knowledge and experience in different areas to our own executives.

Matters to be resolved by the Board of Directors are first reviewed and discussed in detail by our Corporate Strategy Committee, which is made up of President, Executive Vice Presidents, Managing Directors, and Senior Executive Officers, in order to make the decision-making process more efficient and effective.

We have also adopted an executive officer system and an in-house company system in order to operate more flexibly and appropriately as an integrated business entity involved in Cement, Metals, Advanced Materials & Tools, Electronic Materials & Components.

Composition of the Board of Directors



Matters Resolved by the Board of Directors

With the aim of ensuring swift and appropriate decision making and execution of duties, the Board of Directors makes important executive decisions including exclusive prerogatives of the Board of Directors as required by laws and regulations, the standards for which are clearly stated in the Board of Directors Rules. The determination and execution of business affairs not decided by the Board of Directors is delegated to the Corporate Strategy Committee, appointed directors, or the heads of each business division or corporate department in accordance with internal regulations on decision-making authority. The Board of Directors also receives summarized reports on and exercises supervision over business affairs determined by the Corporate Strategy Committee.

Nomination of Candidates for Director and Selection of Managing Titled Executive Officers

Mitsubishi Materials is an integrated business entity involved in

Cement, Metals, Advanced Materials & Tools, Electronic Materials & Components, and our basic approach to the structure of the Board of Directors, which fulfills the roles of deciding on important matters and exercising supervision over management, is to ensure that it comprises a diverse range of human resources with different expert knowledge, experience, and other qualities. In light of this approach, we endeavor to nominate and select individuals of exceptional insight and character as candidate directors and titled executive officers, regardless of attributes such as gender or nationality.

In nominating candidate directors to be in charge of business affairs and selecting titled executive officers, we select individuals who are familiar with company management in general and with the businesses and operations of Mitsubishi Materials. After discussions with related officers as needed, the president makes a selection after a comprehensive accounting of various factors including career, past performances and expert knowledge. Finally, appointments or selections are made following deliberation by the Board of Directors.

Candidates for outside director should be individuals who will supervise the appropriateness of company directors in the execution of their duties from an independent and objective standpoint, and should be able to provide a diverse range of values and advice based on expert knowledge, extensive experience, and broad, advanced insight that differs from those of directors who have advanced internally. These candidates are selected by the president with reference to standards for determining independence, and are nominated after deliberation by the Board of Directors.

Committee for Nomination and Compensation

On June 22, 2018, the Company established the “Committee for Nomination and Compensation” for which the majority of members being outside directors in order to ensure the transparency and objectivity of the Board of Directors’ decisions regarding the appointment and dismissal of directors and officers as well as their compensation.

Composition of the Committee

- (a) The members of the Committee will not exceed five and will be appointed from directors other than the Chairman and the President by resolution of the Board of Directors. More than half of the members will be outside directors.
- (b) The chairperson will be selected from committee members who are outside directors by resolution of the Board of Directors.

Matters to be Discussed

- The Committee will recommend to the Board of Directors the following matters:
- (a) Policy and criteria regarding appointment and dismissal of directors and executive officers; selection of each candidate
 - (b) Plans regarding successors of managerial positions, including the President
 - (c) Structure and standard regarding Director’s and officer’s compensation
 - (d) Any matters ancillary to the above

Committee for Monitoring of Measures to Enhance Governance

To prevent the reoccurrence of deliveries of products, etc. that deviated from the customer standards or internal company specifications as a result of the Company’s consolidated subsidiaries improperly rewriting inspection data, the formulation, disclosure, and sequential implementation of preventive measures and group governance framework enhancement measures (collectively, the “Measures”), which include quality control, are being undertaken by the relevant subsidiaries where data falsification took place and by the Company, respectively.

In addition, on May 10, 2018 the Company established the “Committee for Monitoring of Measures to Enhance Governance” comprised of outside directors of MMC and outside experts with the objectives of monitoring the status of main enhancement and other measures progress, achievements, and administration from a more independent position than management as well as

providing necessary advice and proposals on related issues to the Board of Directors.

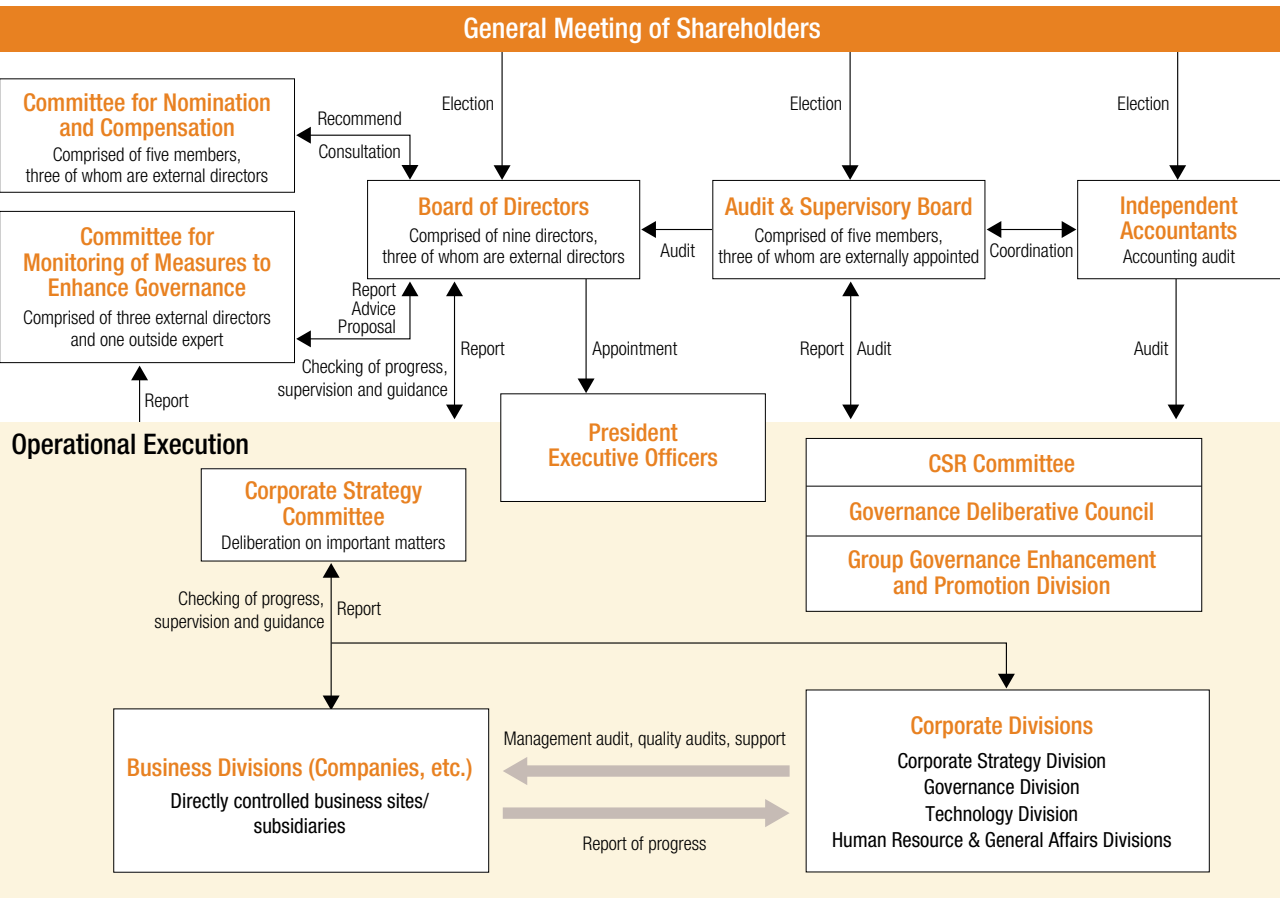
Composition of the Committee

- (a) All members of the Committee will be outside directors or outside experts.
- (b) The chairperson of the Committee will be one of the outside directors appointed by the committee members through consultation.

Responsibility

- (a) Confirmation of the appropriateness regarding the investigation into the facts and cause analysis of the quality issues and the preventive measures.
- (b) Confirmation and supervision of the progress of the Measures and the preventive measures of the quality issues occurred within the MMC group
- (c) Reporting of the results of (a) and (b)

Overview of the Corporate Governance System (As of July 31, 2018)



On April 1, 2018, the Company newly established the “Group Governance Enhancement and Promotion Division” as a cross-sectional organization to steadily implement and confirm the status of the main prevention measures and main enhancement and other measures; the “Governance Deliberative Council” as a body that deliberates on business

divisions’ governance-related policies and plans (including main enhancement measures) for the fiscal year; and the “Governance Division (which oversees the Safety & Environment Dept., CSR Dept., Quality Management Dept., and Internal Audit Dept.)”, which is tasked with governance-related administrative and support functions.

Corporate Governance

Policy regarding the determination of remuneration

< Directors and titled Executive Officers>

We make it a basic policy to appropriately link the remuneration for Directors and titled Executive Officers to corporate performance as well as individual performance. Drawing on the advice of external experts, steps have been taken to design a system that is highly objective. Remuneration is paid in accordance with internal rules and regulations approved by the Board of Directors and is comprised of a basic fixed component as well as a bonus that is linked to performance.

The amount of the basic remuneration is determined in accordance with the title and individual performance of each director or officer. A portion of basic remuneration is paid in a fixed monthly amount as stock-based remuneration (not paid to outside directors) and used for purchasing the company’s shares through the company’s director shareholding association. The Company’s shares acquired based on the remuneration cannot be sold at least during each director’s term of office. This aims to link the remuneration to medium and long term corporate performance.

Secondly, the amount of the bonuses, as remuneration linked to short-term corporate performance, is determined after the end of the fiscal year using the net income attributable to owners of parent and consolidated ordinary income for that year as indicators, and taking into consideration individual performance. The bonuses can be reduced or removed entirely depending on factors such as business conditions and the amount of the dividends for the fiscal year.

Due to the role fulfilled by outside directors in supervising the appropriateness of directors in the execution of their duties from an outside, independent, and objective standpoint, their remuneration comprises only a fixed amount, which is determined in light of individual circumstances based on internal regulations approved by the Board of Directors.

■ Directors and Audit & Supervisory Board Members’ Remuneration (fiscal 2018)

Position	Total Amount of Remuneration (Millions of yen)	Remuneration by Type (Millions of yen)		Number of Executives (persons) ¹⁾
		Basic ⁴⁾	Bonus ⁵⁾	
Directors (of which Outside Directors)	455 ²⁾ (56)	374 (56)	80	10 (4)
Audit & Supervisory Board Members (of which Outside Audit & Supervisory Board Members)	124 ³⁾ (52)	124 (52)	—	6 (3)

Note 1: The number of Directors/Audit & Supervisory Board Members includes one Director and one Audit & Supervisory Board Member whose terms ended during the fiscal 2018. There are nine Directors and five Audit & Supervisory Board Members as of the end of the fiscal 2018.
Note 2: It was resolved at the 91st Ordinary General Meeting of Shareholders held on June 29, 2016 that the amount of remuneration to the Directors should not exceed ¥49 million per month (excluding salaries as employees for Directors who also serve as employees), including remuneration not exceeding ¥6 million for Outside Directors.
Note 3: It was resolved at the 82nd Ordinary General Meeting of Shareholders held on June 28, 2007 that the amount of remuneration to Audit & Supervisory Board Members should not exceed ¥17 million per month.
Note 4: Of the basic remuneration for Directors, the stock-based remuneration is ¥28 million.
Note 5: It was resolved at the 81st Ordinary General Meeting of Shareholders held on June 29, 2006 that the amount of the bonuses for Directors other than Outside Directors should not exceed ¥170 million per annum.

<Audit & Supervisory Board Members>

The remuneration for Audit & Supervisory Board Members is set at an appropriate level based on discussions among them and is not linked to corporate performance in light of the fact that they assume the responsibility for auditing the execution of duties by Directors as an independent body entrusted by shareholders.

Evaluation of the Effectiveness of the Board of Director

Respective directors and respective auditors regularly evaluate the role, composition, management method, etc. of the Board of Directors, based on which the effectiveness is analyzed and evaluated at the meeting of the Board of Directors.

It has been confirmed that the effectiveness of the Company’s Board of Directors has been secured in the fiscal 2018 analysis and evaluation, with the Company’s Board of Directors as the target, where exchange of opinions was made on the following three points as the matters to be discussed continuously:

- Balance between the composition of the Board of Directors and their attributes (expertise, experience, etc.)
- Contents and length of time of the deliberation and explanation at the meeting of the Board of Directors
- Contents of the materials for the meeting of the Board of Directors

We will keep making continuous efforts for further improvement of the effectiveness.

Auditing Framework

Operational and financial audits are overseen by the Audit & Supervisory Board, which consists of five members in total; three standing members (including one outside member) and two non-standing members (both outside auditors). We regard this to be a valid composition in the interests of auditing the adequate performance of duties by the directors. We have also determined that this is a suitable number of outside Audit & Supervisory Board members based on compliance with the conditions stipulated by law as well as with the total number of members and roles they perform.

Enhancement of the Effectiveness of Audits by Audit & Supervisory Board Members

MMC’s Audit & Supervisory Board has reported to the Board of Directors that it will work to supervise the implementation and operation status of MMC Group’s governance framework enhancement measures, and implement the following measures for improving the effectiveness of audits by Audit & Supervisory Board Members, and that MMC will make the necessary response to such efforts.

- (i) The personnel working in the Audit & Supervisory Board Member Assistance Dept.—who support the duties of MMC’s Audit & Supervisory Board Members will serve concurrently as part-time audit & supervisory board members at major subsidiaries with full-time audit & supervisory board members, whereby coordination between MMC’s Audit & Supervisory Board Members and the standing audit & supervisory board members of subsidiaries will be improved.
- (ii) The subsidiaries that only have part-time audit & supervisory board members will be requested to submit monthly activity status reports by such part-time audit & supervisory board members, and MMC’s Audit & Supervisory Board will work to obtain and act on the information in a timely manner.
- (iii) MMC’s Standing Audit & Supervisory Board Members will newly establish a new consultation contact method liaising directly with the Standing Audit & Supervisory Board Members, in addition to the current whistleblower hotline.
- (iv) Cooperation with the Internal Audit Dept. of the Governance Division, which conducts internal audits, will be strengthened, including the expansion of the scope of joint audits.

Internal audit

We conduct internal audits in order to check that our operations, including those at group companies, are being run effectively and efficiently, and to verify the reliability of the financial reporting, the maintenance and effective use of assets, the status of risk management activities, and the compliance with legislation, internal regulations, and other applicable standards.

We begin our basic internal auditing procedure by conducting a “Paper Questionnaire” across all facilities (business divisions and subsidiaries of Mitsubishi Materials). The Paper Questionnaire consists of a comprehensive range of questions on the subject of laws, regulations, and control procedures that are of particular

relevance to the group. We revise the Paper Questionnaire annually to reflect the latest legislation, and include supporting evidence for the questions and details of remedial measures to enable facilities to rectify issues themselves and use Paper Questionnaire as a manual. To encourage facilities to rectify issues themselves, we also carry out “Comprehensive Internal Audits” at selected facilities based on the risk-based approach to the results of the Paper Questionnaire.

Starting from fiscal 2019, the five-to-six-year cycle of the Comprehensive Internal Audits has been revised to a two-year cycle for an increased frequency of audits. Moreover, the audit contents will be improved taking into consideration collaboration with other departments in the Governance Division and use of external resources.

In addition to Comprehensive Internal Audits, we conduct specific “Theme Audits” in order to focus auditing activities on such areas as compliance with important legislation. Combining these auditing techniques, we follow up on the found flaws in every six months if they have been duly corrected in an effort to make the audits more effective and enhance the corporate value of the group as a whole.

We also make every effort to improve our group-wide internal auditing framework by sharing information through measures such as holding semiannual meetings with group companies that have their own internal auditing organizations, and also by planning joint audits with our subsidiaries on the companies affiliated with them.

Mentioning about our cooperation with Audit & Supervisory Board Members and directors, we are required to submit reports to the Board of Directors twice a year, covering subjects such as progress of the internal audits and the auditing plans for the following year. Meanwhile, we are required to submit monthly reports to the Audit & Supervisory Board Members outlining the results of the assessments carried out on the establishment and the implementation of internal controls in relation to internal audits and financial reporting. From fiscal 2018, we will conduct joint audits with the Audit & Supervisory Board at some facilities in an effort to streamline the auditing and to share auditing information.

Internal Control

Since the establishment of the Internal Control System Management Committee in January 2006, we have taken steps such as developing a set of basic principles for improving the Group’s internal control systems, and ensuring compliance with the requirements to introduce internal control evaluation and disclosure systems in relation to financial reporting, in an effort to ensure compliance with the Companies Act, the Financial Instruments and Exchange Act, and other relevant legislation, and to establish the optimal internal control systems for both Mitsubishi Materials and the Mitsubishi Materials Group companies.

Evaluations conducted during fiscal 2018 found our internal control systems in relation to financial reporting to be sufficient and effective, with no material weaknesses identified. The results were then submitted in June 2018 in the form of an Internal Control Report with the unqualified opinion of an auditing firm.

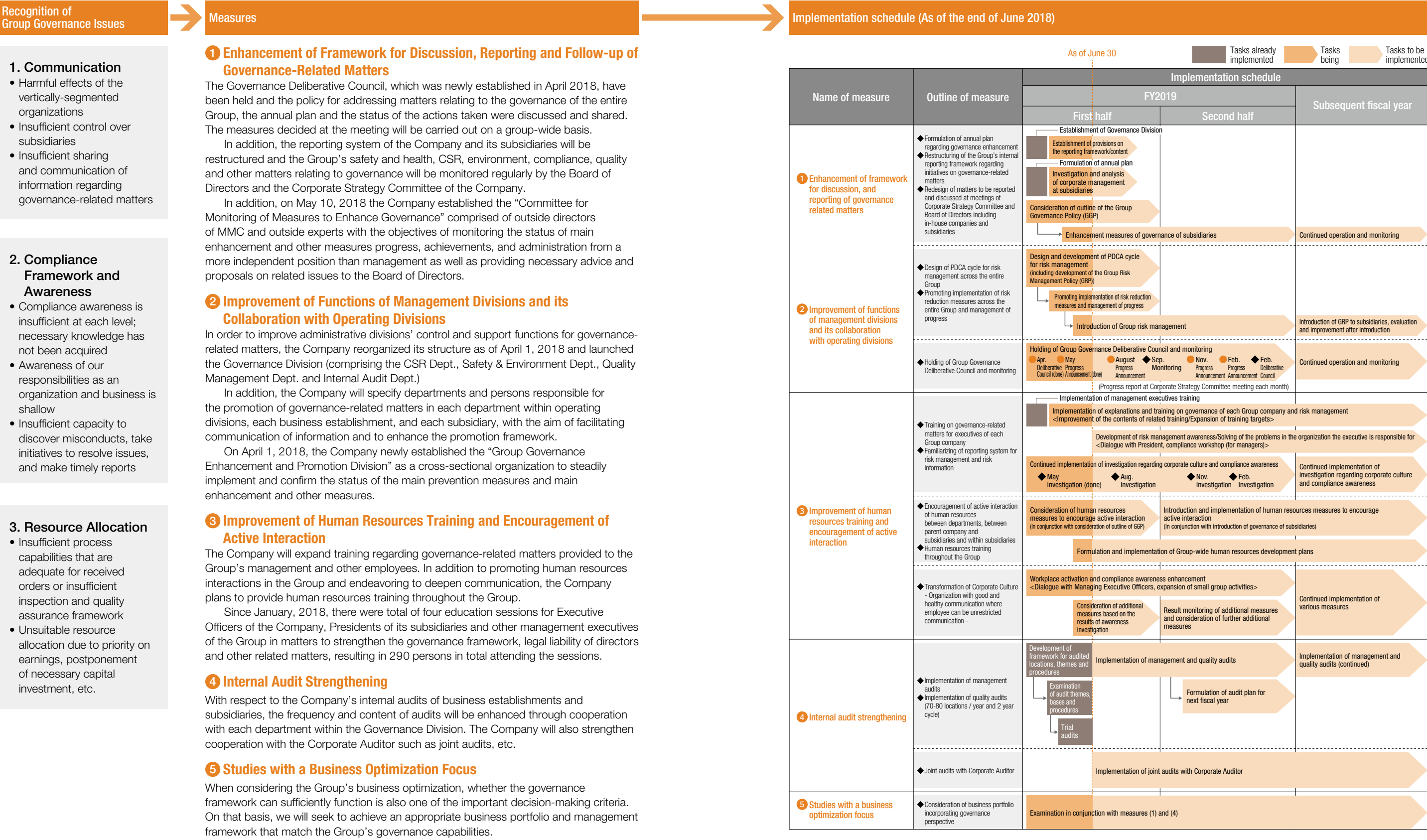


We aim at the long-term improvement of our corporate value by swiftly and surely implementing the Measures with further enhanced sense of crisis and in a more timely manner and working to regain the trust of customers and other stakeholders.

CSR Dept.	Safety & Environment Dept.	Quality Management Dept.	Internal Audit Dept.
<p>[Specific matters for implementation]</p> <ul style="list-style-type: none"> Expansion/Repeated thorough provision of compliance education Continuous implementation of awareness survey Familiarization of the risk information reporting system Expansion and enhancement of the sharing and communication of risk information Swift sharing and status management of negative information Making compliance matters themes of small group activities 	<p>[Specific matters for implementation]</p> <ul style="list-style-type: none"> Enhancement of compliance with legislation in new facilities related to permits and licenses/registration/equipment specifications, etc. Strengthening of the framework for compliance with pollution prevention legislation Enhancement of environmental audit and survey Strengthening of the internal environmental management framework 	<p>[Specific matters for implementation]</p> <ul style="list-style-type: none"> Implementation of a Front Loading System Enhancement of the Framework and Authority of the Quality Management Dept. Expansion of Quality Training Promoting Automated Inspection Equipment Enhancement of Quality Audits Guidance meetings by external consultants Establishment of company-wide quality personnel committee 	<p>[Specific matters for implementation]</p> <ul style="list-style-type: none"> Increase of frequency of Comprehensive Internal Audits Improvement of audit contents Promotion of joint audits with Corporate Auditor Strengthening of the audit of overseas facilities

Enhancement of the Governance Framework

The Company formulated and began to implement the measures for the solution of the Group governance issues, based on the analysis of the background and root causes of the quality issues.



Main causes of the shipment of non-conforming products	Preventive measures	Implementation Schedule (As of the end of June 2018)																																																																									
<ul style="list-style-type: none"> Inadequate framework for exerting influence on product development and order receiving processes at order receiving stage Attitude excessively prioritizing "order receiving" and "delivery date" Order received and mass production that the specifications exceeding manufacturing capability 	<p>① Implementation of a Front Loading System for Order Receiving</p> <p>Currently, we are planning to implement a system (a Front Loading System) for making decisions on specifications and receiving orders after considering whether the order can be accepted taking into account manufacturing capability at various department within the business division including development and design, manufacturing, inspections and sales.</p> <p>Currently, according to the new guidelines for the front loading system, each business is installing the front loading system. Some businesses have begun considering of products in new orders at receiving orders, based on the guidelines.</p>	<p>As of June 30</p> <p>Tasks already implemented Tasks being Tasks to be implemented</p> <table border="1"> <thead> <tr> <th>Name of measure</th> <th>Outline of measure</th> <th>FY 2018</th> <th colspan="2">FY2019</th> <th>Subsequent fiscal year</th> </tr> <tr> <th></th> <th></th> <th></th> <th>First half</th> <th>Second half</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="2">① Implementation of a front loading system (FLS) for order receiving</td> <td>◆ Establishment and wide dissemination of guidelines ◆ Confirmation of operation status</td> <td></td> <td>Establishment and wide dissemination of FLS guidelines Review of FLS guidelines</td> <td>• Confirmation (during quality audits) and periodic review of FLS operation status</td> <td></td> </tr> <tr> <td>◆ Primary preventive measures for quality issues at 5 affected companies</td> <td></td> <td>• Strengthening DR 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<ul style="list-style-type: none"> Insufficient framework of quality assurance system Pressure on quality assurance departments from other departments 	<p>② Enhancement of the Framework and Authority of the Quality Control Department</p> <p>Centered on the Governance Division and the Quality Management Department, we will establish a framework aimed at improving quality control for the Group and will construct the required quality control function for each business and product.</p>																																																																										
<ul style="list-style-type: none"> Low awareness of compliance with specifications Arrogance in thinking that quality control is being achieved Low sensitivity to risk in relation to quality issues 	<p>③ Expansion of Quality Training</p> <p>We will expand quality training aiming to have our group employees at all levels and in all areas understand the importance of quality and what should be done to maintain and improve quality. We will use the recent quality issues (the "Incident") in this training.</p> <p>After April 2018, training of quality management personnel of the Group will be provided by inviting outside experts, and a meeting will be held for personnel responsible for quality in the Group. In addition, a new handbook for quality management will be developed and used for training and other purposes.</p>																																																																										
<ul style="list-style-type: none"> Insufficient business resources (insufficient inspectors, inspection equipment, etc.) 	<p>④ Promoting Automated Inspection Equipment</p> <p>For all product inspection data, from when it is obtained during the manufacturing process through the final inspections, by promoting initiatives such as automating acquisition of inspection data, we will aim to establish a system that will prevent misconduct, including the rewriting of data, and will establish a system that allows for more accurate and prompt confirmation that inspection data is consistent with customer specifications.</p> <p>Currently, the locations where the Incident occurred are installing equipment for automated processing as soon as it is ready and some locations have already started operating the equipment. In addition, the details of the process to install the equipment for automated processing for the entire Group are being discussed. We will formulate a three-year plan to be prepared for this installation.</p>																																																																										
<ul style="list-style-type: none"> Audit procedures that has become a mere facade 	<p>⑤ Enhancement of Quality Audits</p> <p>With the Quality Management Department and Internal Audit Department in the Governance Division taking the lead, we will implement the following measures, etc.:</p> <ol style="list-style-type: none"> Improving the independence of our group's internal audit departments and strengthening their authority; Increasing internal audit staff and increasing the frequency of audits; Training human resources to become experts in quality audits; Applying audit methods for the prevention of misconduct; Enhancing coordination among the Company's Internal Audit Department and the internal audit departments of our subsidiaries and associates; and Improving internal audit operations with the use of IT <p>During FY 2019, quality audits will be conducted, covering about 70 locations in Japan and overseas.</p>																																																																										
	<p>⑥ Utilization of Outside Consultants</p> <p>In order to introduce third party perspective in quality control, we will utilize outside consultants on an ongoing basis specializing in quality control matters. Since January 2018, outside consultants have visited locations where the Incident occurred and provided guidance and advice on quality management and assurance. The number of locations these consultants visit will be increased in the future to prevent complacency in the Group's quality management activities and to firmly establish effective quality management activities.</p>																																																																										

Progress of Recurrence Prevention at the Subsidiaries where the Quality Issues Occurred

The MMC's five consolidated subsidiaries, where the recent quality issues occurred, are respectively implementing the measures to prevent a recurrence of the issues as their top priority. At the same time, they are also implementing the group governance framework enhancement measures which include quality control. The progress of the measures at the above companies is reported in the Implementation Schedule on the page on the right.

Compliance

Compliance is an essential factor in a company's sustainable development and a cornerstone of corporate management. The Mitsubishi Materials Group directs constant efforts to improve compliance awareness among individual employees through activities such as domestic and overseas training.

Commitment to Raising Compliance Awareness

Our broad view of compliance encompasses such elements as corporate ethics and social norms in addition to legal compliance, reflecting our sincere determination to live up to our stakeholders' expectations.

We are continually implementing new measures to enhance our Group-wide compliance programs, including domestic and overseas training aimed at realizing our steadfast commitment to improving compliance awareness among individual Group employees. Recent quality issues have made us more determined than ever to raise awareness in every facet of our business.

Activities Conducted to Raise Compliance Awareness

Recognizing the importance of establishing the Corporate Philosophy system among all our employees, we produce and distribute booklets, posters, cards and collections of case studies concerning compliance issues. The booklets, posters and cards are produced in 21 languages for sharing with employees worldwide.

Since 2006, the Mitsubishi Materials Group has recognized October as Corporate Ethics Month. During this month each year, a message from the President is posted on the Company intranet, and the various facilities and Group companies plan and conduct unique activities. We share the Group's sense of crisis through small group activities, moreover, considering all issues that arise as our own problems and exchanging opinions to raise compliance awareness and improve workplace communication. We will also continue to conduct investigations regarding awareness for all our employees.

Group-wide CSR Education

We provide CSR education and training with a special emphasis on compliance for Mitsubishi Materials Group employees in Japan and overseas.

We have constructed a framework that enables every employee in every domestic Group company to participate in CSR training once a year. To accomplish this, we have been training instructors to provide CSR training for both our Corporate and Group companies since 2012. Employees responsible for promoting CSR activities at our individual facilities and Group companies serve as instructors for the training.

At facilities outside Japan, meanwhile, CSR-related education and training are conducted after careful consideration of the appropriate training contents in light of conditions in the country or region concerned.

Special preliminary and global human resources training courses are organized to provide employees assigned overseas with training in CSR-related issues, including conflict minerals, human rights in emerging countries (such as child and forced labor), regulations concerning competition in the respective countries and overseas anticorruption measures.

We make proactive use of visiting instructors and e-learning in our training programs organized to enhance compliance awareness among employees both in Japan and overseas.

In-House Reporting System

We established an Internal Contact Office in December 2002 as a consultation service to handle reports and inquiries from employees of Mitsubishi Materials Corporation and its Group companies. We added an external reporting system in April 2006 as an outsourced service operated by an independent law firm. Contact information for these reporting system is printed on cards for employees of the Mitsubishi Materials Group to keep on their person and made available on our Group newsletter and through our CSR education and training activities.

Numbers of reports and inquiries received through the In-house reporting system (FY)

2012	2013	2014	2015	2016	2017	2018
33	19	22	24	33	38	41

Initiatives to Prevent Bribery of Public Officials Overseas

A number of Japanese companies have been convicted of bribing officials in foreign countries in recent years, for which they have incurred large fines in the countries concerned. We are reinforcing our systems of preventing bribery of this kind as we expand our operations globally. In April 2018, we clarified our stance in a manual titled "Regulations for Combating Bribery of Public Officials, Etc." We are continuing our efforts to prevent bribery, and to keep our domestic and international Group companies fully informed of our current system.

Risk Management

We are striving to improve our risk awareness and our ability to deal properly with the various risks surrounding the Group in order to ensure stable operation of our business and to minimize any risk-related damages. As a part of an enhanced governance structure introduced by the Group as of fiscal 2019, moreover, crisis management has been combined with risk management activities to create a system that initiates action against recognized critical risks without fail.

Risk Management Activities

Basic Perspective

We conduct risk management activities aimed at controlling factors that could exert a negative impact on our business performance and providing steady support for sound business operations throughout the Mitsubishi Materials Group. To assure achievement of these goals, we adhere conscientiously to the following three basic policies:

Basic Risk Management Policies and Objectives

- 1. Responding to high priority risks:**
Prioritizing risks and implementing measures accordingly
- 2. Identifying unrecognized risks:**
Using risk management records to establish a comprehensive overview of all risks
- 3. Sharing information concerning risks:**
Disclosing the details of Companywide risks to all concerned parties

Implementation structure

Entities responsible for risk management in the corporate divisions, business divisions, factories, branches and Group companies formulate risk management plans according to Group risk management policies/plans approved by the CSR Committee. Upon receiving approval from the Governance Deliberative Council, they develop and deploy action plans in conjunction with the CSR Dept.

Each division identifies all risks at the beginning of each fiscal year, implements measures to minimize them throughout the year and conducts evaluations of their performance at year-end to determine areas for improvement in the coming term. Information on the activities is shared with the administrative and corporate divisions, and their progress is regularly monitored by the Committee for Monitoring of Measures to Enhance Governance comprising outside directors of MMC and outside experts, Corporate Strategy Committee, Board of Directors and internal audits, with a rigorous PDCA cycle applied overall.

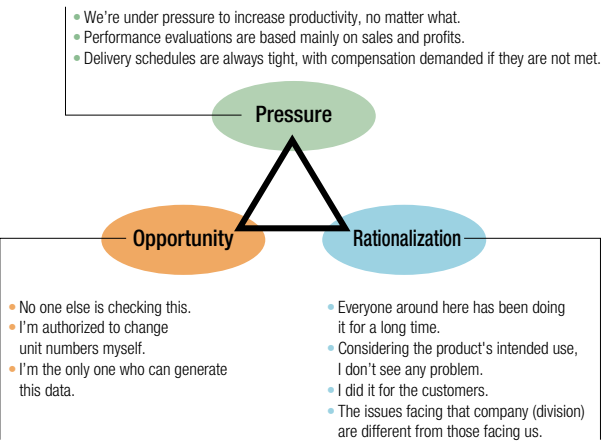
In the area of employee education, meanwhile, we hold training and consulting meetings led by CSR Dept. staff or outside consultants in Japan and overseas as part of efforts to enhance risk awareness and strengthen our Group-wide risk control capabilities.

Comprehensive identification of critical risks

The corporate divisions take the lead in identifying the critical corporate risks which are common throughout the Group in addition to the inherent risks to business segments identified by individual businesses.

To ensure absolute protection against critical risks at a time when these are diversifying and intensifying, the Group has instituted a system for comprehensive risk identification from various perspectives, with a particular focus on risks involving fraud as seen from the three viewpoints of "opportunity," "pressure" and "rationalization". Making use of the well-known "fraud triangle" theory for factor analysis of fraud.

The Fraud Triangle



Crisis Management Activities

We are striving to strengthen our crisis management systems to facilitate fast, accurate responsiveness to emergency situations, including natural disasters, accidents, terrorist activities and pandemic events. Besides formulating crisis management measures, we institute business continuity plans for all our consolidated subsidiaries in Japan and overseas with the aim of minimizing the impact on customers of any crisis that might occur through swift restoration and continuation of operations.

We are also developing systems for obtaining information and expert advice from external consulting firms on the latest trends in crisis management around the world. We distribute regional editions of safety manuals that consider risks unique to individual countries and regions, and moreover, conduct security checks for particularly high-risk countries and regions.

In addition to crisis management measures implemented so far in preparation for natural disasters, accidents, terrorist activities and pandemics, we intend to formulate systems to manage other critical risks we have identified in the course of our risk management activities.

Cement Business



Seeking to enhance our domestic plants’ international competitiveness and to activate business in local areas overseas as an industry leader



Kazuhiro Kishi, Director and Managing Executive Officer
President, Cement Company

Medium- to Long-term Goals

- ◆ Become a leading company in terms of efficiency in the cement industry
- ◆ Become a local-area champion in overseas

Business Policy

- Become superior in the domestic market that is contracting as it matures
- Grow overseas businesses with the support of stable cash income from domestic businesses

Key Strategies

Achieve growth through innovation	◆ R&D and Innovation Develop technology to reuse waste for cement manufacturing Enhance concrete technology Reduce CO ₂
Create value by building a recycling-oriented society	◆ Expand the environmental business Develop new business in growth segment Increase the alternative thermal energy rate
Increase the company's market presence through investment for growth	◆ Fortifying the domestic foundation for competitiveness Kyushu Plant: Increase global competitiveness Downstream businesses: Fortifying the sales foundation in Tokyo Metropolitan Area, etc. ◆ Expand the U.S. business Expand the ready-mixed concrete business Establish and reinforce MCC terminals ◆ Develop new overseas business bases
Increase efficiency through continuous improvement	◆ Improve domestic and the U.S. cement manufacturing technology Establish a stable operation system Reduce costs Thoroughly conserve energy Increase workplace capability

Message from President of the Cement Company

The Cement Company's operations have two aspects. It serves as both an “arterial enterprise” that provides stable supplies of basic materials required by society, and as a “venous enterprise” that processes and recycles various waste materials. Detoxifying waste delivered by our veins and returning it to our arteries as products with added value enables us to contribute to realization of a recycling-oriented society. As societies become more affluent, the amount of waste they generate increases naturally. But this waste can be recycled to build the foundations for town and city construction. I believe this to be the most important role our cement business plays in society.

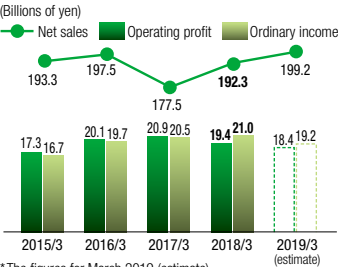
While demand for cement is contracting in Japan from the perspective of quantity, demand for high-quality cement products is growing to meet needs such as measures to guard against natural disasters, achieve rapid disaster recovery and disseminate concrete paving with low life-cycle costs. At the same time, we are threatened with increased cost competition from other companies overseas, where robust demand for cement is expected. The Kyushu Plant, our main production facility and the largest in Japan in terms of production capacity, is located in a coastal area not far from a company-operated mine from which it procures limestone raw material. Building on these major strengths, we are collaborating closely with the Central Research Institute in research aimed at reducing our equipment failure rate, innovating and increasing our processing efficiency, and saving more energy in order to further enhance our global competitiveness. We intend to expand our shipping facilities for exports in the future.

To reinforce our sales capabilities in Japan, meanwhile, we have gathered our technical capabilities in the field of ready-mixed concrete at our Concrete Technology Center, which has been relocated to central Tokyo, and established a system for responding promptly to customer requests concerning concrete quality and technologies.

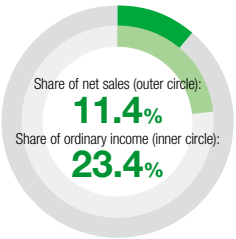
Collecting waste contributes to realizing a recycling-oriented society as well as to reducing costs. We are currently focusing on improving our processing capabilities for various waste materials, including waste plastics, as an alternative thermal energy resource. We plan to reinforce this initiative at all our plants in Japan going forward.

Overseas, we operate a cement manufacturing base in Southern California, where we have become a leading company in the ready-mixed concrete business. Buoyed by our company's high reliability and growing demand, we have maintained a considerable market share and excellent business performance, both of which we are seeking to improve further. We are currently looking for candidate locations for applying the business model we have deployed in the United States in other countries.

We will continue to promote further innovations in our “safe and reliable Mitsubishi cement,” with our highest priority remaining on quality.



* The figures for March 2019 (estimate) were published on May 10, 2018.



Strengths	Weaknesses
<p>[Domestic business]</p> <ul style="list-style-type: none">• High cost competitiveness of Kyushu Plant (Kanda)• International sales capabilities, stable export destinations• Waste disposal processes <p>[Overseas (U.S.) business]</p> <ul style="list-style-type: none">• Vertical value chain• High competitiveness and customer satisfaction with Robertson's Ready Mix, Ltd.	<p>[Domestic business]</p> <ul style="list-style-type: none">• Lack of reserve export capability remaining at Kyushu Plant (Kanda)• High electric power costs• Weak cement sales capability in the Tokyo Metropolitan Area <p>[Overseas (U.S.) business]</p> <ul style="list-style-type: none">• Insufficient cement supply capacity
Opportunities	Threats
<p>[Domestic business]</p> <ul style="list-style-type: none">• Demand for large-scale projects in the Tokyo Metropolitan Area• Expanding demand in emerging countries• Increased quantity of coal ash generation <p>[Overseas (U.S.) business]</p> <ul style="list-style-type: none">• Long-term growth in demand• High entry barriers against new competitors	<p>[Domestic business]</p> <ul style="list-style-type: none">• Contracting demand for cement in Japan• Rising electric power prices• Tightened environmental regulations, CO₂ emissions regulations <p>[Overseas (U.S.) business]</p> <ul style="list-style-type: none">• Soaring coal ash procurement costs• Tightened environmental regulations• Rising electric power prices

Fiscal 2018 in Review

Our focus at the Kyushu Plant during fiscal 2018 was on facility improvement and expansion aimed at further enhanced cost effectiveness. We also directed efforts at improving our processing capabilities for waste plastic and other waste, with our new systems to be in full operation before the end of fiscal 2019.

We responded to expanding demand in the Tokyo Metropolitan Area by acquiring Tokyo Ryoko Concrete Corp. as a wholly-owned subsidiary and relocated the Concrete Technology Center to its premises.

Our overseas business performance was strong, buoyed by a positive market environment in the United States. Demand for cement in Southern California, where Robertson's Ready Mix, Ltd. (MCC Development Corporation's main subsidiary) conducts the ready-mixed concrete business, was particularly high, and recorded growth of approximately 8% compared to the previous year. We also acquired a new aggregate quarry site to improve the aggregate self-sufficiency ratio. We have applied for an environmental permit for the site.

Outlook for Fiscal 2019 in Light of the External Environment

We expect demand for cement in Japan to register 42.5 million tons in fiscal 2019 (up 1.5% from the previous year). We are leveraging the expertise of the Concrete Technology Center to provide customers with further enhanced technical services. We are also pursuing improvement of our concrete technologies and human resources development, moreover, in cooperation with other Group companies.

Our target for waste plastic processing at the Kyushu

Business Overview

Cement is an essential material for construction of social infrastructure, from office and residential buildings to dams, bridges, roads and breakwaters. The Cement Company has established a broad business structure encompassing manufacture and sales of various cement products, soil-stabilizing cement, mineral products (aggregate, limestone), concrete repair materials and ready-mixed concrete. In addition to our four plants in Japan, we have established operations in Southern California to conduct businesses based on a vertical integration model from cement production to ready-mixed concrete and aggregate manufacture.

Plant in fiscal 2019 is a 34% increase from fiscal 2017. In view of Chinese import restrictions on waste plastics, we are confident of our ability to meet this target. Demand for cement from fiscal 2021 forward is expected to decline, meanwhile, to below 40 million tons. Moves to secure stable overseas exports from the Kyushu Plant will include further expansion of its exporting capacity and continued investigation of the potential for new overseas business, especially in the Southeast Asia and Oceania regions.

We anticipate growth in demand for cement in Southern California from its current level of approximately 6 million tons a year to about 7 million tons a year by 2020. We will respond by constructing new ready-mixed concrete plants to expand our supply chain in this area. We will also move forward with our search for sites to expand our network of aggregate quarry mines. The State of California has tightened its regulations concerning exhaust gases and other air pollutants, and we have responded by steadily promoting implementation of the requisite measures to assure business continuation, including rigorous controls on combustion and exhaust gas emissions. At the same time, the Mitsubishi Cement Corp.'s Cushenbury Plant is working to enhance its cost competitiveness by upgrading its systems of processing and using alternative fuels.

Activities for Medium- to Long-term Growth

In light of the possibility of industry restructuring associated with the reduced demand for cement in Japan, we are determined to position ourselves in the forefront by boosting our strengths and eliminating weaknesses. We plan to increase our international competitiveness, moreover, by enhancing energy efficiency and conservation as well as by maintaining the utilization rate of our domestic plants to reduce manufacturing costs while also improving and expanding the Kyushu Plant's exporting facilities. In the domestic market, we will develop high-value-added businesses that respond accurately to customer demand by reinforcing our technical capabilities through efforts centered on the Concrete Technology Center.

Overseas, we are seeking to maximize profits throughout the value chain in Southern California, while also laying the groundwork for importing cement from other countries.

Intent on extending the know-how acquired through our vertical integration model in Southern California horizontally to other overseas markets, we have been reviewing candidate locations for conducting business while assessing the market size and available resources.

Japan

Reinforcing the Kyushu Plant's International Competitiveness

In preparation for the anticipated reduction in domestic demand for cement from fiscal 2021 forward, we aim to maximize profits by maintaining full production at the Kyushu Plant, which surpasses our other plants in cost competitiveness. This will require increasing exports as domestic demand contracts. Taking the risk of fluctuations in international market conditions into account, we will seek to reduce manufacturing costs as well as to upgrade the berths and other bulk handling facilities at the Kyushu Plant to enhance its international competitiveness.

We worked on facility improvement as part of our cost reduction measures in fiscal 2018, making use of the Central Research Institute's advanced data analysis and simulation technologies. It took some time for conditions in the plant to change in accordance with the simulations, but we eventually obtained more positive results through cooperation and intensified competition among engineers at the sites and the Central Research Institute. Additionally, with the company, the Corporate Production Engineering Department and the Central Research Institute joining forces in cross-functional projects (CFP), we began implementing initiatives to extend the life of refractory materials in the kiln and to realize long-term stable facilities operation.

In fiscal 2019, we will reduce manufacturing costs further by such means as introducing these accumulated skills to the workplace and training technical staff to reduce the number of equipment failures during a year of continuous operation and to increase the amount of waste processed. Among other moves to enhance our quality control, we will promote introduction of fully automated analysis systems by fiscal 2020. By both increasing the frequency of the

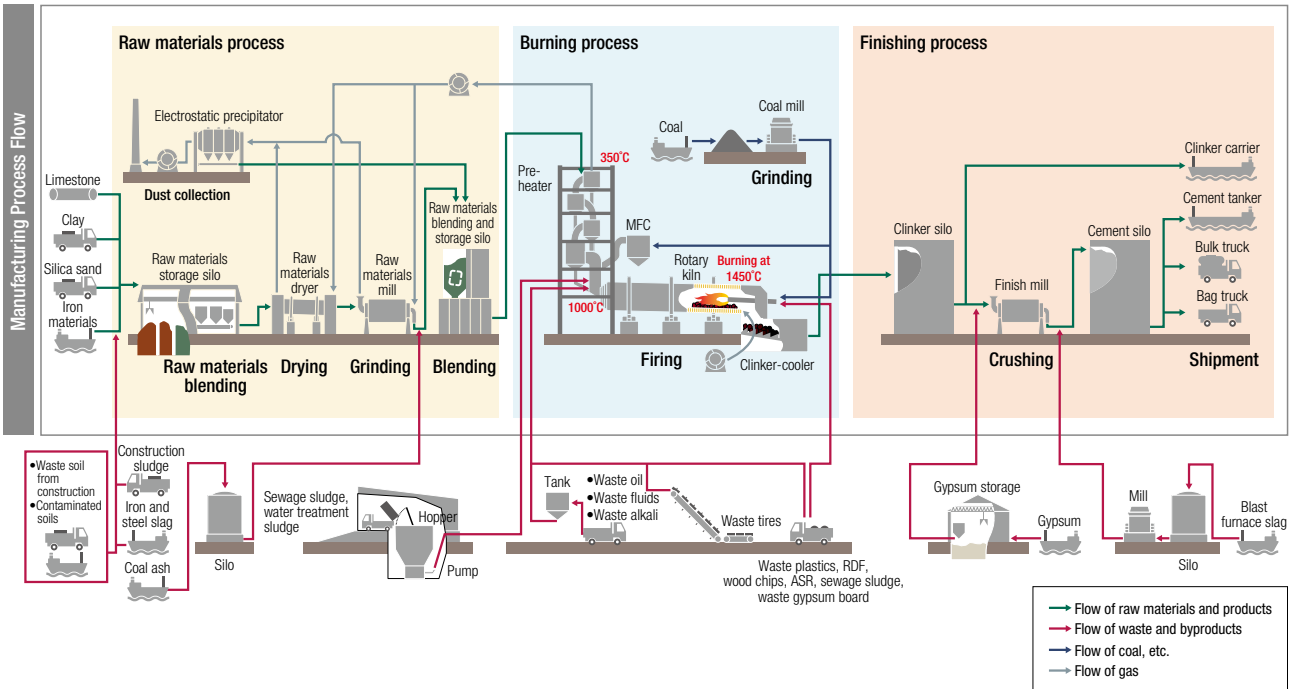


analyses and expanding the range of substances analyzed, we will ensure the quality of our products so that customers can use them more confidently than ever. We also intend to improve our logistics and bulk handling functions, moreover, by introducing measures to reinforce our berthing capabilities and conducting deliberations on effective operation of multiple berths with a view to expanded exports in the future.

Amount of waste and byproducts:
Approx. 4 million tons/year

Volume of raw materials recycled per ton of cement:
436 kg/ton

Cement production processes and waste acceptance



Japan

Environmental Business Expansion

Committed to contributing to realization of a low-carbon society while stabilizing the Cement Business profitability, we are pursuing initiatives to increase the ratio of alternative thermal energy.

Our priority measures for raising this ratio are aimed at, first, increasing our disposal processing capacity for difficult-to-treat waste, such as high-chlorine waste plastics and shredder dust generated from junked automobiles and discarded domestic electrical appliances, and, second, development and expanded acceptance of waste tires, biomass and low-cost alternative sources of thermal energy (wood chips, waste oil, etc.). As part of this initiative, we collect wood chips derived from driftwood generated by torrential rains in northern Kyushu and contribute to recovery and restoration of disaster areas.

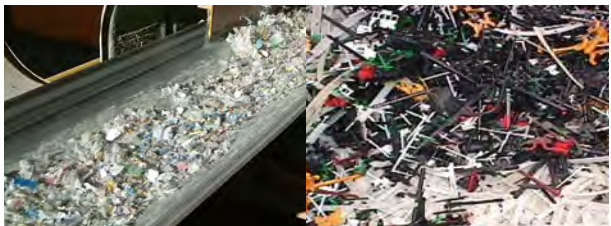
In fiscal 2018, construction conducted to improve the capabilities of our waste plastics processing facilities was completed at our main Kyushu Plant (Kanda). During fiscal 2019, we will increase our alternative thermal energy rate by 34% compared to the fiscal 2017 benchmark, with a further 37% to be added in fiscal 2020 by fully realizing the effects of our capacity improvement work and by expanding our intake of low-cost alternative thermal energy resources.



Waste tires



Wood chips



Waste plastics

Overseas

Expanding Vertical Integration in the Overseas Cement Business

Growth in demand for cement and ready-mixed concrete is expected to continue in Southern California, where Robertson's Ready Mix, Ltd. has established a strong sales base. Further enhancement and extension of our ready-mixed concrete business will position us to benefit substantially from this growth in regional demand.

In fiscal 2018, we acquired a site adjacent to an aggregate quarry in Southern California, where excavation is currently under way, and commenced procedures for obtaining licenses for development of new aggregate materials. We expect these operations to secure a stable supply of aggregate materials from a long-term perspective and to enhance the cost competitiveness of our ready-mixed concrete business by increasing the aggregate self-sufficiency ratio. Another promising development is that a cement import terminal, where operations had been suspended, is nearly completing installation of new equipment in response to environmental regulations in preparation for a resumption of importing.

Among other fiscal 2019 initiatives, we plan to initiate operation of a new ready-mixed concrete plant currently under construction in northwestern Los Angeles County by the end of the year. In future, we will continue adding new sales channels and expanding our sales area by establishing new ready-mixed concrete plants and acquiring new aggregate resources, with the aim of enhancing our business value by strengthening our market presence.

Intent on entering into new overseas markets, we continue to explore investment opportunities that can contribute to improving the value of the cement and ready-mixed concrete business, focusing on such factors as business and value chain configurations that conform to the characteristics of the target area's market and the macro environment.



Cushenbury Plant, Mitsubishi Cement Corp.



Ready-mixed concrete plant, Robertson's Ready Mix, Ltd.



Satisfying growing worldwide demand for metals by leveraging synergies in three fields of business: mining & mine development, smelting & refining, and copper & copper alloy products



Yasunobu Suzuki, Director and Senior Managing Executive Officer
President, Metals Company

Medium- to Long-term Goals

- ◆ Increase synergy between new copper mine development and smelting & refining
- ◆ Expand the recycling business and increase its profitability
- ◆ Build high rolling-margin profitability in the copper & copper alloy products business

Business Policy

Contribute to a recycling-oriented society through metals from manufacturing to recycling

Key Strategies

Achieve growth through innovation

- ◆ [Copper & copper alloy products] Sell products meeting customer needs
- ◆ [Copper & copper alloy products] Increase sales of terminal materials and new alloys
- ◆ [Copper & copper alloy products] Develop high-performance plating

Create value by building a recycling-oriented society

- ◆ [Smelting & refining] Increase E-Scrap recycling
- ◆ [Copper & copper alloy products] Promote alloy recycling

Increase the company's market presence through investment for growth

- ◆ [Mining & mine development] Develop new projects
- ◆ [Copper & copper alloy products] Create synergy with Luvata
- ◆ [Copper & copper alloy products] Establish global sales system
- ◆ [Copper & copper alloy products] Expand sealing materials business

Increase efficiency through continuous improvement

- ◆ [Mining & mine development] Improve the system of improving and making decisions on existing projects; organization reinforcement
- ◆ [Smelting & refining] Increase process efficiency
- ◆ [Smelting & refining] Optimize the smelting & refining business
- ◆ [Copper & copper alloy products] Fortify the manufacturing system of rolling business
- ◆ [Copper & copper alloy products] Strengthen cost competitiveness of extrusion business

Message from President of the Metals Company

The Metals Company is a basic industrial enterprise that provides society with various essential metal materials.

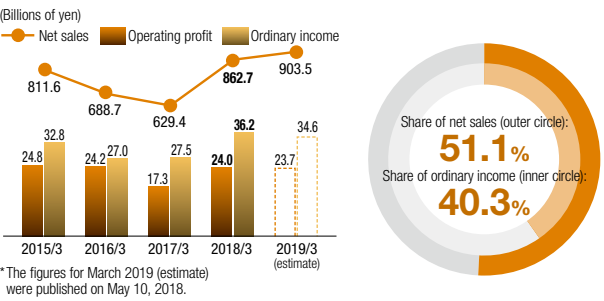
Our business policy is to “contribute to a recycling-oriented society through metals from manufacturing to recycling.” We anticipate continued growth in demand for copper, our main product, in coming years accompanying the shift to renewable energy in developed countries, infrastructure development in emerging countries, accelerating vehicle electrification and proliferation of EVs, progress of the IoT and other factors. The question we face is how best to fashion our company's responses to this increasing demand.

In the mining & mine development business, we invest in three copper mines in Canada and Chile, securing stakes in their mineral resources. We are also working on new projects. Our Zafranal Project in Peru plans to commence operations in 2022. Most of the world's good copper deposits that are easily accessible and profitable have already been developed by now, and a reduction in the copper grade and increase in impurities in the available ores have emerged as issues. The challenges we have to overcome are therefore to ensure profitability by developing technologies to remove the impurities from the ores and to improve the quality of copper concentrates right at the mine site through application of our smelting technologies.

In the meantime, the smelting & refining business is focusing its efforts on E-Scrap recycling. In conjunction with the growing demand for copper, recycling of used copper is becoming increasingly important. We have established systems for recovering valuable metals such as copper as well as gold and other precious metals from printed circuit boards in discarded home appliances and electronic devices such as PCs. In fiscal 2017, Naoshima Smelter & Refinery's annual processing capacity for E-Scrap reached 110,000 tons, the world's largest, and in fiscal 2018, we established facilities in the Netherlands for receiving and sampling E-Scrap from the region centered on the EU.

Our copper & copper alloy products business has moved quickly to prepare to benefit from the promising opportunity afforded by the mid- to long-term escalation of copper demand. In this connection, we are sharing information and technology with Luvata, a recent addition to the MMC Group.

In the domestic market, we are seeing steady demand for our products from customers in the automobile and semiconductor fields. We are satisfying diverse customer requests by expanding our production capacity and developing new plating technologies. All these activities are technically challenging, but we will proceed to solve them one after another in fiscal 2019. I believe this will refine our proprietary expertise and enhance our competitiveness. Copper materials are extremely promising. Our aim will be to achieve further growth by capitalizing on synergistic effects with other Group companies and business divisions, while determining which businesses we should focus on.



Strengths	Weaknesses
<p>[Mining & mine development]</p> <ul style="list-style-type: none"> Long-term good relationship with major resources companies Long years of operational experience in limestone mining <p>[Smelting & refining]</p> <ul style="list-style-type: none"> Company's stable foundation comprising three smelters and refineries in Japan and overseas Processing technologies for E-Scrap and waste making use of the Mitsubishi Process featuring high efficiency and an exceptionally low environmental impact <p>[Copper & copper alloy products]</p> <ul style="list-style-type: none"> Copper alloy products manufactured based on the company's unique technologies World's most advanced technology R&D and manufacturing technologies, including those of Luvata 	<p>[Mining & mine development]</p> <ul style="list-style-type: none"> Shortage of engineers for mining projects (especially in the field of metallurgy) <p>[Smelting & refining]</p> <ul style="list-style-type: none"> Increased costs of PGM and rare metals smelting Insufficient response to potentially increased impacts related to impurities such as arsenic and tin Inferior economy of scale for copper production compared to smelters and refineries elsewhere in the world <p>[Copper & copper alloy products]</p> <ul style="list-style-type: none"> Insufficient passing down of expert workers' skills and expertise Aging facilities Slow entry into overseas markets compared with other companies
Opportunities	Threats
<p>[Mining & mine development]</p> <ul style="list-style-type: none"> Potential for developing technologies for removing impurities <p>[Smelting & refining]</p> <ul style="list-style-type: none"> Worldwide expansion of E-Scrap market with growing environmental awareness Global trend toward long-term increase in copper consumption <p>[Copper & copper alloy products]</p> <ul style="list-style-type: none"> Growing demand for semiconductor parts with proliferation of EVs Continuous growth of global automobile and semiconductor markets 	<p>[Mining & mine development]</p> <ul style="list-style-type: none"> Location of undeveloped deposits at higher altitudes or deeper underground, lower ore quality, increasing impurities Activities against development due to national controls on natural resources or environmental concerns, stricter regulations <p>[Smelting & refining]</p> <ul style="list-style-type: none"> Domination of mines by major resources companies Growing number of Chinese smelting and refining companies <p>[Copper & copper alloy products]</p> <ul style="list-style-type: none"> Active investment by Japanese and overseas competitors

Fiscal 2018 in Review

In the mining & mine development business, we initiated a feasibility study (economic evaluation) at the Zafranal Project in Peru with the aim of increasing our stake in mining. We also conducted a survey in conjunction with the Geo-Met Program at the Copper Mountain Mine in Canada, moreover, to investigate geological features and conduct metallurgical testing for the purpose of improving the accuracy of our production predictions through a better grasp of ore characteristics and productivity.

In the smelting & refining business, we installed a new sampling facility for high-grade E-Scrap at Naoshima Smelter & Refinery and brought it online in October 2017 for the purpose of increasing the volume of E-Scrap collection. In December 2017, moreover, we increased capacity at Onahama Smelting and Refining Co., Ltd. In order to construct a larger global E-Scrap collection network, we established MM Metal Recycling B.V. in the Netherlands to handle reception and sampling of E-Scrap generated in the region centered on the EU. The new facility commenced operation in February 2018.

Concerning the copper & copper alloy products business, sales of high-value-added products such as terminal materials for in-vehicle devices and sealing materials for semiconductors remained firm throughout the year as we enhanced the sales composition by shifting toward high-margin products. In May 2017, moreover, we acquired the Luvata Special Products Group as part of efforts to establish a global production and sales structure.

Business Overview

In accordance with its mission of providing society with stable supplies of metal materials and products, including copper, the Metals Company conducts business in the three fields of mining & mine development, smelting & refining and copper & copper alloy products. Our mining & mine development business invests in overseas copper mines in order to secure stable supply of copper concentrate as a raw material and to obtain dividend income from mines. In the smelting & refining business, we produce high-quality electrolytic copper using the Mitsubishi Process featuring high efficiency and an exceptionally low environmental impact, while also focusing on resources recycling. The copper & copper alloy products business supplies automotive parts, electric wires, copper tubing, oxygen-free copper, copper alloys and other products on a global scale.

Outlook for Fiscal 2019 in Light of the External Environment

In the mining & mine development business, we will continue to improve the management and operations of our three existing mine projects, while also continuing to evaluate possibilities for new mine development, such as the Zafranal Project in Peru, which yields clean, low-impurity ores.

In the smelting & refining business, we have already completed the construction work and facility expansion necessary in Japan and the Netherlands. Our E-Scrap processing capacity at Naoshima Smelter & Refinery and Onahama Smelting and Refining Co., Ltd. is now as high as 160,000 tons a year. The challenge we face going forward is to increase the volume of high-grade E-Scrap with a high valuable-metal content. We will procure copper concentrates through various channels, although this is becoming increasingly difficult year by year due to a rapid increase in China's smelting capacity.

In the copper & copper alloy products business, demand for products for use in automobiles and semiconductors is expected to remain strong. We will make capital expenditures to establish copper strip production lines to meet demand for increased production of high-value-added products centered on terminal materials for use in automobile devices. We will also direct efforts toward expanding sales of two new alloys, MSP®5 and MSP®8, for which demand can be expected to increase in the future for applications in EVs and renewable energy. We will also pursue establishment of a complementary supply system and an effective sales strategy with Luvata.

Activities for Medium- to Long-term Growth

In a time of continually expanding worldwide demand for copper, issues such as higher mine operating costs, domination of mines by major resources companies and obstacles to procurement of raw materials due to China's emergence are growing in complexity every year. People's expectations with respect to E-Scrap recycling are rising steadily as well.

In the mining & mine development business, we are aiming to achieve a Controlled Volume Ratio of over 50% in the early 2020s and are working to secure a stable supply of copper concentrates, while paying close attention to our relationship with the community and environmental issues. We will also establish a unique position in the industry by acquiring added value through integration of existing smelting technologies, one of our strengths, to strengthen our presence as a resources company, while training engineers by dispatching them to mine sites.

In the smelting & refining business, we plan to improve our sampling and assaying capabilities, which have strong implications for our E-Scrap collection capability, and further enhance our domestic processing capacity with the aim of establishing a processing capacity of 200,000 tons a year by fiscal 2022.

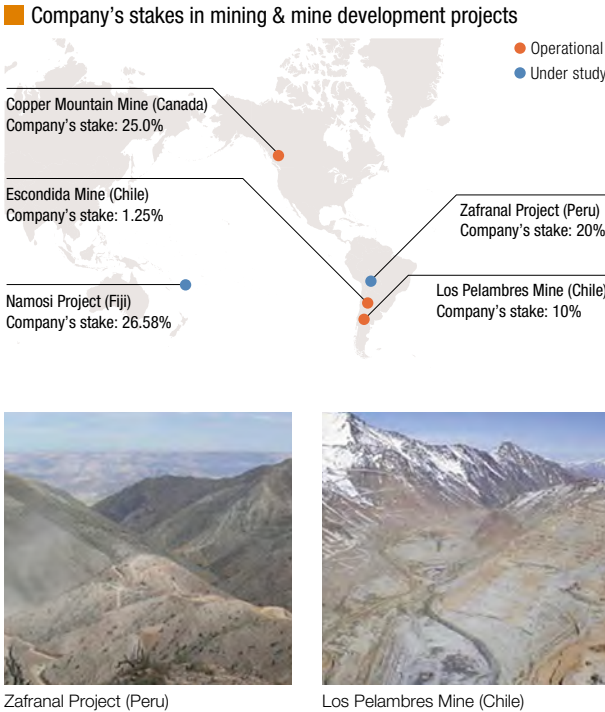
In the copper & copper alloy products business, meanwhile, we are seeking further growth by accelerating establishment of a global production and sales system through synergies with Luvata, while at the same time taking advantage of our unique technologies to improve our responses to customer requirements by adding greater value to our copper alloys and high-performance plating products.

Mining & Mine Development business

Steady Procurement of Copper Concentrates (Investment in Overseas Copper Mines)

With respect to copper concentrates, the raw material for copper products, we seek to secure stable supplies through investment in copper mines overseas. To realize even greater stability, our objective is to participate in low-cost mines with long mine lives. The Zafranal Project, a new copper mine in Peru, for example, is partnering with Teck Resources Ltd., Canada's largest mining company, to promote projects in careful consideration of the local community and the environment. The copper concentrates obtained from this mine are low in impurities, and can thus be expected to reduce the burden on our smelting operations. A feasibility study has been under way since 2017, and operations are scheduled to begin at about the end of 2022.

We are also focusing on measures to improve our operation of existing projects. We work together with the Copper Mountain Mine in Canada, for example, by dispatching engineers to the mine site, where they have implemented a successful initiative during fiscal 2018 to improve the accuracy of the mine's production predictions. We plan to continue deepening our involvement in the mine to help it optimize its production planning and improve productivity. The Escondida and Los Pelambres mines in Chile, meanwhile, are both highly competitive large-scale mines whose stable operations have made considerable contributions to the Metals Company's steady procurement of raw materials and earnings.



Smelting & Refining business

Expanding E-Scrap Processing

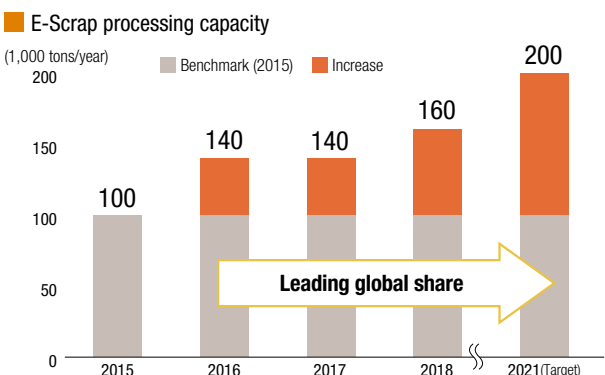
Structures and technologies that support efficient resources recycling are becoming increasingly important for securing stable supplies of metal resources and contributing to sustainable development of society. "Urban mines" comprising waste electrical and electronic equipment (WEEE), such as televisions, computers and mobile phones, have been attracting increasing attention in recent years as sources of valuable metals, including precious and rare metals, that can be extracted and recycled highly efficiently with minimal impact on the environment and local communities compared to natural mines.

In addition to the smelting and refining technologies for use with copper and other nonferrous metals the MMC Group has accumulated for over a century, we have abundant expertise in conducting various forms of recycling. We are actively engaged in recycling of E-Scrap (recyclable materials generated from dismantled and crushed WEEE, primarily from printed circuit boards). The Mitsubishi Process, a copper smelting and refining process originally developed by the company, is distinguished by its superiority in terms of cost efficiency and processing performance, not only with respect to copper concentrate processing but also to recycling.

In a step toward establishing a global collection structure and increasing our processing capacity for E-Scrap, which is increasing in volume worldwide, we established MM Metal Recycling B.V. in North Brabant, the Netherlands, in fiscal 2018 as a base for collection, inspection and sampling of

E-Scrap. The new facility will reduce the time required to assay the content of valuable metals in E-Scrap, while facilitating our responsiveness to the needs of recyclers and increasing the volume of E-Scrap collected in the region centered on the EU. Other moves during the term included installing an additional sampling facility for high-grade E-Scrap at the Naoshima Smelter & Refinery and investment in increased processing capacity at the Onahama Smelting and Refining Co., Ltd.

These measures have raised our Group's E-Scrap processing capacity as of fiscal 2019 to 160,000 tons a year, the highest level in the world. Going forward, we will continue to increase our collection and processing capacity and to promote collection and processing of high-grade E-Scrap with higher valuable-metal content.



Copper Processing & Copper Alloy Products business

Providing Products That Meet Customer Needs, with a Focus on High-Value-Added Fields

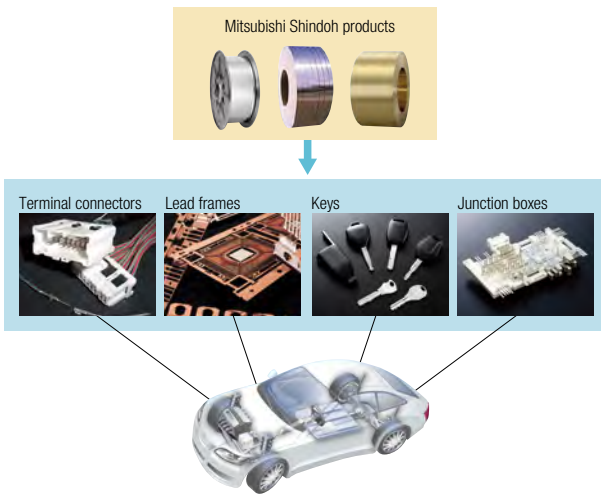
In the automobile and semiconductor fields, where demand for copper & copper alloy products is strongest, demand is expected to continue to increase in fiscal 2019 and beyond. The rapid growth of the next-generation vehicle market is particularly likely to drive soaring demand for copper.

The Metals Company responded to the automobile industry's need for compact, low-cost, high-performance electronic devices by developing two new alloys, MSP®5 and MSP®8, in a joint R&D project with Mitsubishi Shindoh Co., Ltd. MSP®5 is a high-quality, rare metal-free alloy with excellent cost performance developed as a material for high-end terminals for in-vehicle devices with properties (strength, conductivity, stress relaxation resistance and processability) equivalent to or better than those of the current mainstream Cu-Ni-Si alloys. MSP®8, which can be manufactured with simple processes, has the high material strength required for in-vehicle parts for high-voltage, strong-current applications such as superior conductivity, anti-stress relaxation properties and press processability. A number of automobile parts manufacturers have already decided to adopt these alloys, and we are preparing to begin mass-producing them in fiscal 2019.

Besides developing new alloys, we commenced capital expenditures to supply terminal materials for in-vehicle devices in response to the brisk market demand and began constructing a system for increased production of high-value-

added products that meet customer needs. We are also pursuing development of various high-performance plating and processing technologies. In the area of sealing products, moreover, we plan to reinforce a production system to improve sales.

Looking to the future, we will continue to develop high-performance alloy products matched to our customers' diversifying needs, establish systems to supply them and reinforce our sales promotion efforts.



Acquisition of Luvata and Pursuit of Integrated Synergies

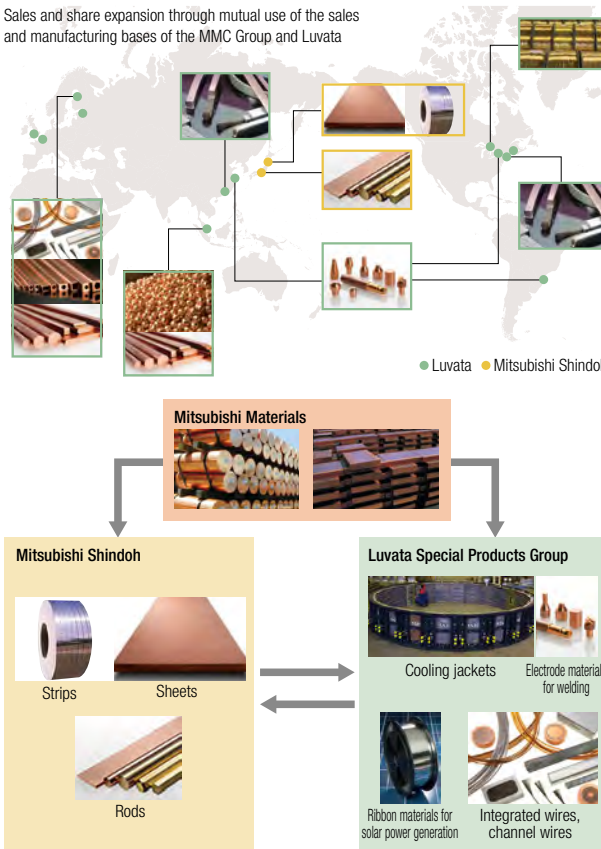
As a world leader in the copper-processing field, the Metals Company has so far developed its business primarily in Japan and Southeast Asia. With today's rapid globalization of customer companies and intensifying competition with producers in emerging countries, however, we have identified "establishing global production and sales structures" and "developing business in growth areas" as challenges for realizing continued corporate growth and further improved earnings. With this in mind, we acquired the Luvata Special Products Group in May 2017 to gain access to its network of twelve business bases in seven countries worldwide, centered in North America and Europe, and its global production and sales structures.

Taking the opportunity presented by our acquisition of Luvata, we have been examining the prospects for implementing the following synergies:

- Sales promotion in thus far uncultivated markets (especially in Asia) by both companies
- Effective deployment of resources through complementary supply of materials between the two companies
- Sales expansion through introduction of our alloy technologies to Luvata

As of fiscal 2019, we have already begun conducting complementary supply of materials and combined sales promotion activities.

Our plans for the future center on accelerating the global expansion of our copper & copper alloy products business as part of efforts toward further growth through pursuit of various synergies among the regional, product and technological assets of our Group and Luvata.





We aim to become the global leader in the cemented carbide products market by leveraging our superior product value and proposal capabilities through selection and concentration.



Shinichi Nakamura, Managing Executive Officer
President, Advanced Materials & Tools Company

Medium- to Long-term Goals

- ◆ Become a global player capable of providing high value-added products and service solutions

Business Policy

We aspire to become an energetic company with a “WakuWaku” feeling as well as a trusted genuine partner of our customers through a relentless pursuit of “speed” and “innovation” from our customers’ perspective, consistently making things happen

Key Strategies

- | | |
|--|---|
| Achieve growth through innovation | ◆ Enhance the power of solution by industry oriented teams
◆ Create key technologies through the Company’s original development and open innovation
◆ Get closer to the customers by utilizing IoT and Big Data and enhance the level of manufacturing capability |
| Create value by building a recycling-oriented society | ◆ Promote tungsten recycling |
| Increase the company’s market presence through investment for growth | ◆ Promote local production for local consumption by reinforcing factories and using local vendors
◆ Expand sales and technical center networks
◆ Create synergies with Mitsubishi Hitachi Tool Engineering |
| Increase efficiency through continuous improvement | ◆ Reinforce the Key Account strategy
◆ Decrease cost
◆ Improve asset efficiency at factories |

Message from President of the Advanced Materials & Tools Company

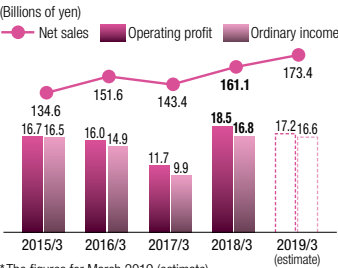
The Advanced Materials & Tools Company operates two businesses, a cemented carbide products business and a sintering parts business, both with a primary focus on the automotive industry. As globalization and diversification of needs accelerate, it is essential that we maintain our ability to meet these needs as they emerge. Our mission is to contribute by providing the materials necessary for customer growth, and to pursue innovation in market-orientated manufacturing.

Our cemented carbide products business focuses deployment of its corporate resources on four industrial sectors — the automotive, aerospace, medical and mold and die sectors — in which it has concentrated on reinforcing its technical strengths and developing new markets while responding adeptly to changing trends. With demand for aircraft growing worldwide, the aerospace industry has become a particular focus of attention. We are concentrating on reinforcing our technical capabilities in this industry, which is adopting cutting-edge materials one after another, with the intention of establishing it as a cornerstone of our business along with the automobile industry. Although the automobile industry is flourishing with the growing prosperity of emerging countries, meanwhile, we are gearing up for a rapid shift to EV production.

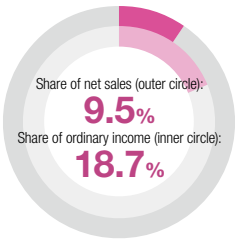
Our efforts to develop optimal solutions are concentrated in our technical centers, where customers can also experience various processing operations. In fiscal 2018, we established the Central Japan Technical Center, our second technical center in Japan. With both the aircraft and automobile industries concentrated in Central Japan, we believe the new center’s location will be advantageous for in-depth, timely introduction of new technologies. Going forward, we will optimize our services by operating six technical centers in Japan and overseas.

We are at the same time advancing the collection and recycling of used cemented carbide tools to stabilize our procurement of tungsten and cobalt, two key materials in cemented carbide production. We are currently working to establish an international collection system.

Our goal as the Advanced Materials & Tools Company is to be considered a business entity that excites customers by doing exciting work for every one of them. We will cherish and encourage this attitude by pursuing human resources development and manufacturing as a genuine partner on which customers can rely.



*The figures for March 2019 (estimate) were published on May 10, 2018.



- | Strengths | Weaknesses |
|--|---|
| <ul style="list-style-type: none">• Total Group support, from raw material powder of cemented carbide and finished product manufacturing to recycling of post-use products• Materials technologies cultivated over many years as a comprehensive materials manufacturer• Sales network with global reach | <ul style="list-style-type: none">• Deficient manufacturing capabilities and site structure overseas• Short delivery date structure for special products manufactured at overseas sites• Need for acquisition and training of human resources to propose overseas solutions |

- | Opportunities | Threats |
|--|---|
| <ul style="list-style-type: none">• Increased demand due to expanded automobile manufacturing in emerging countries• Growth in demand due to an increase in the number of aircraft manufactured and the difficulty of cutting processing parts materials• Growth in new demand accompanying business expansions in medical applications industry | <ul style="list-style-type: none">• Market entry by upcoming new manufacturers• Risk of tungsten and cobalt supply shortages• Decrease in machining process due to improved performances of 3D printers• Decrease in the number of automobile parts with the trend toward EVs• Switch to use of non-ferrous metal materials |

Fiscal 2018 in Review

Cemented carbide products as a whole saw an 11% increase in sales as compared to fiscal 2017. We consider that growth of the cutting tool market, on which the company focuses in the automotive sector, by an estimated 7% from the previous year made a considerable contribution to this result.

In the aerospace sector, the Aerospace Dept. is participating in a project concerning cutting of super heat-resistant alloys and other research conducted by the RWTH Aachen University Laboratory for Machine Tools and Production Engineering (Germany), which is contributing to increased sales by our European sales bases. In the United States, we are participating in a high-precision drilling project led by OMIC R&D (Oregon Manufacturing Innovation Center Research and Development) in the state of Oregon. We have established an aerospace team at a marketing company in the United States, moreover, where we are actively pursuing growth in sales.

We also established a special sales team in a U.S. sales company in the medical field. As sales promotion efforts among target users advanced, the goals set for annual sales performance were achieved.

We have also reinforced our sales strategies for the European market in the field of molds and dies. We are expanding our sales territory in China, meanwhile, where we have recently acquired 30 new corporate customers for IT-related precision plastic dies and car press dies. Among other moves, we have integrated the sales structures for Mitsubishi Materials products and Mitsubishi Hitachi Tool Engineering products in the United States and Southeast Asia in order to conduct more efficient sales operations.

We have completed a new factory in Akita Plant, the Japan New Metals Co., Ltd., where the tungsten processing capability has been increased 1.5 times in hopes of accelerating future recycling activities. We also established the Central Japan Technical Center in June 2017 and expanded and renovated our Tianjin Technical Center (China) in October 2017.

Business Overview

The Advanced Materials & Tools Company develops business both domestically and overseas with such cemented carbide products as cutting, rock drilling and plastic-forming tools as well as sintering parts for automotive components. Our mainstay cemented carbide products comprising tungsten carbide and cobalt composites occupy the top shares of their markets in Japan. We support the world’s manufacturing industries by providing the tools for machining steel and other metal products. To achieve recycling of tungsten, moreover, the main raw material for cemented carbide, we engage actively in collecting used cemented carbide tools.

Outlook for Fiscal 2019 in Light of the External Environment

The cutting tool market is expected to continue its steady growth in fiscal 2019.

In the automotive sector, despite a downward trend in the number of automobiles manufactured in Japan, growth of the cutting tool market catering to the automotive industry is expected to exceed 8% in fiscal 2019. This growth can be attributed to increased manufacturing in emerging countries, which has led to an upward trend in overseas manufacturing of vehicles with internal combustion engines and boosted demand for cutting tools.

The cutting tool market in the aerospace sector is expected to increase slightly by an estimated 1%, but we are promoting various activities by specialized teams aimed at raising the growth rate further.

In the medical field, the market continues to expand as the world’s population increases and the aging rate soars, boosting demand for cemented carbide tools. We are focusing on processing of high-grade material products, such as prosthetic joints and plates, and we expect the fiscal 2019 growth rate to exceed 7%. We will actively pursue sales activities in the United States, a country with advanced medical care, deploying our accumulated processing know-how and materials technologies.

In the mold and die field, we aim to acquire the world’s largest market share by sharing strategies and optimizing corporate resources with Mitsubishi Hitachi Tool Engineering, Ltd. a supplier of distinctive, innovative products.

Activities for Medium- to Long-term Growth

We anticipate annual growth of 3 to 4% in the cemented carbide product market up to the year 2025. Our goals for 2025 include growth in sales targeting the aerospace market of approximately 10%.

Commoditization continues to advance with the entry into the market of new manufacturers, raising fears of falling prices. It is essential that we focus our resources on providing the market with increasingly attractive, high-value-added products to avoid becoming drawn into any ensuing price competition. We will continue to implement a “selection and concentration” strategy of focusing on carefully selected markets and target industries. At the same time, we will improve our proposal capabilities by focusing on establishing a global network of technical centers and enhancing our solution provision, which is one of our strengths.

Fielding Industry-oriented Teams to Reinforce Our Solution Proposal Capabilities

The basic strategy of the Advanced Materials & Tools Company is to acquire customer trust as a genuine partner by transitioning from the conventional product-oriented approach as a supplier to a market-oriented perspective like that of our customers.

We are applying this basic strategy by developing market strategies focused on investing corporate resources in the automotive, aerospace, medical and metal mold and die markets based on our “thorough selection and concentration” approach.

We will raise the Group’s market presence, moreover, by promoting adoption of Mitsubishi Materials’ superior-quality, high-performance DIAEDGE brand cemented carbide products for use in the automotive, aerospace and medical industries and of Mitsubishi Hitachi Tool Engineering’s MOLDINO brand leading-edge cutting tools for use in mold and die manufacture.

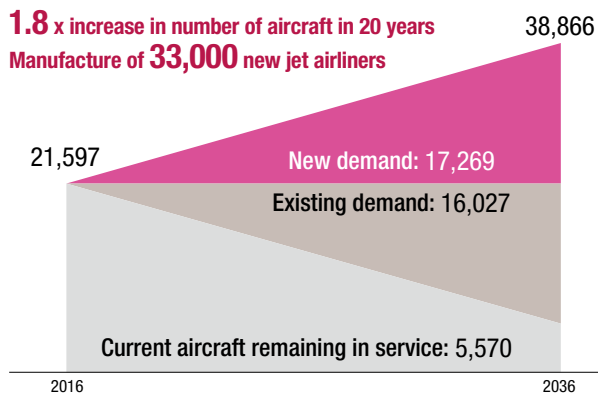
Automotive

In the automotive sector, the largest of our four core markets for cemented carbide tools, we have established new engineering teams to provide multi-faceted customer support. We are reducing the lead time required for design and manufacturing, moreover, while also working to improve our total solution proposal capabilities by reinforcing our relationships with machine tool builder and tool holder manufacturers.

Aerospace

With regard to the field of aerospace, as a second cornerstone of the business along side automobiles we have established a new highly specialized Aerospace Dept. integrating the marketing, prototype creation and solution proposal functions previously handled by separate divisions. This new department will seek to create deep relationships with customers, especially those who will become major players in the aerospace industry, by leveraging its experience and expertise, including its accurate grasp of customer needs, prompt responsiveness to issues concerning prototypes and participation in projects conducted by external research institutions, to provide technical proposals. What is more, the new department is developing a business model that enables it to participate in customers’ new projects from the concept stage forward.

Commercial airliner demand forecast



Medical

Our operations in the medical field include organizing a team of medical experts to develop marketing activities aimed at establishing a business foundation in the United States, the country with the world’s largest demand. We are also positively deliberating measures to accelerate growth in the United States through M & A and business alliances.

Mold and Die

In the mold and die field, we will strive to attain the largest share of the world market for molds by making full use of Mitsubishi Hitachi Tool Engineering’s MOLDINO brand of specialized and cutting edge technologies, while also maximizing use of the company’s resources in areas such as product development and manufacturing technologies, to acquire new customers.

Overseas

In our overseas operations, we will promote local production for local consumption, pursue capacity expansion at our existing manufacturing bases and increase the number of items they manufacture, while proactively developing local partners and implementing M & A. We are also upgrading the functions of our technical centers, moreover, to enhance our solution proposal capabilities.

We will continue to establish and develop sales bases in a timely manner in order to expand our services in growing emerging markets.

Goals for 2019

We will reinforce and develop our bases for developing solutions by such means as establishing technical centers in Stuttgart, Germany, and Pune, India, and renovating our existing technical center in the United States.

Worldwide technical center development



Expanding Tungsten Recycling

Procurement of tungsten raw material is essential to providing a steady supply of cemented carbide products.

Some 60% of the world’s tungsten reserves are thought to be concentrated in China, which currently supplies 80% of the tungsten used in manufacturing, but dependence on a single region for procurement of a key raw material creates potential risk.

The Advanced Materials & Tools Company has been actively seeking to decrease this potential risk and to secure stable procurement by acquiring tungsten from multiple sources, with tungsten recycling as one of its primary initiatives. We will continue the following efforts:

- (1) Increase the tungsten recycling ratio.
- (2) Diversify tungsten procurement sources to include regions other than China as well.

We reduced our dependence on China for tungsten from about 70% in 2004 to 50% as of 2016.

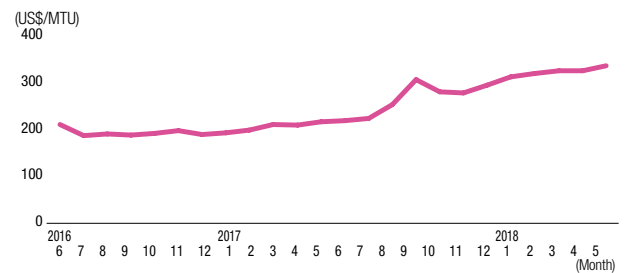
With recognition of recycling of used cemented carbide products growing among users, the volume of cemented carbide scrap collected has been steadily increasing. We will raise the recycling ratio further, however, by broadening the range of our targets for recycling. We will continue our efforts to develop scrap collection infrastructure for tungsten recycling and to promote recycling awareness among users.

With concern to cobalt powder, another key raw material used in cemented carbide products, we will strive to achieve stable procurement by raising the recycling ratio and increasing the number of suppliers.

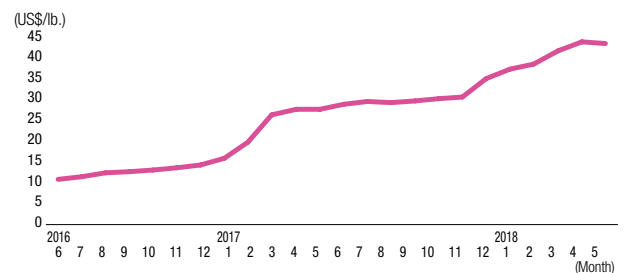
Goals for 2019

- To expand our recycling operations toward achieving a recycled material ratio of 30% for all tungsten procurement
- To reduce our dependency on China to 40% or less, and increase procurement from other regions
- These initiatives will be implemented to diversify our materials sourcing by combining procurement of raw materials with recycling, thus dispersing potential risks and preparing for unforeseen contingencies. We will consider the balance between stable supply and procurement costs in optimizing our raw materials procurement portfolio. We will enhance the positive relationships developed over many years of trading with Chinese suppliers, moreover, and maintain a certain ratio of stable procurement from China.

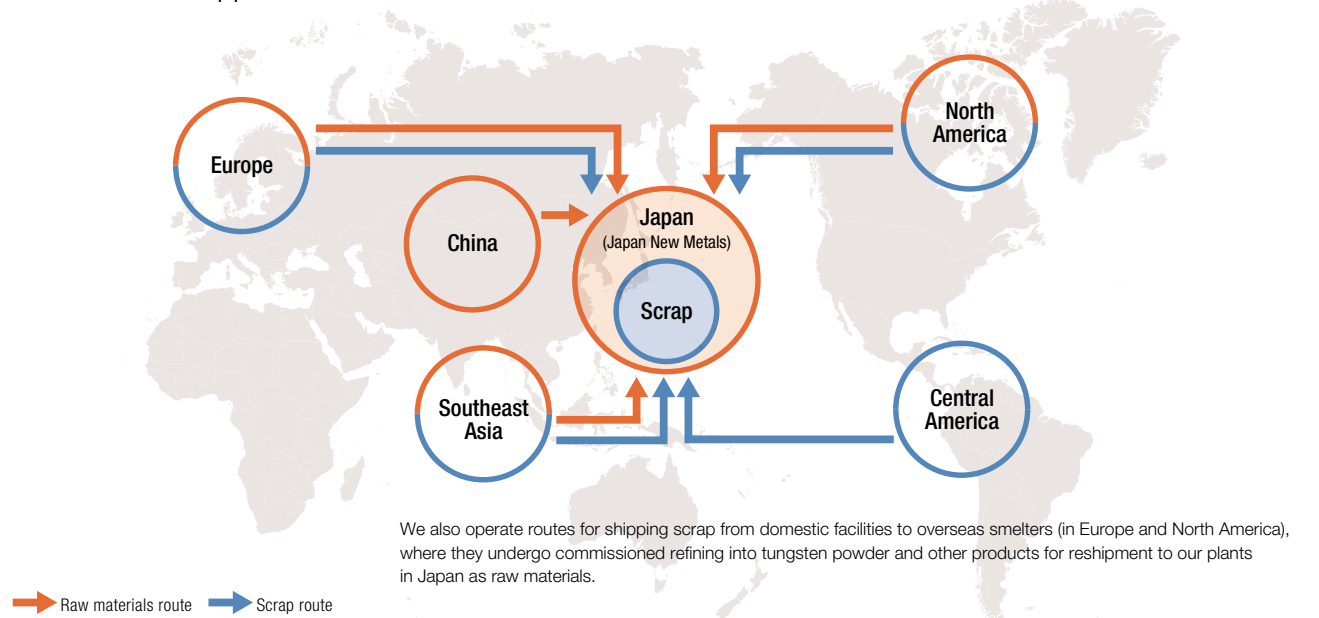
International tungsten market prices

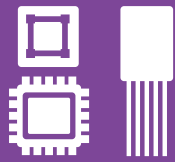


International cobalt market prices



Raw materials & scrap procurement routes





Collaborating with customers to develop new markets in the semiconductor, electronics and automobile sectors to realize a rich and prosperous society



Yoshihiko Kimura, Managing Executive Officer
President, Electronic Materials & Components Company

Medium- to Long-term Goals

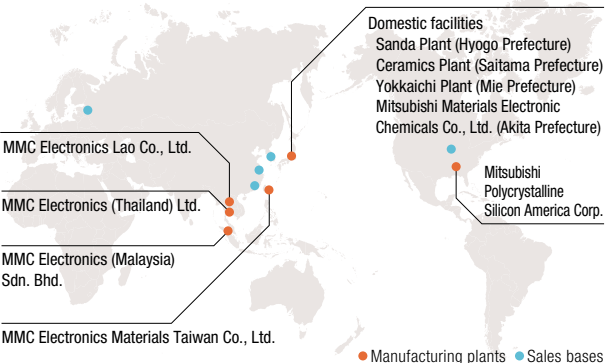
- ◆ Become a highly profitable business entity that provides materials (solutions as well as products) required by growth markets in timely manner by responding to changes in the business environment quickly

Business policy

- Lineup of high-value added products
- Generate and expand profits by concentrating resources on growth businesses and products
- Develop and nurture strong new businesses

Key Strategies

- ◆ New products and sales expansion in the next-generation vehicle market (ceramic substrates for power modules, thermistor sensors for vehicles, solar heat-ray shielding paint, etc.)
- ◆ New products and sales expansion in the IoT-related market (antenna modules, thermistor sensors, etc.)



Message from President of the Electronic Materials & Components Company

Rapid growth in the use of AI and IoT technologies has made life increasingly more comfortable in recent years. Demand for EVs and other next-generation vehicles is expected to expand, moreover, in response to the effects of global warming. To meet this demand, the Electronic Materials & Components Company is leveraging its accumulated expertise in materials such as nonferrous metals and ceramics to focus on three priority fields: semiconductors, electronics and automobiles.

In the semiconductor field, we manufacture and sell precision silicon products and their raw material, columnar crystal silicon, to meet the rapidly expanding demand for semiconductor production equipment.

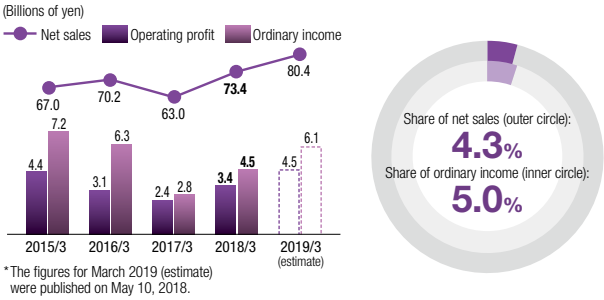
In the electronics field, we provide electronic devices such as thermistor sensors used primarily for refrigerator and air-conditioner temperature control; surge absorbers for installation with inverters, which are essential components for energy-efficient home appliances; and miniature chip antennas for wireless communication devices.

Our automobile business, meanwhile, produces electronic devices such as ceramic substrates for power modules for the inverters used in next-generation vehicles and other devices such as thermistor sensors and surge absorbers, for which demand is expected to expand as EV production soars.

With the intention of leading significant technological innovation in the field of electronic materials and components, we collaborate closely with both customers' development and technical divisions and our Group's Central Research Institute to develop a wide range of new products and technologies.

A business entity operating based on an advanced materials and solutions business model, we develop growth markets with our customers in accordance with our motto, "Together with Customers," and achieve continuous evolution through concerted daily efforts.

<ul style="list-style-type: none">● Strong product development framework founded on collaboration with the Central Research Institute[Advanced materials/chemical products] Customer-oriented business model supported by a high-quality, high-value-added product lineup[Electronic devices] Optimal production network system, primarily in Southeast Asia region[Polycrystalline silicon] Stable supply system centered on production facilities in Japan and the United States	<ul style="list-style-type: none">● Small scale of individual businesses● Unbalanced sales areasConcentration of facilities in East Asia, with entry into Western markets, India, etc., delayed
Strengths	Weaknesses
Opportunities	Threats
<ul style="list-style-type: none">● Thriving businesses in the semiconductor and electronics sectors and accelerating growth of the next-generation vehicle business● Improving balance between energy savings and a prosperous living environment● Accelerated growth of highly integrated, energy-efficient semiconductors● Sophisticated semiconductor manufacturing processes● Growth in demand for rechargeable batteries, control circuits and air conditioners for next-generation vehicles	<ul style="list-style-type: none">● Competition stemming from innovation in emerging countries● Decline in product sales prices due to intensified competition● Increases in costs of raw materials, labor and energy



Fiscal 2018 in Review

In an environment of high demand for many products of the Electronic Materials & Components Company, ordinary income for fiscal 2018 was 170% of the actual results recorded for the previous year (up 70%).

Sales and profits increased for processed silicon products in the semiconductor sector due to an acceleration of demand, expansion of the production facilities and improved productivity. Although the sales volume of polycrystalline silicon expanded in the active semiconductor market, a downturn in sales prices resulted in lower profits.

Our operations in the electronics field have achieved increases in both sales and profits due to growth in sales of electronic devices for home appliances and sputtering targets for use in displays.

Outlook for Fiscal 2019 in Light of the External Environment and Activities for Medium- to Long-term Growth

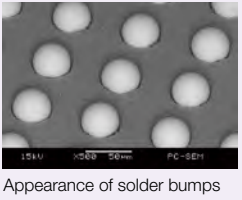
Demand is expected to remain steady in the semiconductor, electronics and automobile sectors due to a proliferation of applications for AI and accelerated growth of the IoT and next-generation vehicle markets. We anticipate growth in both sales and profits exceeding that of the previous year in fiscal 2019.

With competition in our industry intensifying, moreover, we are optimizing our responses to customers' increasingly exacting demands regarding performance, quality and delivery dates. We are providing high-value-added products and planning to increase our strategic investments for growth.

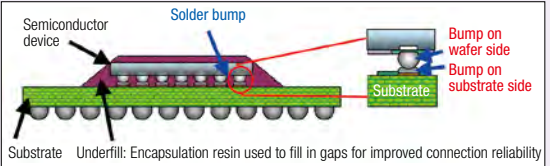
Our electronic materials and components business is responding to the Group-wide policy of "Creation of new products and businesses" articulated in the Medium-term Management Strategy. We are focusing on markets related to the IoT and next-generation vehicles by collaborating with customers to enter new growth fields, pursuing continuous evolution and conducting corporate reformation to contribute to creating a rich and prosperous, amenable society.

World's Finest Semiconductor Solder Material with 50% Lower Alpha-Ray Emissions

We have successfully developed a "HULA-grade" solder material with reduced emissions of alpha rays, which exert a negative effect on the performance of semiconductor devices. This new solder material is contributing to the manufacture of more reliable semiconductor devices.



Appearance of solder bumps



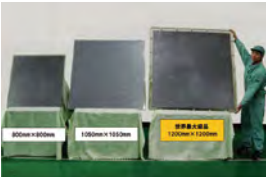
Cross-section of an IC

Business Overview

The Electronic Materials & Components Company consists of three business segments: semiconductors, electronics and automobiles. The semiconductor business provides precision silicon products for the semiconductor production equipment that is helping to build the advanced information society. Our low-alpha solder, for which our market share is among the world's largest, is the most desirable solder for use in semiconductors. Our electronics business, meanwhile, manufactures electronic devices used in smartphones, organic electroluminescence products and home appliances that contribute to energy saving. In the automobile sector, moreover, we produce ceramic substrates for power modules with high thermal conductivity and solar heat-ray shielding paint.

Semiconductors

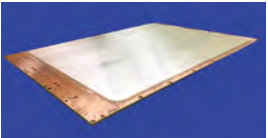
- In the field of processed silicon products for use in the manufacture of semiconductor equipment, our focus is on improving performance by increasing the product size and developing superior cleaning and processing technologies. We will seize the opportunity afforded by growing demand to achieve increases in both sales and profits that surpass our fiscal 2018 results.
- In the area of polycrystalline silicon material for silicon wafers, we will differentiate ourselves by providing the world's highest quality, and by balancing supply and demand to improve our revenues.



Columnar crystal silicon

Electronics

- We anticipate expanded sales of thermistor sensors and surge absorbers, our two mainstay electronic devices, due to rapid dissemination of energy-efficient home appliances. We will continue to respond to customer demands by leveraging our superior materials technologies to develop innovative products and by stressing local consumption of local products at our manufacturing and sales bases in countries such as Thailand, Malaysia and Laos. Taking advantage of rapidly growing demand for electronic devices, we are pursuing both sales and profits in excess of their fiscal 2018 levels.
- We also meet customer needs by developing unique products such as functional coatings and sputtering targets.
- In the area of chip antennas, we enhanced our responsiveness in the fast-growing IoT field by opening the Antenna Solution Center for chip antennas on the premises of our Saitama Property Management Office (Saitama, Saitama Prefecture) in December 2017. We provide full support and proposals for improving cellular band antenna designs, of which customers often request consultation.



A DIASILVER sputtering target



Antenna Solution Center (website)

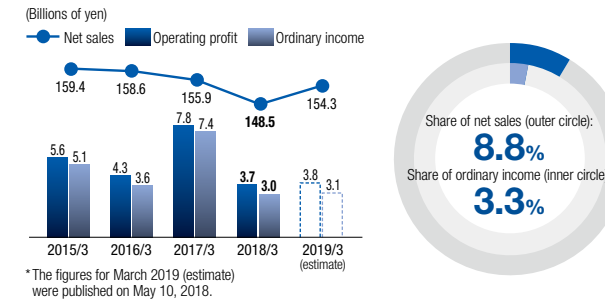
Automobiles

- The expansion of the markets for vehicle electrification and next-generation vehicles such as EVs is progressing very quickly. We pursue proactive sales promotion activities in the automotive sector, making the most of the reputations established by our superior ceramic substrates for power modules for in-vehicle (next-generation vehicle) inverters and our highly reliable, high-performance thermistor sensors and surge absorbers to propose new products with special characteristics.

Aluminum Business



Creating new added value that meets society's needs accurately through initiatives leveraging our technological strengths



Business Overview

The Aluminum Business comprises the Mitsubishi Aluminum Co., Ltd. Group, which engages in rolled and processed product manufacturing, and the Universal Can Corporation Group, which manufactures aluminum beverage cans. The two groups have worked together in Can to Can recycling operations based on a cycle of can manufacturing, collection, melting, casting and rolling for over 40 years. This process has contributed to conservation of aluminum resources and establishment of a recycling-oriented society.

Medium- to Long-term Goals

[Rolling and processing]
◆ Establish a presence in the global market for automotive heat exchanger materials

[Can manufacturing]
◆ Gain the No.1 share of the domestic aluminum bottle market
◆ Development of overseas business

Business Policy

Pursue business strategies that utilize the strengths of the rolling and can manufacturing businesses, respectively

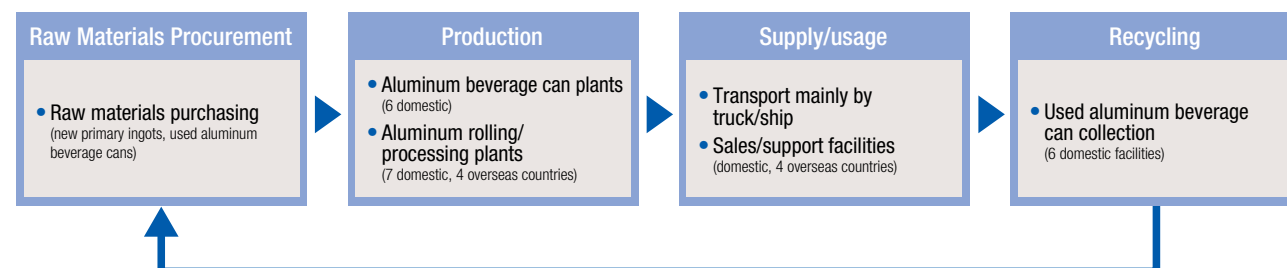
Key Strategies

◆ Implement a selection and concentration strategy in rolling and processing business (shift to heat exchanger materials)
◆ Respond to increased production of aluminum bottles and develop next-generation products

Strengths	Weaknesses
<p>[Rolling and processing]</p> <ul style="list-style-type: none">• Demand response capability through multi-product manufacturing• Superior development level that meets customer needs with integrated casting, sheet and foil plants <p>[Aluminum beverage cans]</p> <ul style="list-style-type: none">• Excellent technical capabilities and production capability for both aluminum bottles and caps <p>[Shared]</p> <ul style="list-style-type: none">• Integrated aluminum beverage can recycling system• Raw material and resources procurement employing combined Group capabilities	<p>[Rolling and processing]</p> <ul style="list-style-type: none">• Difficulty of achieving significant production increases due to limited space for plant expansion• Lack of established global supply network for aluminum coils• Low productivity compared to competitors <p>[Aluminum beverage cans]</p> <ul style="list-style-type: none">• Limitation of sales of aluminum beverage cans

Opportunities	Threats
<p>[Rolling and processing]</p> <ul style="list-style-type: none">• Expanding supply-and-demand gap for sheet metals for automobile heat exchangers due to a focus on aluminum body sheets for automobiles by major global rolling manufacturers• Increasing demand for aluminum due to rising EV production and vehicle weight reduction• Movement toward change from copper to aluminum as the material used in home appliance and air-conditioner heat exchangers <p>[Aluminum beverage cans]</p> <ul style="list-style-type: none">• Expansion of aluminum bottle market• Customer reorganizations	<p>[Rolling and processing]</p> <ul style="list-style-type: none">• Slow growth of rolled products in domestic market• Intensifying competition with emergence of Chinese manufacturers <p>[Aluminum beverage cans]</p> <ul style="list-style-type: none">• Increasing entry of new companies into aluminum bottle market• Increase in material prices

Value Chain in the Aluminum Business



Fiscal 2018 in Review

● **Rolling and processing business**
In September 2017, we entered discussions with Gränges AB, a Swedish aluminum rolling and fabrication company, about joint establishment of a manufacturing base for sheet metals for automobile heat exchangers in North America. We are seeking to launch new products developed jointly with customers such as automobile heat exchanger manufacturers.

● **Can manufacturing business**
We made capital expenditures to increase production of aluminum bottles. We are also developing attractive new products to create a new de facto standard for aluminum bottles. With respect to overseas business development, moreover, we began specific development planning for target areas where growth of future demand is anticipated.

Outlook for Fiscal 2019 in Light of the External Environment and Activities for Medium- to Long-term Growth

● **Rolling and processing business**
Competition is intensifying in Japan and abroad, driven by the progress of industrial reorganization. Demand for aluminum materials is expected to expand due to various factors, including vehicle weight reduction and replacement of other materials such as copper in an environment of rising materials prices.

In the fields of sheet metals for automobile heat exchangers and extruded metals, both special focuses of Mitsubishi Aluminum, we are preparing systems to increase production through capital expenditures at the Fuji Plant to reinforce our ability to respond to small-lot orders for diversified products from customers. We are also developing products to meet the need for more sophisticated material technologies to increase energy savings.

● **Can manufacturing business**
In the aluminum beverage can industry, competition is intensifying as new competitors enter the aluminum bottle field one after another at a time when industry growth is expected to slow due to Japan's declining birthrate and aging population. Universal Can Corporation, an established major aluminum beverage can maker, is considering deploying its technological capabilities to productize new aluminum bottles and promote sales overseas.

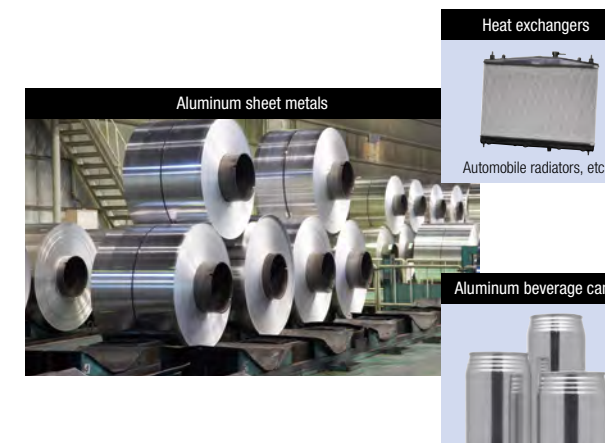
Rolling and Processing Business

Supplying Sheet Metals for Automobile Heat Exchangers in North America

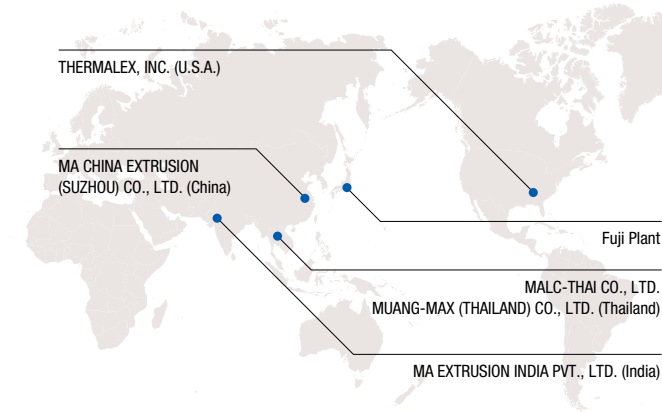
With global growth in environmental awareness, the need for vehicle weight reduction to improve fuel efficiency is leading automakers to adopt lighter-weight aluminum construction. In North America, especially, our major competitors are focusing their rolling mill operations on automotive aluminum body sheet, and the need for locally supplied clad materials (multi-layer materials manufactured by rolling alloys with different properties) is growing among automobile heat exchanger makers.

Against this backdrop, Mitsubishi Aluminum announced a plan in September 2017 to establish a joint venture to manufacture aluminum materials for automobile heat exchangers in North America with Gränges AB, a Swedish company with the world's largest share of the market for aluminum sheet metals for heat exchangers.

Mitsubishi Aluminum: Focus on Sheet Metals for Heat Exchangers



Mitsubishi Aluminum's Global Organization



Aluminum Beverage Can Business

Securing a Presence in the Domestic Aluminum Bottle Market and Consideration of Overseas Business Development

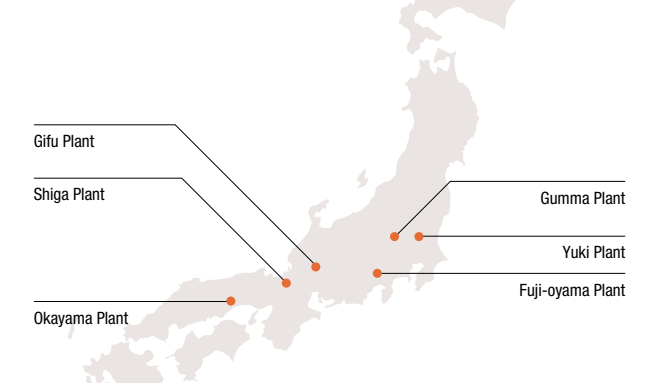
A contraction of the domestic market for beverage cans is inevitable in the future due to Japan's decreasing birthrate and aging population. Universal Can Corporation has driven the expansion of the aluminum bottle market, however, by using its technological strengths to introduce aluminum bottles with excellent resealing and recycling characteristics to the market early as strategic products.

Competition with plastic bottles has intensified in recent years. We are responding by adding new value through weight reduction and development of aluminum bottles with new shapes. We will also actively investigate the prospects for overseas business development centered on Southeast Asia and strive to cultivate new markets.

About half the materials handled by our aluminum beverage can business are sourced by recycling aluminum beverage cans. We will increase this amount further by reinforcing our recycling facilities and expanding our collection bases. Our promotion of recycling is contributing to cutting raw material costs and significantly reducing CO₂ emissions through operation of our unique integrated processing system.



Universal Can Corporation's Manufacturing Bases

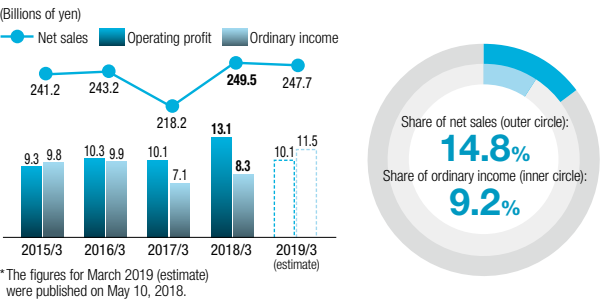


Other Businesses

Environment & Energy Business
Affiliated Business



Pursuing further expansion of operations in the fields of recycling and energy to contribute to creation of a recycling-oriented society



Business Overview

The Environment & Energy Business contributes to creation of a recycling-oriented society through its four main businesses: environmental and recycling, renewable energy, nuclear power and coal. It partners with affiliated organizations that support the operations of the MMC Group, ranging from engineering and trading companies to salt producers and regional promotion projects engaged in a wide range of operations and products.

Medium- to Long-term Goals

- ◆ [Environmental and recycling]
Launch and expansion of recycling operations trusted by stakeholders
- ◆ [Renewable energy]
Become Japan's largest comprehensive geothermal power generator

Business Policy

To contribute to creation of a recycling-oriented society with a low environmental burden by promoting recycling and energy businesses that benefit fully from the special strengths of our corporate Group

Key Strategies

[Environmental and recycling]

- ◆ Expansion of operations to include new recycled items such as solar panels and lithium-ion batteries

[Renewable energy]

- ◆ Expansion of new geothermal power generation business

<p>[Environmental and recycling]</p> <ul style="list-style-type: none">◆ Unique recycling technologies utilizing both smelting and cement processing	<p>[Environmental and recycling]</p> <ul style="list-style-type: none">◆ Late entry into automobile recycling compared with competitors
<p>[Renewable energy]</p> <ul style="list-style-type: none">◆ Long-term record in geothermal power generation business, proactive approach to new geothermal power, formidable comprehensive Group power (excavation technologies, engineering, operations management, others)	<p>[Renewable energy]</p> <ul style="list-style-type: none">◆ Shortage of human resources, extended period from survey to start of operations

Strengths

SW

Weaknesses

OT

Opportunities

OT

Threats

OT

[Environmental and recycling]

- ◆ Social demand for realization of a recycling-oriented society

[Renewable energy]

- ◆ Policy support through Japan's Feed-in Tariff Scheme
- ◆ Society's growing need for renewable energy

[Environmental and recycling]

- ◆ Intensifying competition from growing numbers of emerging participants

[Renewable energy]

- ◆ Large number of geothermal energy sites developed by other companies, difficulties in consultation with local communities
- ◆ Policy changes by national governments, strengthening of environmental protection regulations

Fiscal 2018 in Review

The Environmental and Recycling Business aspires to stay a step ahead of social needs as it realizes significant innovations in recycling. We are introducing unique recycling operations only we can conduct founded on recycling of discarded home appliances.

In the area of solar panel and lithium-ion battery recycling, we are progressing with technological development and studying institutional issues in a project subsidized by Japan's government. We established a new company to handle fly ash treatment, and obtained the requisite permits and completed construction of a factory in March 2018. We have also completed studies and reviews in preparation for industrializing conversion of food waste into energy.

In the renewable energy business, construction of the Wasabizawa Geothermal Power Plant is progressing, and an environmental impact assessment has been completed for the Appi Geothermal Plant Project. Surveys and explorations are underway at other potential geothermal generation sites as well.



Outlook for Fiscal 2019 in Light of the External Environment and Activities for Medium- to Long-term Growth

One focus of the Environmental and Recycling Business's operations in fiscal 2019 will be on establishing future technologies for solar panel and lithium-ion battery recycling. We will also begin fly ash treatment operations and direct efforts toward increasing business in this field. With concern to conversion of food waste to energy, we will accelerate our preparations to commence business in fiscal 2021.

In the renewable energy sector we will respond to society's demand for increased use of renewables by continuing to expand geothermal power generation, making the most of our wealth of experience and expertise accumulated through past achievements. Construction of the Wasabizawa Geothermal Power Plant will enter the final stage as the plant prepares to begin operation in fiscal 2020. We will also proceed with commercialization of the Appi Project and pursue further development of new geothermal energy.

As initiatives toward medium- to long-term growth of the environmental and recycling business, we will promote establishment of technologies and operations for recycling combustible waste and difficult-to-treat waste.

Environmental and Recycling Business

Advanced Recycling Business Creation

Despite the construction of large numbers of solar power plants in Japan, systems for recycling have not yet been established. At the same time, rapid growth in the number of EVs on the road is certain to lead to discarding of massive numbers of lithium-ion batteries.

We are developing technologies to extract resources from this difficult-to-treat waste safely and effectively. Our ambition is to lead the way in creating an advanced recycling business using these technologies.

We are establishing resources recycling methods that do not rely on landfill disposal, meanwhile, to recycle waste such as incineration fly ash and food waste. This involves cooperating with our Group's Cement Company and other partners to use them as cement materials or convert them to energy, respectively.

A solar panel treatment demonstration line

Kitakyushu Ash Recycle Systems Co., Ltd., a company specializing in recycling incineration fly ash as a cement raw material

Renewable Energy Business

Expansion of New Geothermal Power Generation

Japanese society is pushing industry to expand the use of renewable energy sources to benefit from their low environmental impact and sustainability. Among these, hopes are particularly high for geothermal power generation, which emits almost no CO₂, as a source of base load power that stably supplies a certain amount of electric power.

Our company has made use of underground resource development technologies acquired through its mining business to participate in the geothermal power generation business for over 40 years. The MMC Group's achievements in this field are among the greatest in Japan.

We are leading the way in domestic geothermal power development, as represented by our two large new geothermal power plants (Wasabizawa and Appi) currently undergoing or completing environmental assessment.

While proceeding with these two projects, we are also implementing surveys and exploration at various locations with the aim of developing new sources of geothermal energy and helping to expand the use of renewable energy in Japan.

Wasabizawa Geothermal Power Plant Construction work

Appi Geothermal Power Plant Conceptual drawing

Affiliated Business

We operate a varied range of affiliated businesses. These include engineering and trading companies and range from manufacture salt to the makers of pure gold cards, precious metal clay and the high-quality MJC jewelry brand. We also make use of former mining sites as regional tourist mines.

Mitsubishi Materials Techno Corporation is developing ground source heat pump systems that harness underground heat which is one of renewable energy throughout Japan. Overseas, our operations include provision of mine drainage management technologies to the Ellatzite Mine in Bulgaria and acceptance of engineers as internship from Bulgaria's Sofia University for three consecutive years and we develop environmental technology exchange.

Construction of a practical geothermal heat pump system (Tokyo Skytree)

Ellatzite Mine, where our mine drainage management technologies are in operation (Bulgaria)

MJC brand jewelry

Human Resources Strategies

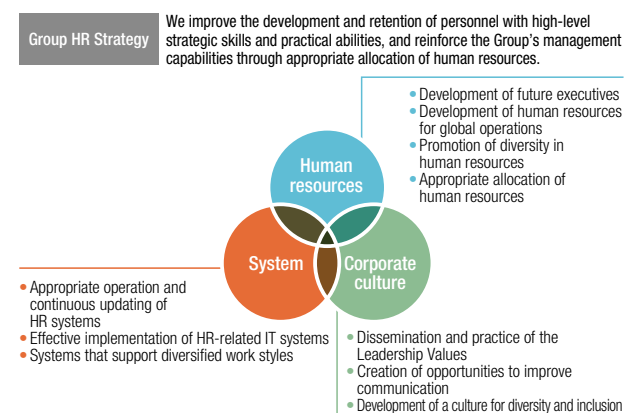
We direct concerted efforts to the training and allocation of human resources who provide the basis for the Company's competitiveness. While fostering management executives who will assume responsibility for the next generation, moreover, we seek to provide an environment in which employees can grow and attain fulfillment with the aim of becoming a company in which everyone feels safe, secure and highly motivated.

Basic Approach to Human Resources

The Mitsubishi Materials Group views its employees as creators of new value and sources of corporate competitiveness. We consequently seek to be a company that accepts and respects diversity, where every employee finds work personally meaningful while working together to achieve optimal organizational performance.

Our medium- to long-term HR strategy states that "we improve the development and retention of human resources equipped with high strategic skills and practical abilities, and strengthen the Group's management capacity through the appropriate allocation of human resources." We consider it essential for corporations to continuously develop personnel who excel as leaders in order to maintain competitiveness and sustain growth.

Medium- to Long-term HR Strategy



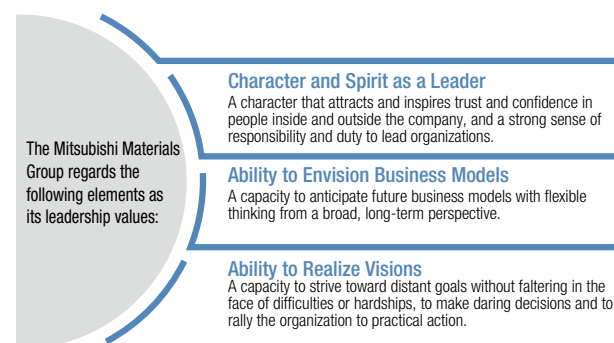
Guidelines for Developing Leadership Values

In February 2016, in order to clarify the competences and skills common to leaders in our Group's various businesses, we drew up "Leadership Values in the Mitsubishi Materials Group" ("Leadership Values" hereinafter) which is also to be used as a set of guidelines for our leadership development.

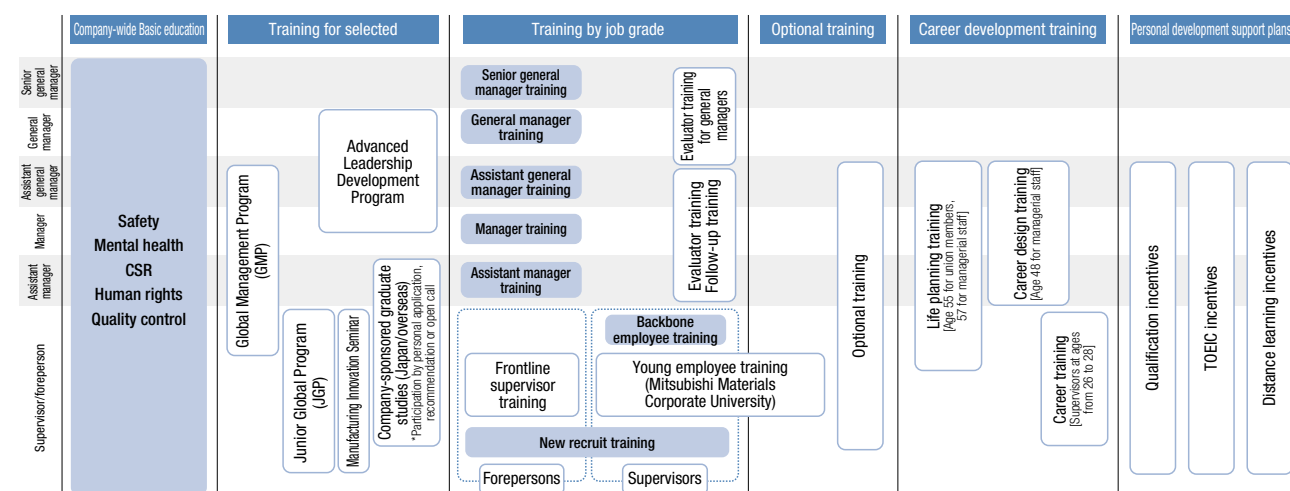
Among the three Leadership Values listed, "Personality and Spirit of Leader" has especially deep roots in our tradition of commitment and responsibility for the safety and livelihood of our employees. Our Group traces its roots back to the era of coal and metal mining, where workplace sometimes put ones' life in danger. This value is therefore a constant among requisite leadership qualities that have been passed down unbroken through generations in the Group, and was selected as one of core values through spirited discussions among management.

Our Leadership Values are reflected in performance assessment of managerial employees in Mitsubishi Materials. The Company's manager training programs have been redesigned in accordance with our Leadership Values, which afford Group employees opportunities for leadership development appropriate to the various stages of their careers.

Leadership Values in the Mitsubishi Materials Group



Group-wide Education System



Advanced Leadership Development Programs

In fiscal 2006, the Group established "Advanced Leadership Development Programs," which seek to develop qualified candidates for our Group's senior management positions.

General managers considered as potential candidates for the Company's executives or presidents of major Group companies are identified as "Superiority Talents," while managers considered as potential candidates for general managers, plant managers or presidents of Group companies are identified as "Advancing Talents." Their professional capabilities are developed accordingly through both training and experience (job assignment).

This development program was enhanced in fiscal 2018. Its content was expanded based on the Leadership Values, and mechanisms were introduced to ensure that its personnel development methods were implemented more systematically and continuously.

An annual HR meeting held by each business division brings the executive officer responsible for HR and the general manager of HR Department together with the executive officer responsible for each division to assure coordinated implementation of the development program, such as confirming individual career development and assignment plans for each of superiority and advancing talents.

The training program for the Superiority Talents has been reconfigured, by doubling its period, to employ members of the Company's current management executives as instructors to train participants directly as a means of engendering a managerial mindset. In fiscal 2018, twelve participants made presentations on the future and visions of the Group to the management executives on the final day, which inspired lively discussion between them.

For the Advancing Talents, we provide a special training program in which they develop business strategies for the individual businesses, and make systematic assignment based on individualized career development plans.

Initiatives to Encourage Diversity Empowerment of Women

Based on the Group's medium- to long-term HR strategy we are promoting efforts to diversity human resources.

We particularly emphasize the on empowerment of Woman's Active Participation. In the course of efforts to achieve the priority goals presented by the "Basic Principles on Women's Active Participation" formulated in October 2015, we have been responding to this issue through three action phases: laying a foundation for securing and retaining female human resources (FY2016), creating an environment for expanding career options (FY2017), and stepping up efforts towards greater empowerment (FY2018 onwards).

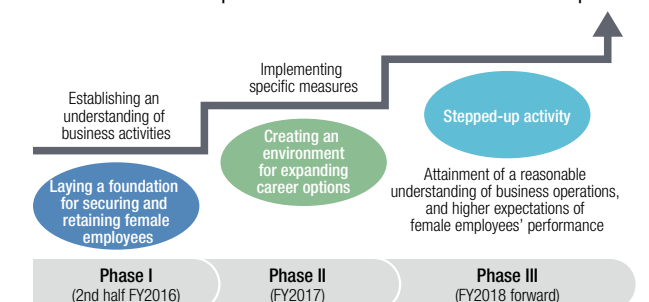
In addition to providing career training to all our female employees, we are currently pursuing ongoing initiatives to address both intangible factors (such as awareness-raising, communication enhancement) and tangible factors (such as facilities) based on action plans (3-year plans) formulated by priority plants selected by the individual Group companies in 2017.

Adjusting Work Styles to Life Plans

We seek to realize workplaces in which individual employees can work in a manner suited to their life plans, while also aiming to create a workplace that can challenge career advancement. For this, we are organizing and optimizing systems as well as conducting educational and training programs that support various ways of working. We are also taking steps to reduce out-of-hours and to encourage employees to take paid holidays in accordance with conditions at our individual sites. We have introduced an elective welfare system that is designed to correspond to employees' diversifying needs, moreover, including such items as travel and life support options. This system is used by many employees including family members.

Fully aware of the capacity of disabled persons to learn, grow and contribute to society through work, our business divisions throughout the Group are proactively seeking to hire them.

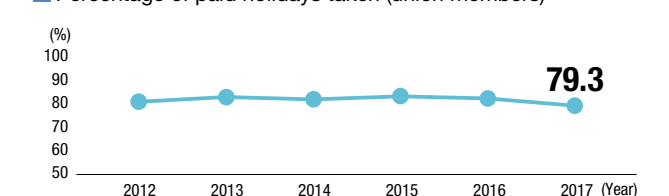
Procedure for empowerment of Woman's Active Participation



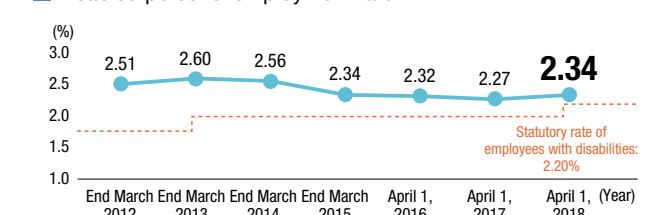
Numerical Targets for Achievement under the Basic Principles on empowerment of Women's Active Participation (by 2020)



Percentage of paid holidays taken (union members)



Disabled persons' employment rate



* The calculation date was changed (from end March) to April 1 effective fiscal 2017.

Human Resources Strategies

Ensuring Employee Safety Basic Approach

The MMC Group Code of Conduct states in Article 2: “We are committed to providing a safe and healthy environment for all our stakeholders.” This commitment reflects our realization that we must preserve our employees’ safety and health to enable them to provide their families with secure and happy lives, and to contribute to our effective operation and continued development as a company.

MMC Group Basic Policy on Safety and Health Management

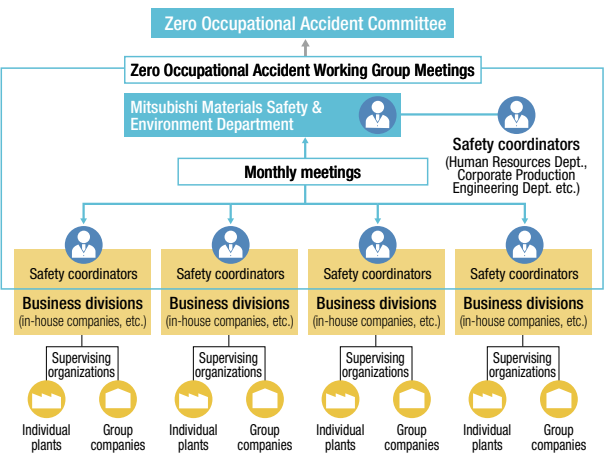
- 1) We will carry out safety and health activities based on full participation from all employees, underpinned by leadership and initiative from the President and other managing personnel.
- 2) We will ensure that all employees comply with the Industrial Safety and Health Act and other applicable legislation, manuals and operating procedures, and establish a workplace culture whereby everyone follows the rules and ensures that others do too.
- 3) We will make every effort to create pleasant workplaces that are healthy for both body and mind, for all employees, through activities aimed at creating open workplaces and promoting health.
- 4) We will take preventive measures in accordance with Ministry of Health, Labour and Welfare guidelines on the prevention of work-related traffic accidents and improve road etiquette amongst all employees, in order to eliminate traffic accidents based on our commitment to promoting road safety activities as an example to society as a whole.

Promotion of Safety and Health Activities

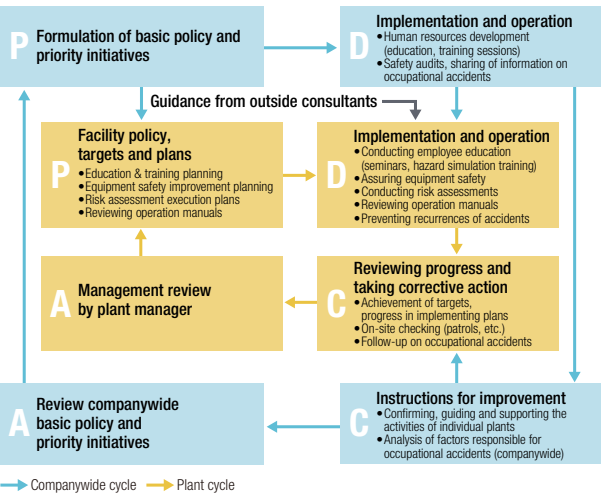
In 2014, an explosion at the Yokkaichi Plant took the lives of five employees of MMC and partner companies. We instituted the Zero Occupational Accident Project that same year, based on a strong commitment to root out future incidents of this kind and to eliminating serious occupational accidents. The Project’s Zero Accident Committee, which is headed by an executive appointed by the President, analyzes current conditions and formulates basic policies and specific measures for review and discussion by the Corporate Strategy Committee. If approved, they are implemented, with progress reports made regularly to the Corporate Strategy Committee. The Mitsubishi Materials Safety & Environment Dept. cooperates with safety coordinators appointed by the various in-house companies in sharing information concerning progress and issues with respect to current safety and health measures. The safety coordinators also participate in Zero Occupational Accident Working Group Meetings, where they share information and discuss new measures. The Zero Accident Labor-Management Panel comprising members from both the labor union and management implements joint labor-management initiative to create a framework for promoting Zero Occupational Accidents.

The Zero Accident Committee identifies issues of concern brought to light by the occurrence of occupational accidents and strives to improve worksite conditions by applying PDCA cycles tailored to individual plants. In 2017, we set the following priorities to eliminate occupational accidents: 1) a campaign to eliminate multiple accidents and 2) use of risk assessments to realize strict controls on equipment safety and to guide activities toward eradication of occupational accidents. We are reinforcing these initiatives further in 2018.

Framework for Zero Occupational Accident Project



Group Occupational Safety and Health Management System



Safety Record

In 2017, 181 employees of Group companies were involved in occupational accidents, 40 of which resulted in lost-time injuries. Although the number of occupational accidents has decreased over the past decade, it has remained steady for the past six years. The lost-time injury frequency rate (fatalities and lost-time injuries per million work hours), a rate applied to assess the state of occupational accidents, was 0.09*1, which is lower than the average rate for manufacturing industries in Japan (1.02*2). In 2018, we are implementing measures to prevent accidents associated with basic body movements, such as falling down or twisting, as we work to achieve zero occupational accidents.

*1 Excluding subcontractors
*2 Source: "Overview of Survey on Industrial Accidents in 2017," Ministry of Health, Labour and Welfare of Japan

MMC Group Safety Record 2017

Number of employees injured		
MMC (non-consolidated)	Lost-time (or more serious)	1
	No lost-time	21
MMC (subcontractors)	Lost-time (or more serious)	7
	No lost-time	11
Group companies	Lost-time (or more serious)	32
	No lost-time	109
Totals	Lost-time (or more serious)	40
	No lost-time	141

Hazard Sensitivity Education

Realizing that experiencing danger firsthand contributes to improving hazard sensitivity, we opened the Occupational Safety and Health Education Center called Midori-kan on the grounds of our Saitama Office (Saitama, Saitama Prefecture) in March 2017. The center is equipped with 50 types of hazard simulation equipment, designed to reproduce actual worksite conditions and potential hazards in everyday operations, for use by expert instructors in conducting hazard sensitivity training. The center also offers regular specialized training courses on occupational safety and health in classrooms designed specifically for this purpose. In the year since its establishment, the Center has provided hazard sensitivity training for more than 1,500 Group employees, approximately 300 of whom have also completed specialized training courses. In April 2018, we introduced a virtual reality hazard simulation system that provides a 360-degree view and haptic feedback. Experiencing simulated hazardous situations that are difficult to replicate in real life in this way is expected to increase trainees’ sensitivity to hazards at work.



Simulation of being trapped in or between equipment



VR experiment



Visual line image of VR experiment (Incident of being trapped by a press machine)

Mental Healthcare

About half the new absences due to mental health issues involved young employees who had joined MMC within the past five years. We have been addressing this situation since fiscal 2017 by interviewing employees in their third or fourth year with the Company. In fiscal 2019 we began conducting interviews by clinical psychologists with all third-year employees. We employ stress-check results, training in self-care and management training programs, moreover, to encourage development of a sense of awareness concerning mental health among employees in an effort to prevent them from experiencing mental health issues.

Research and Development

The MMC Group gathers a wide range of talented human resources and technologies from its various companies and affiliates at the Central Research Institute to conduct R&D. We leverage their capabilities to create new products and businesses according to a development strategy encompassing short-, medium- and long-term perspectives.

R&D Strategy

The Mitsubishi Materials Group's basic policy on R&D is to develop unique new products, technologies and businesses in response to customer needs by deploying its advanced technological capabilities integrated with other cutting-edge technologies from both domestic and overseas institutions.

In accordance with this policy, we will continue to refine our core technologies and to create competitive new businesses and products that anticipate changes in the world as part of our efforts to establish our identity as a leading global company.

We implement our development strategies from short-, medium- and long-term perspectives. Acting from a short-term perspective, to begin with, we develop timely new products and technologies that help to raise our various businesses to the very top positions in their industries; from a medium-term perspective, we pursue development of new core businesses to contribute to the Group's sustainable growth; while from a long-term perspective, we boldly take up the challenges involved in realizing exciting new technologies for the future.

R&D Promotion System

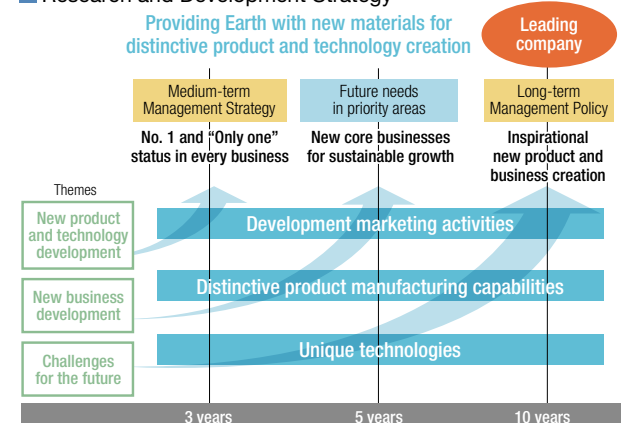
Our strategy employs a two-pronged approach to R&D featuring close collaboration between our Central Research Institute, which focuses on medium- and long-term needs, and the R&D departments in our business divisions, which respond to immediate needs.

The Central Research Institute concentrates on creating new areas of business through Group-wide basic research and promulgation of ideas that can lead to breakthroughs.

The Institute leverages strengths—from basic technologies such as analysis, evaluation and CAE* technologies to core technologies centering on thin films and interfaces, metalworking and reaction processes—to develop new technologies and products that anticipate megatrends and changes in market needs. The Group then employs these technologies and products to promote new business creation. The Institute deploys a stage-gate system (research design review) to assure accuracy in its anticipation of changes and rapid application of its R&D results. Its strict operations during the R&D period, meanwhile, result in a regeneration of themes through a process of reorganizing and resetting its R&D themes and goals, respectively. The Institute's active pursuit of new product development also creates synergies with external technologies and the Group's core technologies.

* CAE (computer-aided engineering) refers to the use of analysis software to develop materials and processes based on computer simulations.

Research and Development Strategy



Creation of New Products and Businesses

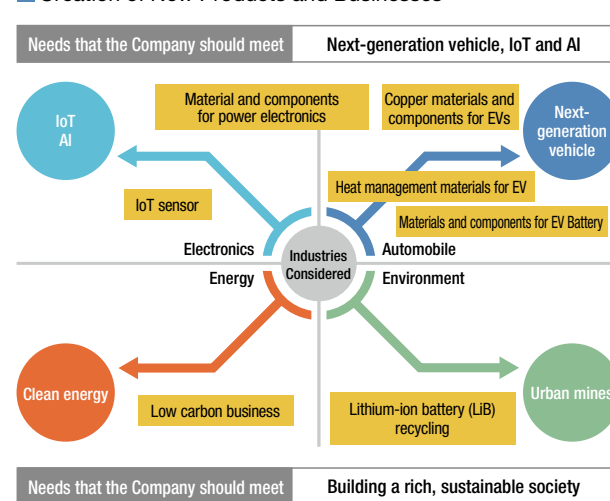
The rates of change in the social landscape and technological trends are increasing rapidly. Japan's domestic economy is contracting against the backdrop of a declining birthrate and aging population, while the global economy continues to expand, with emerging countries' economies playing the central role. AI and IoT are bringing a hyper-advanced information society quickly to the fore, and growing environmental awareness promises to accelerate the shift from internal combustion engines to electric vehicles and an expanded need for recycling.

In consideration of this external environment and social landscape—and committed to attaining sustainable growth by leveraging our Group's strengths—we have defined the following priority fields for the creation of new products and businesses, which is a Group-wide policy objective of our Medium-term Management Strategy: next-generation vehicles, IoT- and AI-related businesses, clean energy and recycling (urban mines). We intend to contribute to realization of a fulfilling sustainable society by offering products and solutions in these four fields.

We established two new departments in April 2018 specifically to accelerate the creation of these new products and businesses: the EV Material Development & Recycling Business Promotion Dept. and the New Business Development & Promotion Div. The role of the EV Material Development & Recycling Business Promotion Dept. is to serve as the command center for all the Group's products related to next-generation vehicles. It is actively dealing with a full spectrum of needs associated with next-generation vehicles.

The New Business Development & Promotion Div., meanwhile, is organized to coordinate efforts by the Group's marketing, business model-building and technology development arms to pursue new business development. Its primary focus is on constructing a foundation for future revenues by creating new products and businesses that anticipate market changes.

Creation of New Products and Businesses



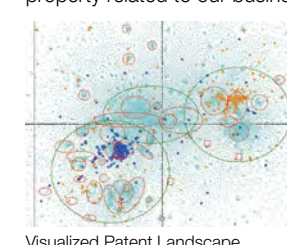
Intellectual Property Strategies

Our Group fully respects third-party intellectual property rights, while at the same time ensuring adequate management and reinforcement of our own rights. We are engaged in constructing a winning portfolio of rights and patents in accordance with our business strategies and the R&D strategies that support them.

This portfolio will cover the range from basic patents for our fundamental processes and products to patents for the resulting machines and processes. We will continue our efforts to establish portfolios of intellectual property in Japan, Western countries, other Asian countries and the rest of the world that protect our business models in every business in which we engage, including trademarks and the various legal agreements concerning technologies.

We respond to risks to our intellectual properties incurred through our efforts toward open innovation by correction and elaboration on intellectual property-related agreements, such as non-disclosure agreements and joint development agreements. We also conduct training in the area of intellectual property for employees ranging from newly hired graduates to management personnel. This program, which extends from graduated personnel training and specialized intellectual property management training to optional training, seeks to increase participants' understanding of a range of topics, including formalization and application of intellectual property and new intellectual property in the era of Society 5.0.* The sharing of knowledge, issues, support tools and educational seminars through these activities contributes to reducing intellectual property risks throughout the Group and maximizes our business value.

We promote the use of a system, introduced in fiscal 2017, for monitoring and grasping the latest information on intellectual property related to our business activities. We operate a tool to



Visualized Patent Landscape

create and analyze visualized patent landscapes, which make Big Data on patents available for use in our business and development strategies.

* Society 5.0: Initiatives contributing to realization of a "super-smart society," the fifth stage following the hunter-gatherer society, agrarian society, industrial society and information society.

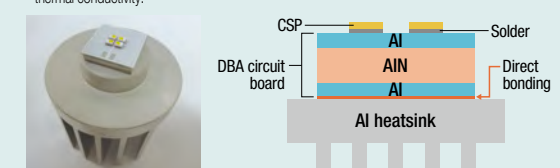
TOPICS

Development of a Substrate Module with an Integrated Heat Sink for Vehicle LED Headlights

The need for increasingly complex light distribution by vehicle headlights has inspired development of smaller, denser LED for control of vehicles' headlights. Conventional LED headlight modules raised the challenge for developers of maintaining and improving heat dissipation performance. Repeated heating as the headlights were switched on and off created cracks in the solder.

We responded by developing a product that combines a DBA substrate directly with an aluminum heat sink, reducing heat resistance by 50% compared to conventional products.

* DBA (Direct Bonded Aluminum) substrate: An insulated aluminum circuit ceramic substrate with high thermal conductivity.



Operation of the Central Research Institute as an Open Organization

The Central Research Institute operates as a diversified open organization. It pursues R&D that leads to creation of new products and businesses, accepting proposals and ideas from junior researchers as well as seniors.

We believe that the dissemination of creative ideas outside the confines of an organization inspires innovative thinking and leads to continually superior research results and development of superior research personnel.

Technology Development Roadmap Meetings

The Technology Div. Corporate R&D Dept. has adopted a system of creating technology R&D roadmaps. Upon receipt of proposals from junior Corporate R&D employees, it creates opportunities specifically for sharing their ideas with junior Central Research Institute researchers through meetings that are kept free from negative feedback by mutual agreement.

This approach has resulted in free, vigorous discussions focused on realizing a sustainable society, replete with expertise underpinned by cutting-edge technological information and the flexible thinking associated with youth.

We use both past and current data to conduct megatrend-oriented backcasting and accumulation-styled forecasting with respect not only to the four priority areas for our Group-wide policy on creation of new products and businesses (next-generation vehicles, IoT- and AI-related businesses, clean energy and recycling), but also to aerospace, healthcare and biotech, social infrastructure and fundamental technologies in such

areas as analysis and simulation. These and other efforts are part of an overall examination of the ideal configuration and direction for our Group businesses.

Discretionary Working System for Professional Work

The Central Research Institute began exploring the possibilities for a discretionary working system for research professionals in fiscal 2013 and deployed it fully in fiscal 2015. Its objectives were as follows:

- Work styles appropriate to researchers
- Work styles contributing to researchers' professional development
- Well-balanced work styles facilitating positive research results

One key characteristic of the Institute's discretionary working system is the freedom of individual researchers to choose whether to work under the discretionary system or to remain under the conventional system. As of fiscal 2019, 34% of the qualified researchers had opted to switch to the discretionary system.

Since all qualified personnel are given the opportunity to change their status of participation from one system to the other from one month to another, some researchers choose to switch between work styles according to the stage or other circumstances of their R&D activities. The freedom it offers has enabled the system to function effectively as a means of diversifying work styles at the Institute.

Manufacturing Innovation

We support our comprehensive efforts to increase business competitiveness by promoting problem solving through cross-divisional projects to realize manufacturing innovation.

What Is Manufacturing Innovation?

We achieve perpetual product manufacturing innovation by maintaining a culture of constant dissatisfaction with the status quo on our production sites, identifying fundamental problems and moving quickly to solutions by capitalizing on human and technological assets inside and outside our Group. This approach advances manufacturing capabilities that differentiate us from the competition.

We believe, moreover, that workers who introduce manufacturing innovations on their own initiative and achieve results gain confidence and pride as manufacturing professionals, contributing to our efforts to create a sounder, and rewarding working environment.

Efforts to Promote Manufacturing Innovation

Most of the obvious problems on the manufacturing site, including product defects, equipment failures and late deliveries, can be handled by applying existing autonomous “KAIZEN” activities. Other problems that manifest themselves, however, such as chronic defects or underlying problems in a manufacturing process that has so far proved profitable, may resist on-site resolution. It is essential to identify and resolve these problems quickly through unified action by the manufacturing site and its support organizations.

Even the quality issues announced in November 2017 might have been preventable had the problems been visualized and resolved in light of the proper conditions. Examples of appropriate problem identification and problem-solving activities include making substantial investments to assure sufficient processing capabilities and radical rethinking of the estimation process to improve the accuracy of order reception procedures. To assure that these activities are conducted consistently from a medium- and long-term perspective in the future, we are reinforcing them appropriately and positioning them as part of our governance for greater growth.

The Production Technology Management Dept. is currently constructing a system for identifying problems to reinforce governance for greater growth and a system for solving problems and supporting implementation of solutions. These activities are

aimed at creating structures that contribute to our culture of ongoing manufacturing innovation.

<System for Identifying Problems>

■ Part 1: KAIZEN Promoter System

Launched in fiscal 2017, the KAIZEN Promoter System (“Promoter System” hereinafter) selects people with knowledge of technologies and technological problems from various business divisions and assigns them leadership roles in solving problems associated with the business or manufacturing sites.

Promoters adopt an overall perspective to identify problems that require support because their resolution would be too time-consuming for the manufacturing site to undertake on its own and problems that require innovation. They then draw on their own experience and technological expertise to work with the Technology Div. and other business divisions to propose solutions to teams at the manufacturing sites, advocating problem-solving as a cross-functional project (CFP).

The Promoters’ impact is especially notable in the following four areas:

- 1) Silo effect prevention. (Promotion of inter-division technology trading/transfers to counter information attenuation due to lapses in communication among business divisions.)
- 2) Solution of problems of concern for multiple business divisions.
- 3) Promotion of advanced initiatives such as Internet of things (IoT) and AI.
- 4) On-site implementation of standard problem solving methodology and manufacturing management support.

Our structure as a Group engaged in a wide range of businesses provides us with a diverse fund of human and technological assets. Information exchange through promoters enables business divisions to access other divisions’ experts, technologies and know-how. In process manufacturing businesses such as the cement business or copper smelting and refining, for example, we have seen a growing number of successful solutions making use of facilities and management technologies related to plant operations. Promoters also advocate adopting technologies from product manufacturing businesses, such as advanced materials and tools or electronic materials and

components, for use in processing businesses.

Product manufacturing businesses, meanwhile, present promoters with a larger number of themes for improvement and innovation as compared with process manufacturing businesses. Promoters engage in activities that contribute directly to plant profitability, for example, from proposing and organizing meetings for identifying problems to participating in CFP planning and promotion.

■ Part 2: Plant Managers’ Workshops

These workshops, which are scheduled for introduction in fiscal 2019, will bring together plant managers from the front lines of manufacturing to identify actual and potential problems and discuss ways of making routine use of CFP for their solution.

■ Part 3: Common Manufacturing Management Framework

We will also begin to examine construction of a Common Manufacturing Management Framework in fiscal 2019. The Framework will provide a means of applying formulae for visualizing a factory’s actual manufacturing capacity, target-setting methods, problem identification capabilities and approaches to problem solution according to plant type. To be constructed based on input from our plant managers’ workshops and success stories from other companies, it will provide the Group as a whole with the requisite methods, procedures and philosophy for maintaining manufacturing innovation over the long term.

<System for Solving Problems>

■ Part 1: Cross-functional Projects (CFPs)

We consolidated the Technology Div. supporting organizations in April 2017 and created a system to support deployment of CFPs in response to actual and potential problems across the value chain.

When an individual division or facility encounters a problem too difficult to solve on its own, the Production Technology Management Dept. organizes a CFP, a team of stakeholders operating across divisions with the Department itself playing a central role, to implement a one-stop solution. The CFP brings together appropriate experts from such varied fields as R&D, facilities technology, data analysis technology, systems technology, and procurement and logistics. It draws on their technological expertise, experience and knowledge for such purposes as acquiring understanding of the on-site situation, identifying causes through data analysis, conducting physical and chemical analyses of intermediate products, identifying causes based on mechanisms, making proposals based on knowledge of the facility organization and management, constructing systems

and offering procurement proposals.

We also employ CFPs to eliminate inefficient processes in our organizations by examining potential problems and offering persuasive comprehensive proposals.

■ Part 2: Manufacturing Innovation Seminar

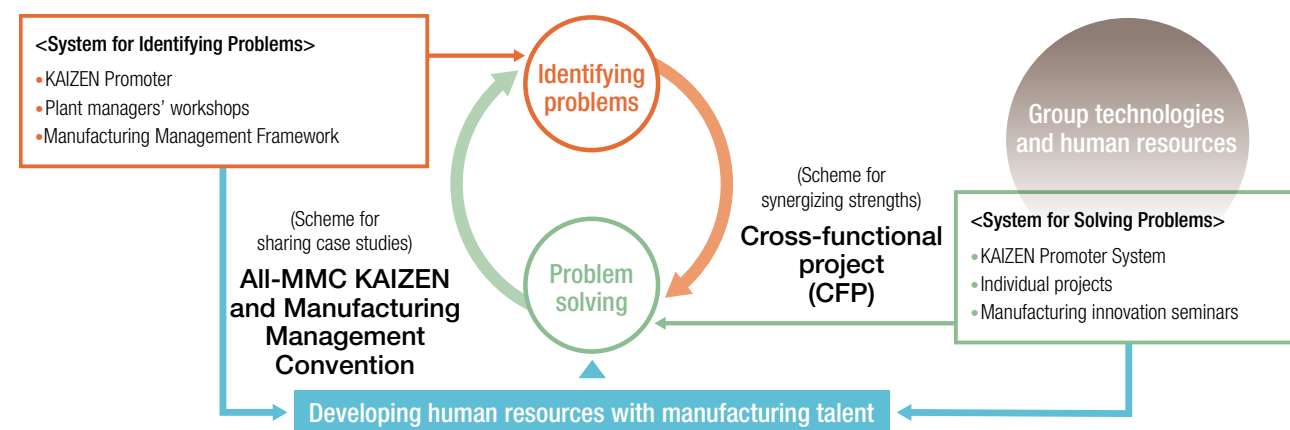
Introduced in fiscal 2017 as a new type of problem-solving system, the Manufacturing Innovation Seminar is a hands-on education program through which young engineers learn the fundamentals of problem solving while contributing to the profitability of their plant. Young engineers selected for participation in the Seminar take on challenges arising at their respective workplaces for about one year with support from instructors referred to as “coaches,” with the aim of developing a higher understanding of manufacturing as future leaders. A total of 45 engineers (including fiscal 2019 participants) have taken part in the Seminar with laudable results since its launch. In the course of the program’s unique, creatively designed workshops, the participants learn the quantitative process improvement methodology (DMAIC methodology) used in the Six Sigma methodology and apply it to practical problem solving upon return to their workplaces. The Seminar is also characterized by the involvement of experts from entities throughout the Group to conduct effective CFP-style problem solving, leveraging the Group’s wide and varied range of business operations.

Beginning in fiscal 2019, we are preparing to have Seminar graduates serve as coaches to promote on-site improvements, as well as to distribute the program’s effectiveness further by deploying it at Headquarters and at the plants’ administrative back offices.

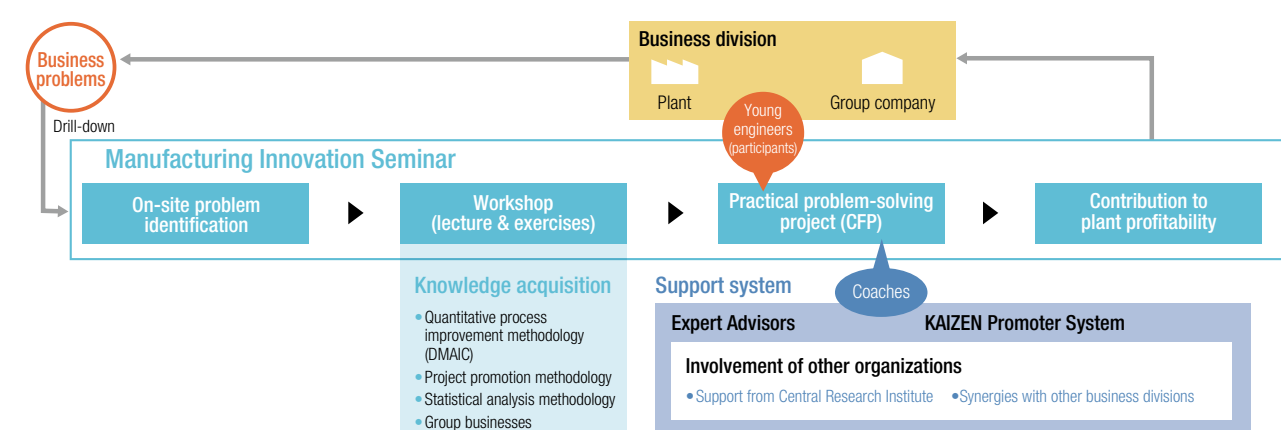
<System for Sharing Manufacturing Innovation>

We hold All-MMC KAIZEN and Manufacturing Management Conventions where we share outstanding examples of improvements and innovations. People involved in manufacturing in all our Group businesses gather to honor the finest achievements, and to learn about superior management techniques and methods, elemental technologies and engineering experts they can benefit from in unstinting pursuit of business competitiveness.

■ Efforts to Promote Manufacturing Innovation



■ Manufacturing Innovation Seminar



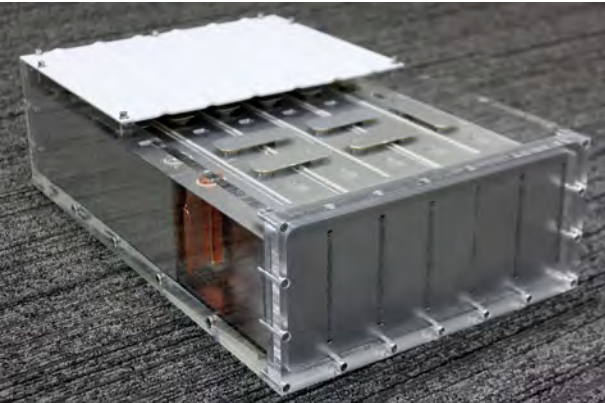
Stakeholder Relations

We proactively create opportunities for engaging in diversified communication and deepening mutual understanding to ensure incorporation of feedback from our stakeholders into management.

New Business Creation in Cooperation with Customers

Seeking enhanced responsiveness to the major social changes such as increased popularity of EVs, the rapid dissemination of new types of energy and so on, the Mitsubishi Materials Group is shifting to market-driven product development based on customer-oriented marketing. The focus of this approach is dialogue with customers in recognition of the vital importance of identifying and acquiring an accurate grasp of their current real and emerging needs. This means grasping opportunities for discussions with key customers in various business areas, pursuing negotiations with selected customers at trade shows and private exhibitions, and conducting technical meeting with specified customers. Through such means, we gather invaluable feedback from customers and utilize it to match our strengths with customers' needs while also creating new development concepts. We structure these activities strategically by sharing marketing information among our business divisions and Group companies, promoting technical exchange and coordinating collaborative development.

Since our technologies and products are often integrated into customers' (end) products as value-added materials and components, it can be difficult to recognize their features when viewing them independently. To give customers a clearer image of characteristics and value of our products and encourage their use in the customers' product designs, we are experimenting with marketing activities which employ full-size models of end products incorporating our products.



Full-size model of a lithium-ion battery module

Dialogue with Shareholders

Our Ordinary General Meeting of Shareholders offers an invaluable opportunity for direct communication between our management members and shareholders. We therefore send out convocation notices at the earliest possible date, while also providing details on our Website, to give shareholders sufficient time to consider the matters to be presented and resolved at the meeting. We continue to expand the range of our information disclosure. Since 2012, we have posted information on the Website earlier than ever and added new content to information disclosed in our annual business report, including details of our policies concerning remuneration and the status of corporate governance.

Besides permitting shareholders to exercise their voting rights in writing or online, we have introduced an electronic voting platform to facilitate voting by both Japanese and international institutional investors.

We use slides with accompanying narrations at the General Meeting of Shareholders to help ensure participants' clear comprehension of the presented contents. We also publish shareholders' voting results for every resolution on the Website, among other channels, after the meeting.

Dialogue with Investors

We organize financial briefings for institutional investors and securities analysts to coincide with our quarterly earnings announcements.

In addition to providing a breakdown of our earnings and explanations regarding matters such as management policy, we also invite questions and comments from participants so as to reflect their views in our IR activities via channels such as feedback to management.

We also organize facility tours on an ongoing basis and arrange interviews with institutional investors and securities analysts in Japan and overseas.

As exercises in active communication, such interviews enable us to clarify strategies and other aspects of our business and engage in constructive exchanges of opinions.

We have been participating in information meetings for individual investors since fiscal 2010.

Going forward, we are committed to maintaining an active IR schedule and ensuring adequate disclosure for the benefit of all investors.



Presentation at overseas IR roadshow (President Ono)

IR Activities in Fiscal 2018

Description	Number of fiscal 2018
Interviews with institutional investors	209
Overseas IR roadshow (Europe and USA)	18
Facility tours for institutional investors	5
Financial briefings and investor conference for institutional investors	6

Maintaining Harmony with Local Communities

The MMC Code of Conduct states the following in Article 4: "We will contribute to the development of each region and build a harmonious relationship of mutual prosperity with local communities." We consider it essential that we act sincerely and honestly to achieve business growth in harmony with society. All our employees will join forces in fulfilling our social responsibilities, increasing our corporate value and earning society's trust in our corporate group.

•Participation in the Community and Society

We engage in wide-ranging activities in various countries and regions, while respecting local values, with the aim of establishing relationships of trust with local communities as a basis for mutual prosperity. We seek to become a familiar member of the community by deepening mutual understanding and trust through such activities as participating in local festivals and clean-up events, contributing to disaster relief efforts, and conducting other volunteer activities that meet regional needs.

•Approaches to Society

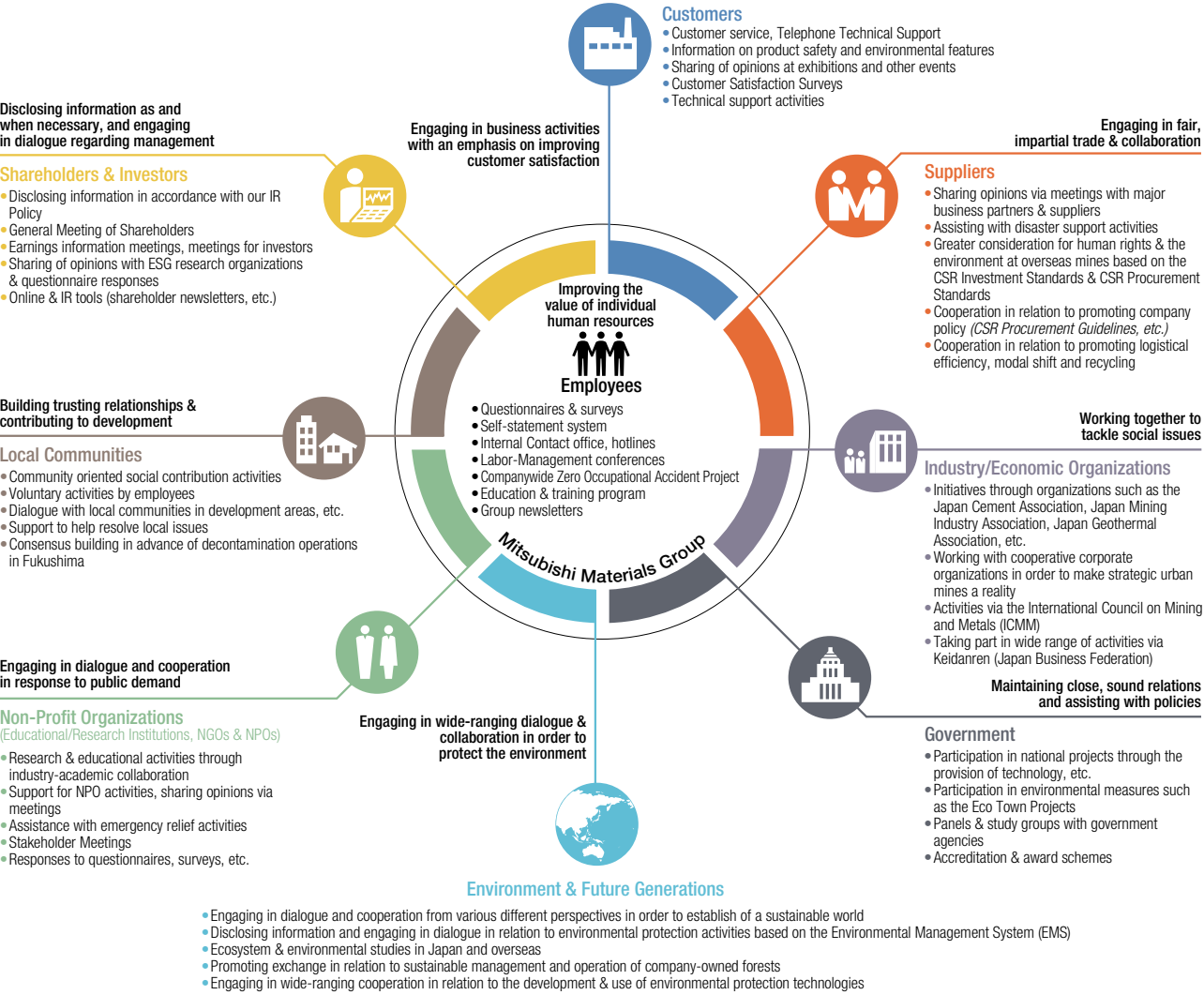
We conduct a variety of activities through our memberships in economic and industry organizations aimed at achieving the sustainability of society.

Among these, we are a member of the International Council on Mining & Metals (ICMM), which brings together the world's leading mining and smelting & refining companies. As an organization representing a major industry that procures raw materials globally and exerts enormous environmental and social impacts, the ICMM has established 10 ICMM principles for sustainable development with the intention of making a positive contribution to 17 goals of the SDGs. Member companies are in an efforts to improve the performance of our industry as a whole by sharing best practices while observing these principles in the conduct of our business.

•Dialogue with the Local Community

We engage in active programs of interaction and dialogue with our local communities to ensure that they recognize our operations and understand them properly.

Basic Approach to Building Relationships with our Stakeholders & Key Means of Communication



Supply Chain Management

We are continuing our efforts to achieve safe, sound procurement in cooperation with many suppliers throughout our supply chain based on our CSR Procurement Guidelines.

CSR Procurement Guidelines: An Overview	
[Basic Procurement Policy]	[CSR Procurement Standards]
1. Open door, fair trade	1. Respect for human rights
2. Compliance with regulations & corporate ethics	2. Compliance with regulations & corporate ethics
3. Health & safety, environmental preservation, efforts to combat global warming	3. Health & safety
4. Respect for human rights	4. Environmental preservation
5. Information security	5. Information security
	6. Ensuring product quality & safety

Metals Company CSR Procurement Standards: An Overview
[Ongoing Improvement of Environmental Performance]
•Introduction & implementation of improvement-oriented EMS
•Reduction in environmental burden imposed by mine development & operation
•Recognition of protected natural areas & preservation of biodiversity
•Consultations with stakeholders concerning environmental issues
[Ongoing Improvement of Occupational Safety & Health]
•Introduction of improvement-oriented safety & health management systems
•Protection of employees & contractors from workplace accidents & implementation of disease prevention measures extending to local communities
[Protection of Basic Human Rights]
•Prevention of forced & child labor
•Elimination of harassment & discrimination
•Avoidance of forced relocation & provision of relocation compensation
•Protection of indigenous people
•Management & recording of complaints & disputes with stakeholders
•Elimination of direct or indirect involvement with militias or other armed groups in conflict regions where human rights violations are an issue

Metals Company CSR Investment Standards: An Overview
[Protection of Basic Human Rights]
Protection of the basic human rights of people impacted by the Company's operations; consultations with stakeholders concerning local community issues; elimination of direct or indirect involvement with militias or other armed groups in conflict regions where human rights violations are an issue
[Mining & Protected Areas]
Recognition & evaluation of the impact on the cultural and natural heritage & risks to biodiversity at every stage of operations; development and implementation of mitigation measures
[Mining & Indigenous People]
Understanding & respect for the society, economy, environment, culture and rights of indigenous people; implementation of social impact assessments concerning them & provision of appropriate compensation
[Local Community Relations]
Confirmation of disputes or lawsuits with the local community; clarification of business plans through consultation & dialogue
[Environmental Preservation]
Implementation of environmental impact assessments (EIA) & acquisition of appropriate permits; establishment of detailed policies to reduce the environmental impact of mine development and operation
[Mineral resources & economic development]
Contribution to sustainable economic development at the regional and national levels

Basic Principles

As a comprehensive materials manufacturer, the Company works in partnership with suppliers throughout the value chain to raise added value and promote global procurement that assures stable product supplies and enhances our product competitiveness.

Stable raw materials procurement is essential for maintaining smooth operations. We consequently recognize the crucial importance of not only disaster and accident preparedness, but also of maintaining close relationships with our suppliers, ensuring the fairness of all our transactions, avoiding corruption, complying with laws and regulations and responding appropriately to human rights and other such issues.

Ensuring Procurement Stability

We make every effort in our global procurement activities to ensure stable raw materials procurement and conduct appropriate risk management. We respond promptly and effectively when procurement is hindered by circumstances such as large-scale disasters, geopolitical risks or changes in the market environment, or when raw materials prices undergo periods of significant fluctuation. We are committed to maintaining procurement stability while mitigating the various risks involved in the procurement process. Strategies to assure this include the following: concluding long-term agreements with key raw materials suppliers, promoting recycling, establishing multiple diversified supply sources, considering the use of alternative materials, reinforcing our supplier relationships, and conducting joint purchasing with other companies. These and other efforts enable us to maintain sustainable procurement by minimizing the impact of unforeseen circumstances on our production activities.

As one example of our raw materials recycling activities, we collect used cemented carbide tools from our customers and reclaim the tungsten, cobalt, tantalum and other materials they contain in cooperation with our suppliers. Our efforts to diversify and enlarge our supplier base, meanwhile, center on working closely with our production, quality assurance, sales and other relevant divisions to expand our procurement network on a global scale.

In addition to our daily procurement activities, we evaluate the performance of our current suppliers on a regular basis and strive to respond to changes in our supply chain and procurement processes without delay.

Implementing CSR Procurement Standards

Among actions aimed at prioritizing CSR throughout the supply chain, we inform suppliers of our Procurement & Logistics Dept.'s CSR Procurement Guidelines and ensure that the Guidelines are reflected in the contents of all basic agreements.

The Guidelines comprise the Basic Procurement Policy elucidating the Department's responsibilities and the CSR Procurement Standards with which suppliers are required to comply.

In April 2016 a reassessment of our methods of selecting new suppliers and evaluating the performance of current suppliers, conducted with the aim of ensuring the effectiveness of our CSR procurement operations, led us to introduce new criteria for selecting suppliers for continuing or newly originated transactions. To such previously considered general factors as quality, price and delivery date, we added supply chain risk, an increasingly pressing concern today, use of child or forced labor, payment of unreasonably low wages and imposition of adverse environmental impacts.

Before implementing these assessments and evaluations, we ask suppliers to evaluate themselves based on our Supplier Self-Check Sheet, and follow up with consultations concerning possible improvements, as necessary.

Copper Product Raw Material Procurement Initiatives

Our procurement of copper concentrate, a raw material of copper product, centers on overseas mines in which we have investments. Although MMC does not participate directly in mine management, we seek to fulfill our responsibilities concerning sustainable development as a company engaged in global procurement activities through participation in the International Council on Mining & Metals (ICMM).

We assign personnel to mines in which our interests exceed a certain level, where they engage in dialog with indigenous people and members of the local community through such means as advisory committees.

The Metals Company responsible for implementing the CSR Investment Standards and CSR Procurement Standards, meanwhile, monitors the circumstances of its suppliers and investment partners through such means as regular surveys, and advises mine operators on implementing any necessary improvements. We seek to grasp the actual on-site conditions and offer any improvements necessary to reduce the environmental burden imposed by our global supply chain, while making every effort to avoid complicity in human rights violations.

Cement Product Raw Material Procurement Initiatives

Limestone is the principal raw material used in cement production.

MMC procures the limestone for use in its cement plants from three Group-owned limestone mines in Japan and two overseas mines (in the United States and Vietnam). It seeks to build relationships of trust with the local communities in which it conducts limestone mining and transportation by implementing various exchange and cooperation activities, while also endeavoring to minimize noise and preserve the habitats of rare species.

Initiatives in Response to Conflict Mineral Issues

The Dodd-Frank Wall Street Reform and Consumer Protection Act requires all companies listed in the United States to disclose any "conflict minerals," which include gold, tin, tantalum and tungsten, contained in their products. They must also provide details concerning their investigations of the countries selected as reasonable sources of these minerals and the results of the investigations as part of efforts to prevent minerals mined in the Democratic Republic of Congo (DRC) or neighboring countries from being used to fund armed groups that commit human rights violations or engage in other acts of violence.

Because the Company's smelting and refining operations employ three of these minerals – gold, tin and tungsten – we are reinforcing initiatives in this area. We began by formulating a Companywide policy on conflict minerals and publishing it on our Website in 2013.

•Initiatives with respect to gold and tin

The Metals Company has pledged its support for a campaign to ensure a transparent flow of funds related to mineral resources, as promoted by the Extractive Industries Transparency Initiative (EITI)*1 since June 2011.

In August 2013, we obtained certification of our use of conflict-free minerals in our gold products from the London Bullion Market Association (LBMA)*2 and have had this certification renewed every year since. Since February 2014, moreover, we have also received annual certification of our use of conflict-free tin from RMAP(former CFS program) of Responsible Minerals Initiative (RMI)*3, former CFSI).

•Initiatives with respect to tungsten

Japan New Metals Co., Ltd., a Group company whose operations include tungsten smelting and refining, began efforts at an early stage to acquire independent certification of its use of conflict-free minerals for supply to smelters and refineries in China. We formulated a Conflict Mineral Management Policy in April 2014 and acquired RMAP certification for tungsten in December of that year.

*1 Extractive Industries Transparency Initiative (EITI):
The EITI is a global framework established to improve the transparency of financial flows from extractive industries engaging in the development of oil, gas and mineral resources to the governments of resource-producing countries. Its aim is to prevent corruption and conflicts, and thus to promote responsible resources development that can facilitate growth and help to reduce poverty.
*2 London Bullion Market Association (LBMA):
The LBMA implements and oversees compliance with quality requirements for gold and silver bullion circulated in the market.
*3 Responsible Minerals Initiative (RMI)
<http://www.responsiblemineralsinitiative.org/>
Electronics Industry Citizenship Coalition (EICC) was renamed Responsible Business Alliance (RBA) and CFSI was renamed Responsible Minerals Initiative (RMI), Conflict-Free Smelter (CFS) program was renamed Responsible Minerals Assurance Process (RMAP) on October 2017.

Environmental Management

The MMC Group is committed, based on its Environmental Policy, to preserving the environment and to pursuing effective use and recycling of resources. We seek to prevent pollution in the vicinity of our business operations, moreover, and to develop a variety of activities aimed at realizing a low-carbon society.

Environmental Policy

The MMC Group is committed, based on its Environmental Policy, to preserving the environment and to pursuing effective use and recycling of resources.

We seek to prevent pollution in the vicinity of our business operations, moreover, as part of efforts to contribute to solution of global environmental challenges.

Environmental Policy

Based on our Corporate Philosophy “For People, Society and the Earth,” we recognize the importance of environmental preservation on a global scale and strive to contribute to the creation of a sustainable society through our business activities.

As a comprehensive materials manufacturer, with operations ranging from cement, metals and metalworking through to electronic materials and components, we supply many of the basic materials and products that are essential to our industrialized society. Indeed, our materials and products are widely used in many aspects of daily life.

Whereas operations within the materials industry inevitably have a high environmental impact at the manufacturing stages, they also present opportunities to effectively harness and recycle resources through initiatives at the waste processing and recycling stages.

We take the environment into consideration in everything that we do and are committed to environmental management, capitalizing on the nature of our operations to strike a balance between business and the environment. With that basic philosophy in mind, we are determined to do our bit to help create a recycling-oriented society that has a low impact on the environment, through strict legal compliance and operations such as supplying and recycling essential everyday materials and products.

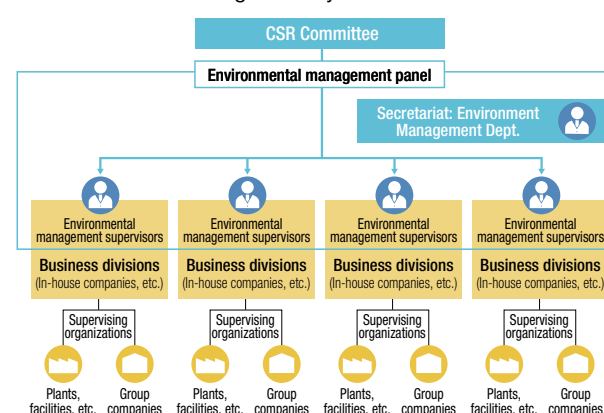
1. Promote environmental management
2. Reduce environmental impact
3. Contribute to creation of a recycling-oriented society
4. Preserve biodiversity
5. Help to create a low-carbon society
6. Coexist with local communities

Environmental Management System

We have introduced ISO 14001 environmental management and other programs Group-wide as a basis for conducting environmental preservation activities tailored to such specific factors as the nature of our various business activities and regional characteristics. When it comes to shared issues, the Group joins together in discussing all the options via the Environmental Management Panel, a specialized subcommittee supporting our CSR Committee, and implements the most appropriate measures.

As a licensed operator in the waste-treatment business, we consider waste management as a top priority, proactively collecting waste products in Japan and recycling them as raw materials and alternative sources of thermal energy for smelting and cement manufacturing. We strive to ensure good environmental management across the board, from the Head Office to individual facilities. Our efforts include providing education and support for compliance with environmental legislation with respect to air and water quality and other concerns, ensuring appropriate use of tools such as waste management manuals and self-check sheets and maintaining a consultation desk at the Head Office.

Environmental Management System



Environmental Preservation

Full Compliance and Environmental Accident Prevention

Ensuring that environmental management is carried out appropriately requires full awareness among managers and staff of the importance of protecting the environment and a proper understanding of legislative requirements. The Group consequently shares information on legislative revisions, conducts capital investments and operations management in compliance with applicable laws and regulations and takes steps to prevent omissions in obtaining licenses and certifications. We provide ongoing staff education in pollution prevention and proper waste management, moreover, as well as training for ISO 14001 internal environmental auditors.

1. Information-sharing Regarding Compliance with Environmental Legislation

We keep employees up to date on changes in legislation by providing information via intranet or email. In the event of major revisions, or revisions requiring measures such as equipment upgrades, we organize explanatory meetings to provide information on the requisite measures and ensure that all our facilities are prepared to take appropriate action.

2. Compliance with Legislation on Pollution Prevention

We strictly observe all relevant laws and regulations in operations management at our business sites, with consideration for local residents and the environment as our highest priority. In order to prevent failure to make notifications or obtain permits or licenses in accordance with legislation applicable to installing or upgrading equipment, we conduct investigations at individual facilities to determine what notifications the regulations require them to submit. We also confirm application of the legislation and the response status of the submissions by the relevant corporate departments. These activities pertain particularly to business startups that require investments exceeding prescribed amounts. In light of the importance of confirming with certainty that operations management is conducted in full compliance with laws and regulations at our business facilities, we constructed a checking system to confirm the status of legal compliance without fail and implemented it in July 2018.

3. Environmental Management Training

Management-level staff at our various facilities receive education designed to improve their understanding of pollution prevention management systems, and other basic management requirements from an environmental management perspective. Seminars are organized for environmental management supervisors at individual facilities to clarify legislation such as the Air Pollution Control Act and the Water Pollution Control Act. We have so far conducted seminars mainly at the Head Office and other main offices, but we will also begin holding them at manufacturing sites to reinforce employee awareness of environmental legislation, while also visiting environment-related facilities in order to reach more employees and contribute significantly to the seminar participants' knowledge of the issues and appropriate responses.

4. Waste Management Training

The Group participates extensively in various recycling businesses as a licensed waste treatment business. Fully aware that any violation of the Waste Management and Public Cleansing Law or related legislation could cause serious problems for the local residents or lead to revocation of our waste treatment business license, we position proper waste management as a vital factor for our business continuity and provide education and promote awareness among our employees accordingly.

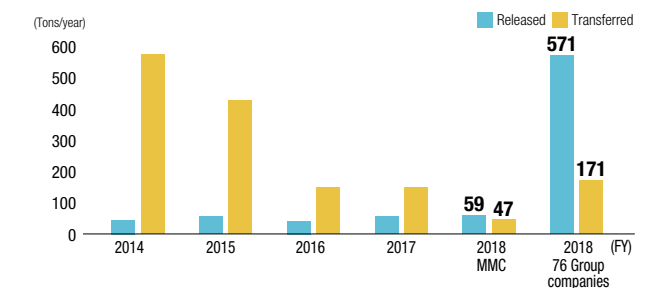
Initiatives to Reduce the Environmental Impact of Manufacturing Processes

As a materials manufacturer, the Mitsubishi Materials Group conducts a wide range of businesses and uses an extensive variety of natural and recycled resources as raw materials. Our various manufacturing facilities conduct environmental risk reduction activities according to the properties of the chemical elements concerned and implement measures to minimize

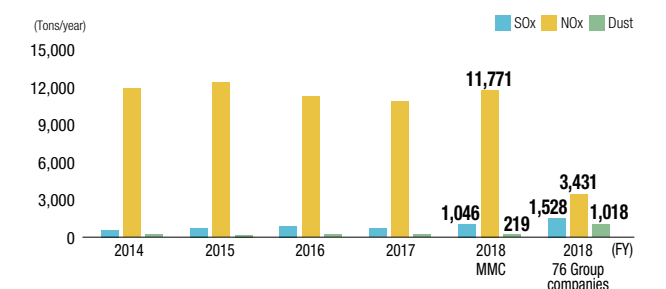
emissions.

Burning fuels in the cement manufacturing, copper smelting and refining and other industries releases pollutants such as dust, sulfur oxides (SOx) and nitrogen oxides (NOx) into the atmosphere. The facilities concerned ensure proper maintenance and stable operation of their electric dust collection equipment and other emissions treatment facilities to minimize emissions. When discharging wastewater into public waters and elsewhere, moreover, we take every appropriate measure to prevent water pollution, such as by installing high-capacity effluent treatment systems and imposing management targets that are even stricter than the official wastewater standards. We endeavor throughout the Group to minimize the volume of waste generated and to recycle resources from waste. These efforts include continuous monitoring at the Group level of the environmental data required to grasp the environmental burden.

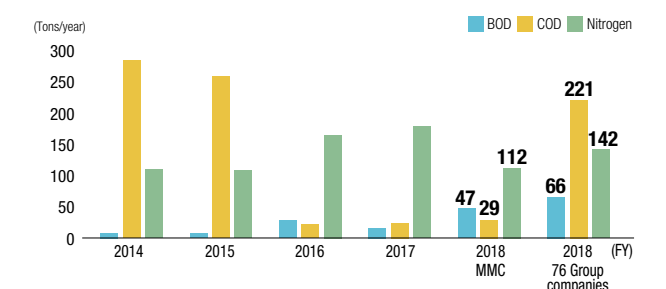
Chemicals Released or Transferred



Emissions into the Air



Emissions into Bodies of Water



Environmental Management

Global Warming Prevention

Policy and Framework

The large number of disastrous extreme weather events believed to have been caused by global warming in recent years (superstorms, floods, droughts, etc.) has engendered a growing sense of concern with respect to global economic risk.

We have set clear targets based on our environmental policy for each of our plants for the purpose of achieving a steady reduction of CO₂ emissions while actively developing and supplying products and services that will contribute to realization of a low-carbon society.

Our cement business not only produce CO₂ through their use of energy sources, but they also produce CO₂ emissions through the thermal decomposition of limestone, the main raw material in cement production. Any tightening of regulations on greenhouse gas emissions (including emissions trading schemes) could therefore pose a considerable financial risk to the Group. At the same time, however, demand for technologies and products that contribute to saving energy and reducing CO₂ emissions is expected to grow, creating more future business opportunities as a result. We are also proactively developing damage prevention measures with respect to heavy rainfall and storm surges associated with extreme weather.

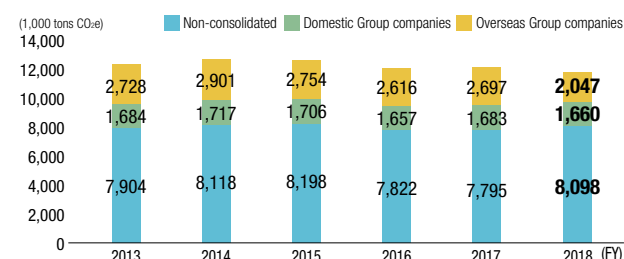
The Company's Global Environment and Energy Committee (comprising members of the Corporate Strategy Committee) takes the lead in formulating strategic initiatives in response to risks and business opportunities related to climate change from a comprehensive medium- to long-term perspective. In fiscal 2019, the Committee made the decision to begin considering ways of introducing an internal carbon pricing system.

Comprehensive Initiatives for Global Warming Prevention

The Group's efforts to realize a sustainable society include establishing global warming prevention targets to be met by 2020 and acting on our total commitment to achieving higher energy efficiency through such means as actively pursuing energy saving at our facilities. We are monitoring progress toward achieving our targets at 13 facilities (with five plants counted as one in the cement business). Our performance in fiscal 2018 registered 100% or higher achievement of our targets at 3 facilities but under 50% at the remaining sites.

In addition to pursuing CO₂ reduction initiatives, we are working to achieve clearly defined targets, such as effective use of recycled resources, aimed at contributing to a recycling-oriented society. (See the CSR Data Book for details.)

Total Greenhouse Gas Emissions (by Non-consolidated & Major Consolidated Subsidiaries)

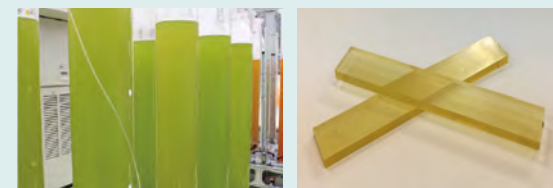


TOPICS

Towards Commercialization of Bioplastic Materials Derived from CO₂-sequestering Algae

This R&D has been adopted by the Ministry of the Environment as a "Development and Demonstration Project for Reduction of CO₂ Emission" performed by University of Tsukuba as a representative organization. We aim to realize to put "highly functional algae-derived plastic" into practice within fiscal 2022. If cement manufacturing process as CO₂ source and algae culturing process as efficient CO₂ fixation are combined and highly functional bioplastic can be produced from emitted CO₂, it is possible to produce a substitute for petroleum-based synthetic plastics and contribute to a low-carbon, recycling society.

In collaboration with University of Tsukuba, Sobio technologies Inc. and NEC Corporation, we started joint development for practical application of this technology.



Algae culture (photosynthesis) using sunlight and CO₂ released from a cement factory

Prototype algae bioplastic

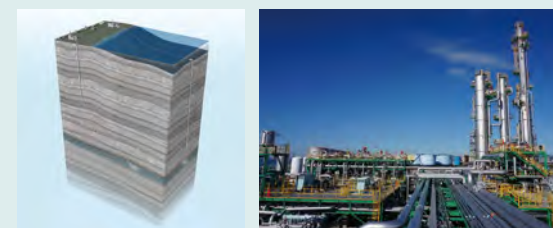
(Courtesy of the University of Tsukuba)

CO₂ Capture and Underground Storage

Another focus of our Group is on CO₂ capture and storage (CCS) technologies employed to isolate and recover CO₂ from production activities and store it underground, rather than releasing it into the atmosphere. This is an area in which we can leverage assets nurtured since our founding in the form of superior technological and human resources for assessing underground structures.

As investors in Japan CCS Co., Ltd., an enterprise founded in May of 2008 under the auspices of the Ministry of Economy, Trade and Industry, we are participating in large-scale CCS demonstration testing and investigations of potential CO₂ storage sites in Tomakomai, Hokkaido.

We are also contributing to assessment and study of CO₂ storage for a Ministry of the Environment field test of environmentally friendly CCS initiated in fiscal 2017.



Outline of CCS as part of demonstration testing in Tomakomai (courtesy of Japan CCS Co., Ltd.)

CO₂ capture plant

(Courtesy of Japan CCS Co., Ltd.)

Abandoned Mine

Managing Abandoned Mine

We are a company with its origins in the mining industry. The Mitsubishi Materials Group owns a wide range of mines around Japan, including limestone, coal and nonferrous metal mines, such as copper, lead and zinc mines. Operations at all of our nonferrous metal mines have now been suspended or discontinued. The following controls and management programs are currently in place at 21 abandoned mines in 14 locations.

- Management tailings dam (sites used to store rubble from mining minerals, slag and sediment from mine drainage treatment).
- Maintenance of excavated mine drift and drainage routes; implementation of safety measures at disused mine mouths and subsidence sites.
- Treatment of acidic drainage containing heavy metals from the above sites.

We continue to preserve and maintain sections of mine drift in some abandoned mines as cultural heritage sites or tourist facilities to exhibit their former conditions and preserve historical mining technologies for future generations.

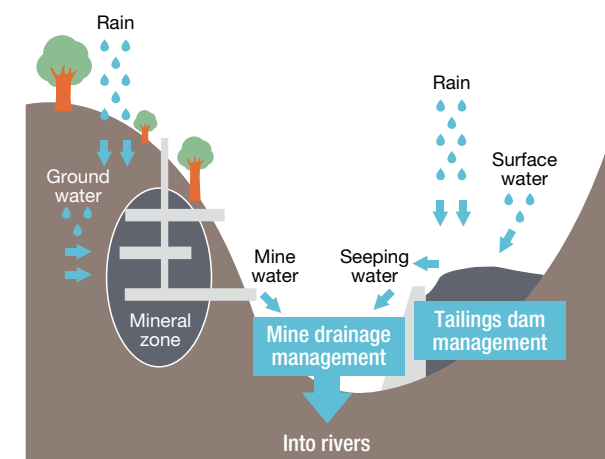
Facility Upgrading and Environmental Countermeasures for Abandoned Mines

Since 2015, all our Group companies have been implementing responses to deteriorating natural disasters and other risks by conducting protective construction to guard against pollution and other threats, reinforcing tailing dams to prevent uncontrolled release of slag and sediment in the event of major earthquakes, reducing wastewater at the source and upgrading aging facilities.

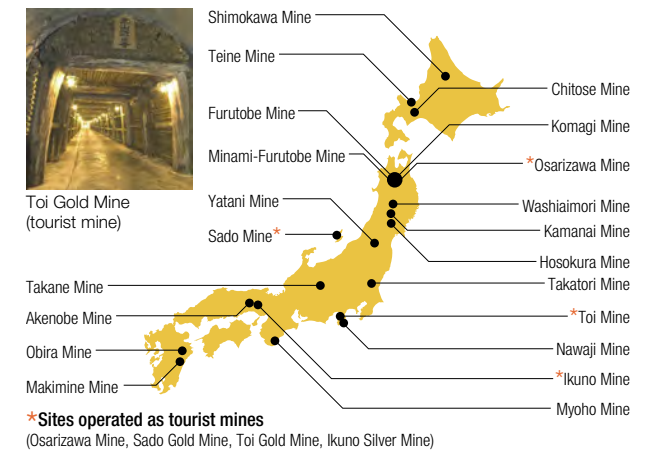
Construction costs are recorded on a regular basis as provisions for the environment. Funding for tailing dam reinforcement work at six of the 10 sites in need of reinforcement had been recorded as of fiscal 2018 along with the costs of mine pollution countermeasures, including the costs involved in reducing wastewater at its source.

In addition to introducing these construction-based solutions, we are directing efforts toward R&D of new technologies for reducing the volume and improving the quality/treating the drainage water in mines and training human resources to handle future operations. We intend to continue our efforts to enhance efficiency and reduce the environmental burden in our management of abandoned mines.

Overview of Wastewater Treatment in Abandoned Mines



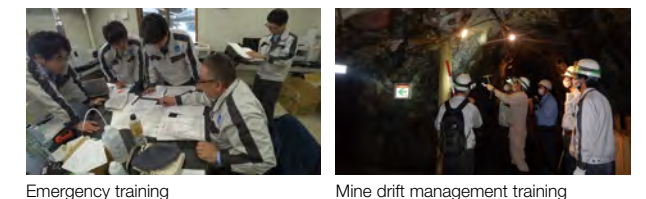
Abandoned Mitsubishi Materials (Non-ferrous) Mines



Major Management Tasks for Abandoned Mines



Human Resources Development



Tailings dam reinforcement



Wastewater Reduction at the Source



Ten-Year Summary

Mitsubishi Materials Corporation and Consolidated Subsidiaries Years ended March 31

	Unit : Millions of yen										Unit : Thousands of U.S. dollars
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018*4
For the Year											
Net sales	1,424,114	1,119,448	1,333,992	1,440,847	1,287,251	1,414,796	1,517,265	1,417,895	1,304,068	1,599,533	\$ 15,055,845
Cost of sales	1,251,102	982,082	1,141,094	1,249,744	1,094,588	1,220,333	1,313,259	1,204,322	1,104,402	1,379,877	12,988,307
Operating profit	35,134	12,680	57,290	52,293	52,500	66,281	71,871	70,420	59,761	72,819	685,428
Ordinary income (loss)	40,046	(9,541)	56,425	42,495	74,414	76,902	81,093	72,422	63,925	79,621	749,447
Net income (loss) attributable to owners of parent	6,106	(66,555)	14,274	9,565	36,948	52,551	56,147	61,316	28,352	34,595	325,638
Capital expenditures	74,252	66,679	43,213	52,141	52,957	65,944	57,636	78,103	75,685	76,231	717,541
Depreciation and amortization	71,973	69,840	66,365	62,514	60,370	60,498	56,746	60,842	60,796	61,420	578,133
R&D expenses	11,852	10,897	11,243	11,743	11,401	10,986	10,530	11,225	11,344	11,614	109,923
At Year-End											
Total assets	1,732,003	1,826,420	1,837,405	1,751,870	1,811,767	1,778,505	1,898,157	1,793,375	1,896,939	2,015,084	18,967,284
Total long-term liabilities	574,518	662,430	572,321	565,542	549,198	514,279	490,825	452,038	480,079	469,508	4,419,317
Total net assets	421,934	399,095	402,868	409,074	466,231	525,707	629,514	645,017	710,195	768,495	7,233,577
Number of shares of common stock (thousands)	1,278,955	1,314,895	1,314,895	1,314,895	1,314,895	1,314,895	1,314,895	1,314,895	131,489	131,489	
Number of employees (consolidated)	21,224	21,641	21,762	22,015	22,181	23,112	23,413	24,636	24,859	26,959	
Unit : Yen											Unit : Thousands of U.S. dollars
Per Share Amounts*1											
Basic net income	¥ 4.81	¥ (52.34)	¥ 10.88	¥ 7.29	¥ 28.19	¥ 40.10	¥ 42.85	¥ 46.80	¥ 216.44	¥ 264.15	\$ 2.48
Diluted net income	—	—	—	—	—	—	—	—	—	—	—
Net assets	287.44	259.93	262.38	267.62	309.17	348.54	420.36	423.83	4,743.27	5,211.20	49.05
Cash dividends applicable to the year	4.00	—	2.00	2.00	4.00	6.00	8.00	10.00	60.00	80.00	0.75
Financial Ratios (%)											
Operating margin	2.5%	1.1%	4.3%	3.6%	4.1%	4.7%	4.7%	5.0%	4.6%	4.6%	
Return on asset (ROA)*2	2.2%	(0.5%)	3.1%	2.4%	4.2%	4.3%	4.4%	3.9%	3.5%	4.1%	
Return on equity (ROE)*3	1.5%	(18.9%)	4.2%	2.8%	9.8%	12.2%	11.1%	11.1%	4.8%	5.3%	
Shareholders' equity ratio	21.0%	18.7%	18.7%	20.0%	22.4%	25.7%	29.0%	31.0%	32.8%	33.9%	

Notes: 1. The Company consolidated its shares at a rate of one share for every 10 shares of its common stock, with October 1, 2016 as the effective date. Accordingly, "Per Share Amounts" is calculated on the assumption that the consolidation of its shares was conducted at the beginning of FY2017.

2. Return on assets (ROA)
ROA = Ordinary income / [(Total asset at the beginning of terms + total asset at the end of terms) / 2] x 100

3. Return on equity (ROE)
ROE = Net income attributable to owners of parent / {[(Total net assets at the beginning of terms - non-controlling interests at the beginning of terms - other deductions at the beginning of terms) + (Total net assets at the end of terms - non-controlling interests at the end of terms - other deductions at the end of terms)] / 2} x 100

4. The translations of the Japanese yen amounts into U.S. dollars are included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2018, which was ¥106.24 to U.S.\$1.

Medium-Term Management Plan
“We can do 600”
2006-2007

Key Strategies

- 1 Improve stability
- 2 Growth area initiatives
- 3 Strengthening cost-competitiveness
- 4 Reforming corporate culture

Achievement Contents

- Ordinary income: ¥60.0 billion
- ROA (Ordinary income / Total assets): Over 4%
- Interest-bearing debt ¥700.0 billion

Medium-Term Management Plan
“Break-through 1000
-Aiming to become a Company
with ¥100 billion Ordinary Income”
2008-2010

Key Strategies

- 1 Expansion and reinforcement of four core businesses as the basis of integrated management
- 2 Initiatives for our growth strategies for “Advancement and Change”
- 3 Emphasize the intellectual capital underlying our growth
- 4 Enhancing financial position

Achievement Contents

- FY2008 Ordinary income: Over ¥100.0 billion
- FY2008 ROA (Ordinary income / Total assets): Over 5%

Medium-Term Management Plan
“Materials Premium 2013
Aiming for New Creation”
2012-2014

Key Strategies

- 1 Develop overseas markets, especially emerging markets
- 2 Realize “Materials Premium”

Achievement Content

- Net D/E ratio: Under 1.5 times

Medium-Term Management Plan
“Materials Premium 2016
-Challenge to become the world's
leading business group-”
2015-2017

Key Strategies

- 1 Fortifying the foundation for growth
- 2 Strengthening global competitiveness
- 3 Pursuing a recycling-based business model

Achievement Content

- Net D/E ratio: Under 1.0 times

Medium-Term Management Strategy
“Transformation for Growth”
2018-2020

Key Strategies

- 1 Achieve growth through innovation
- 2 Create value by building a recycling-oriented society
- 3 Increase the company’s market presence through investment for growth
- 4 Increase efficiency through continuous improvement

Consolidated Balance Sheets

Mitsubishi Materials Corporation and Consolidated Subsidiaries
March 31, 2018 and 2017

Unit : Millions of yen

ASSETS	2017	2018
Current assets:		
Cash and time deposits	141,264	93,389
Notes and accounts receivable:		
Trade	201,013	249,380
Unconsolidated subsidiaries and affiliates	16,998	19,600
Other	6,870	7,764
Inventories	288,279	366,092
Deferred tax assets	9,375	9,068
Leased gold bullion	110,458	88,862
Other current assets	95,746	122,506
Allowance for doubtful accounts	(2,537)	(2,518)
Total current assets	867,469	954,146
Property, plant and equipment:		
Land	276,216	251,926
Buildings and structures	467,426	459,134
Machinery and equipment	1,248,749	1,226,374
Construction in progress	23,091	23,105
Less accumulated depreciation	(1,349,258)	(1,314,981)
Net property, plant and equipment	666,226	645,559
Investments and long-term receivables:		
Investments in securities	189,432	248,722
Net asset for retirement benefits	393	449
Unconsolidated subsidiaries and affiliates	67,005	72,396
Long-term receivables	889	59
Other	24,833	14,138
Allowance for doubtful accounts	(5,549)	(4,297)
Total investments and long-term receivables	277,005	331,469
Other assets:		
Deferred tax assets	26,425	17,914
Goodwill	43,436	44,636
Other	16,377	21,358
Total other assets	86,239	83,909
Total assets	1,896,939	2,015,084

Unit : Millions of yen

LIABILITIES	2017	2018
Current liabilities:		
Short-term bank loans	152,668	154,413
Current portion of long-term debt	66,150	76,728
Notes and accounts payable:		
Trade	106,060	153,415
Unconsolidated subsidiaries and affiliates	6,824	4,129
Other	19,242	24,753
Income taxes payable	16,154	9,151
Deferred tax liabilities	352	79
Accrued expenses	50,859	55,218
Provision for bonuses	12,880	13,228
Deposited gold bullion	241,406	246,227
Reserve for loss on disposal of inventories	637	783
Other current liabilities	33,426	38,949
Total current liabilities	706,665	777,080
Long-term liabilities		
Long-term debt	309,411	290,292
Accrual for officers' lump-sum severance benefits	1,365	1,384
Reserve for loss on unconsolidated subsidiaries and affiliates	4,137	986
Reserve for environmental measures	32,568	37,833
Net defined benefit liability	56,037	51,647
Deferred tax liabilities	23,526	40,039
Deferred tax liabilities for land revaluation	25,590	24,162
Other	27,443	23,162
Total long-term liabilities	480,079	469,508
NET ASSETS		
Shareholders' equity		
Common stock		
Authorized 340,000,000 shares		
Issued 131,489,535 shares	119,457	119,457
Capital surplus	92,422	92,422
Retained earnings	333,526	361,430
Treasury stock, at cost	(2,017)	(2,089)
Total shareholders' equity	543,390	571,222
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	55,226	95,487
Deferred gains or losses on hedges	888	1,068
Revaluation reserve for land	34,930	33,071
Foreign currency translation adjustments	(1,418)	(10,312)
Accumulated adjustments for retirement benefits	(11,735)	(8,066)
Total accumulated other comprehensive income	77,891	111,249
Non-controlling interests	88,913	86,023
Total net assets	710,195	768,495
Total liabilities and net assets	1,896,939	2,015,084

Consolidated Statements of Income

Mitsubishi Materials Corporation and Consolidated Subsidiaries
Years ended March 31, 2018 and 2017

Unit : Millions of yen

	2017	2018
Net sales	1,304,068	1,599,533
Cost of sales	1,104,402	1,379,877
Gross profit	199,665	219,655
Selling, general and administrative expenses	139,904	146,835
Operating profit	59,761	72,819
Other income (expenses):		
Interest and dividend income	15,279	20,260
Interest expenses	(4,922)	(5,058)
Income from leased property	4,863	4,866
Expense for leased property	(3,061)	(2,867)
Expense for the maintenance and management of abandoned mines	(3,565)	(4,098)
Loss on valuation of investment securities	(5,049)	(400)
Insurance income	2,400	—
Gain on net sales of investments in securities	19,072	5,667
Gain on sales of property, plant and equipment	16,545	6,760
Loss on disposal and sales of property, plant and equipment	(4,292)	(4,958)
Loss on impairment of fixed assets	(9,977)	(11,035)
Reserve for environmental measures	(23,912)	(9,092)
Foreign exchange losses, net	(1,347)	(1,805)
Loss on non-conforming products	—	(3,202)
Equity in losses (earnings) of affiliates	1	(1,336)
Other, net	(2,212)	1,259
	(176)	(5,042)
Income before income taxes	59,584	67,777
Income Taxes	24,011	23,639
Net income	35,573	44,137
Net income attributable to:		
Non-controlling interests	7,220	9,542
Owners of parent	28,352	34,595

Consolidated Statements of Cash Flows

Mitsubishi Materials Corporation and Consolidated Subsidiaries
Years ended March 31, 2018 and 2017

Unit : Millions of yen

	2017	2018
Cash flows from operating activities	115,552	50,715
Cash flows from investing activities	(26,557)	(83,957)
Cash flows from financing activities	(15,703)	(11,034)
Effect of exchange rate fluctuation on cash and cash equivalents	(55)	(2,927)
Net decrease (increase) in cash and cash equivalents	73,237	(47,204)
Cash and cash equivalents at beginning of year	58,482	132,616
Effect of changes in consolidated subsidiaries	896	714
Increase in cash and cash equivalents resulting from change of accounting period of consolidated subsidiaries	—	1,228
Cash and cash equivalents at end of year	132,616	87,355

Consolidated Statements of Changes in Net Assets

Mitsubishi Materials Corporation and Consolidated Subsidiaries
Years ended March 31, 2018 and 2017

Unit : Millions of yen

	Years ended March 31, 2018 and 2017					Non-controlling interests	Total net assets	
	Shareholders' equity							
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity			
Balance at March 31, 2017	119,457	92,422	333,526	(2,017)		543,390		
Dividends			(9,168)			(9,168)		
Net income attributable to owners of parent			34,595			34,595		
Increase due to reversal of revaluation reserve for land			1,711			1,711		
Increase in cash and cash equivalents resulting from change of accounting period of consolidated subsidiaries			83			83		
Increase resulting from increase in the number of consolidated subsidiaries			681			681		
Increase due to decrease in affiliates								
Acquisition of treasury stock				(72)		(72)		
Sales of treasury stock		(0)		0		0		
Change in treasury shares of parent arising from transactions with non-controlling shareholders		(0)				(0)		
Net change other than shareholders' equity								
Balance at March 31, 2018	119,457	92,422	361,430	(2,089)		571,222		
	Accumulated other comprehensive income						Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustments	Accumulated adjustments for retirement benefits	Total accumulated other comprehensive income		
Balance at March 31, 2017	55,226	888	34,930	(1,418)	(11,735)	77,891	88,913	710,195
Dividends								(9,168)
Net income attributable to owners of parent								34,595
Increase due to reversal of revaluation reserve for land								1,711
Increase in cash and cash equivalents resulting from change of accounting period of consolidated subsidiaries								83
Increase resulting from increase in the number of consolidated subsidiaries								681
Increase due to decrease in affiliates								
Acquisition of treasury stock								(72)
Sales of treasury stock								0
Change in treasury shares of parent arising from transactions with non-controlling shareholders								(0)
Net change other than shareholders' equity	40,260	180	(1,858)	(8,894)	3,669	33,358	(2,889)	30,468
Balance at March 31, 2018	95,487	1,068	33,071	(10,312)	(8,066)	111,249	86,023	768,495

Profile

(As of March 31, 2018) *June 22, 2018

Company Name : Mitsubishi Materials Corporation
Keidanren Kaikan 1-3-2 Otemachi, Chiyoda-ku, Tokyo 100-8117

Date Established : April 1, 1950

Representative* : President Naoki Ono

Stock Listing : Tokyo Stock Exchange, Inc.

Paid-in Capital : ¥119,457 million

Total Assets : ¥2,015,084 million

Number of Employees : 4,664 (consolidated : 26,959)

Number of affiliates : 149

Equity method affiliated companies : 17

Membership :

Nippon Keidanren (Japan Business Federation), KEIZAI DOYUKAI (Japan Association of Corporate Executives), Japan Cement Association, Japan Mining Industry Association, ICMIM (International Council on Mining & Metals), etc.

Domestic Network

■ Main Mitsubishi Materials premises ● Main Group companies

Kanto Region

- Head Office (Tokyo)
- Yokoze Plant (Saitama Prefecture) Cement
- Ceramics Plant (Saitama Prefecture) Electronic Materials & Components
- Energy Project & Technology Center (Saitama Prefecture) Environment & Energy
- Saitama Property Management Office (Saitama Prefecture)
- Tsukuba Plant (Ibaraki Prefecture) Advanced Materials & Tools
- Central Research Institute (Ibaraki Prefecture)
- Ryoko Lime Industry Co., Ltd. (Tokyo)

Hokkaido

- Sapporo Branch (Hokkaido)

Tohoku Region

- Aomori Plant (Aomori Prefecture) Cement
- Akita Refinery (Akita Prefecture) Metals
- Iwate Plant (Iwate Prefecture) Cement
- Tohoku Branch (Miyagi Prefecture)
- Mitsubishi Materials Electronic Chemicals Co., Ltd. (Akita Prefecture)
- Hosokura Metal Mining Co., Ltd. (Miyagi Prefecture)

Chubu/Hokuriku Region

- Nagoya Branch (Aichi Prefecture)
- Gifu Plant (Gifu Prefecture) Advanced Materials & Tools
- Yokkaichi Plant (Mie Prefecture) Electronic Materials & Components
- Diamet Corporation (Niigata Prefecture)

- Onahama Smelting and Refining Co., Ltd. (Tokyo)
- Mitsubishi Shindoh Co., Ltd. (Tokyo)
- Mitsubishi Cable Industries, Ltd. (Tokyo)
- Mitsubishi Aluminum Co., Ltd. (Tokyo)
- Universal Can Corporation (Tokyo)
- Mitsubishi Materials Trading Corporation (Tokyo)
- Mitsubishi Materials Techno Corporation (Tokyo)
- Materials' Finance Co., Ltd. (Tokyo)
- Mitsubishi Hitachi Tool Engineering, Ltd. (Tokyo)

Kinki/Chugoku Region

- Osaka Regional Head Office (Osaka Prefecture)
- Sakai Plant (Osaka Prefecture) Metals
- Ikuno Plant (Hyogo Prefecture) Metals
- Akashi Plant (Hyogo Prefecture) Advanced Materials & Tools
- Sanda Plant (Hyogo Prefecture) Electronic Materials & Components
- Japan New Metals Co., Ltd. (Osaka Prefecture)
- Tachibana Metal Mfg Co., Ltd. (Osaka Prefecture)

Shikoku Region

- Naoshima Smelter & Refinery (Kagawa Prefecture) Metals

Kyushu Region

- Kyushu Branch (Fukuoka Prefecture)
- Higashitani Mine (Fukuoka Prefecture) Cement
- Kyushu Plant (Fukuoka Prefecture) Cement

Investor Information

(As of March 31, 2018)

Shares of Common Stock

Authorized : 340,000,000

Issued and Outstanding : 131,489,535

Number of Unit Shareholders : 98,732

Major Shareholders (Top 10 shareholders)

Name of shareholders	Number of stock held (Thousand stocks)	Ratio of shareholding(%)*1
Japan Trustee Services Bank, Ltd. (Trust account)	8,042	6.1
The Master Trust Bank of Japan, Ltd. (Trust account)	6,948	5.3
Meiji Yasuda Life Insurance Company	3,101	2.4
National Mutual Insurance Federation of Agricultural Cooperatives	2,546	1.9
Japan Trustee Services Bank, Ltd. (5 trust accounts)	2,496	1.9
The Bank of Tokyo-Mitsubishi UFJ, Ltd.*2	2,465	1.9
STATE STREET BANK WEST CLIENT - TREATY 505234	2,197	1.7
GOVERNMENT OF NORWAY	1,966	1.5
Mitsubishi Heavy Industries, Ltd.	1,900	1.5
Japan Trustee Services Bank, Ltd. (1 trust accounts)	1,848	1.4

*1 Percentages of shareholding were calculated after deducting treasury stocks (524,766 shares).

*2 The Bank of Tokyo-Mitsubishi UFJ, Ltd. has changed its name to MUFG Bank, Ltd. as of April 1, 2018.

