

JFE

TODAY

JFE GROUP TODAY

2017



JFE

Challenging Spirit, Flexibility & Sincerity.

The JFE Group—
Contributing to Society
with the World’s Most
Innovative Technology.



JFE GROUP TODAY 2017

Cover page: “JFE” depicts an environmental plant, a bridge and a ship to represent our engineering business an “Today” depicts manufacturing processes associated with our steel business.

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Passing the Torch to the Next Generation

A company's technical prowess is underpinned by the high aspirations and passions of its employees.

Having recruited talented young personnel since its founding, JFE Steel is reliably passing down its DNA from person to person through close communication.



Bricks line the inside of the cauldron to withstand high temperatures when molten iron's composition is adjusted during the steelmaking process. Workers directly observe the cauldron's brightly illuminated interior to instantaneously detect any deterioration or cracks in the bricks. These and other specialized skills are steadily handed down from experienced workers to young employees.

The Next Story Begins Here

JFE Steel will upgrade and broaden the functional capabilities of major facilities for upstream processes during the current medium term.

As global conditions continue to evolve, JFE is prioritizing the further stabilization and cost efficiency of its world-class manufacturing bases in the emerging new era for steel business.

JFE Steel's all-new corporate videos are now available.

View on our website.

<http://www.jfe-steel.co.jp/en/movie/>



View on
YouTube.



Bridge for Tohoku's Reconstruction

With the large-block erection of the Oshima Bridge, one of the longest arch bridges in East Japan, Oshima Island is now connected to Kesennuma in Miyagi Prefecture.

As the Tohoku Region's first bridge serving a large remote island, this has been a long-cherished dream of local residents, who previously had to rely on boats to travel to the mainland. It also is a symbol of reconstruction efforts taking place since the disastrous earthquake and tsunami in 2011.



Changing the Future with Renewable Energy

A biomass power plant constructed on the idle site of a former cement factory in Saiki, Oita Prefecture started operating in November 2016.

This plant's maximum generating capacity of 50 MWe, one of the largest in Japan, is mainly fed with palm kernel shells (PKS). JFE Engineering's renewable energy technology contributes to low-carbon societies.



Enormous 600-ton Jetty Jacket Crossing Osaka Port

A huge jetty jacket constructed at Tsu Works was installed in Osaka Port.

As a strategic international container port, Osaka Port is expanding its container terminals to handle increasingly large container ships.

Ports across Japan are strengthening their international competitiveness with support from JFE Engineering.



Local Employees Contribute to Our Global Operations

The demand for steel is dramatically increasing in the fast-growing ASEAN region.

Working on the frontlines, JFE Shoji's global supply chain responds to customers' needs for timely deliveries of steel products.

Local employees contribute to make this possible by playing vital roles in markets around the world, serving as a driving force that enables JFE Shoji Trade to steadily develop its global business.



Delivering Next-generation Energy-saving VLCCs



Japan Marine United (JMU) delivered its first next-generation energy-saving VLCC (very large crude oil carrier), constructed at Ariake Shipyard, to an overseas ship owner in June 2016.

This first next-generation energy-saving G-Series VLCC has inherited the legacy of JMU's 35 previous VLCCs with two-million-barrel capacities of cargo oil tank for spot trading. The new VLCC meets the very latest shipbuilding standards while achieves significant improvements in fuel efficiency. Though compact for a VLCC, it maximizes its deadweight at shallow draft to handle east-west trade passing through the Straits of Malacca.

The vessel is equipped with advanced energy-saving ducts and fins incorporating proprietary technologies and it employs a special bow shape for improved seagoing performance. Its fuel-efficient MAN-G engine and highly efficient, large-diameter propeller significantly improve performance compared to conventional vessels. Furthermore, its ballast water management system adds to the vessel's environmentally friendliness.

Overview

Dimensions: length 330 m x beam 60 m x depth 29.35 m x draft 21.58 m
Deadweight capacity: 302,652 t
Gross tonnage: 156,501 t
Sea speed: 15.8 knots

To Our Stakeholders

President and CEO
JFE Holdings, Inc.

Eiji Hayashida

■ Before beginning

I take this opportunity to express my sincere appreciation to our many stakeholders for your continue understanding and support of JFE.

■ Performance Overview

Fiscal year 2016 was another very difficult year for our core steel business. The past two years were underwhelming due to trends in China's economy and raw materials prices. China's economic slow-down prompted a strong increase in the country's steel exports, leading to continued stagnancy in the international market, reaching its lowest point in 10 years.

The international market gradually started to recover as Chinese steel exports began to slightly decline from the middle of 2016 due to domestic economic stimulus measures. However, the price of coal (coking coal), the main raw material for steel, skyrocketed from last summer and significantly raised steel-business costs. Consequently, we were obliged to revise down our earnings forecast for the fiscal year.

After that, vigorous efforts to improve sales prices enabled us to exceed our previous year's consolidated performance and maintain the same level of dividends. However, the results included one-time profits such as asset valuation gains, so operating performance actually declined.

Although our steel and trading businesses are faced with difficult business environments, we aim to improve this fiscal year's performance by actively enhancing our business efficiency while also raising sales prices.

In engineering, we are pivoting on steady earnings from our domestic business in recent years to



With the steel business facing difficult times, the collective strength of JFE is being tested.

expand overseas business, although infrastructure projects in Southeast Asia have not progressed at the expected speed. Consequently, overseas orders have been well below the levels anticipated in our medium-term plan. As such, the steady progress of each project under way has become especially important.

Japan Marine United, our equity-method shipbuilding company, is also facing challenges in terms of revenues as the demand for merchant vessels stagnates and ship prices weaken. Accordingly, the company aims to maintain revenue by improving its cost structure.

■ Steel Business

Although I anticipate the environment surrounding JFE to remain challenging, we are focusing on maximizing efforts to improve the profitability of our core steel business.

This includes the steady implementation of measures proposed in our medium-term business plan, such as facility upgrades, human resources development and transferring skills to younger personnel. The completion of our coke oven renovations in 2018 will enable the total self-feeding of cokes and thereby substantially reduce production costs.

Despite the challenging business environment, we are enhancing the JFE brand by upgrading facilities and refining our total strengths in technologies and products to become an increasingly trusted steel company.

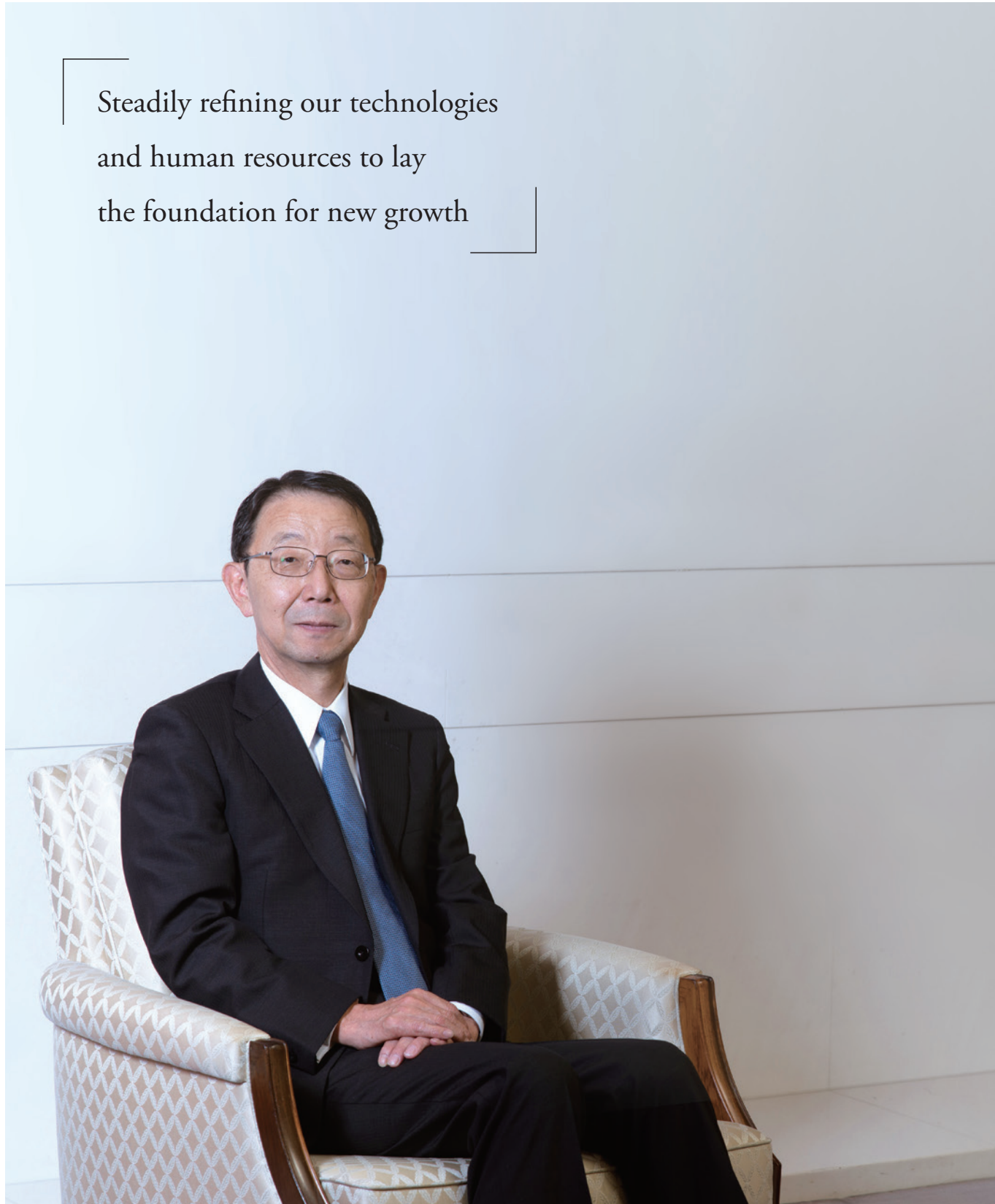
In terms of human resources, we continue to develop our future workforce through skills training and personnel diversification. In particular, we position work-style reform as an important business objective and are striving to ensure that all of our workplaces allow people to demonstrate their abilities to the fullest and feel fulfilled in doing so.

■ Engineering and Trading Businesses

Our engineering business has grown steadily for the past few years, boosted by expansion into operations management mainly in the electricity, water and sewerage sectors. Despite a current leveling off, we aim to grow slowly but surely going forward.

Trading business is greatly influenced by the steel business, but patient efforts to improve the profitability of our processing services in China and elsewhere in Asia are coming to fruition, justifying our current focus on this sector.

Steadily refining our technologies
and human resources to lay
the foundation for new growth



■ Financial Challenges

In addition to augmenting the profitability of individual businesses, we improved cash flow through asset reduction and generally enhanced our consolidated financial structure while continuing to make strategic capital investments. Our balance sheet strengthened without increasing borrowings, bringing our debt-equity ratio to within 50%, one of our medium-term financial goals.

Although we might be delayed slightly in achieving earnings targets including ordinary income and ROE due to harsh external conditions, we will steadfastly continue to pursue these targets.

In the next medium-term business plan currently under discussion, we aim to combine growth-oriented investment and shareholder returns underpinned by financial soundness.

■ Enhanced Corporate Governance

In FY2015, we established our the Nomination Committee and the Remuneration committee in which outside executives (outside directors and audit & supervisory board members) account for majorities to ensure strong corporate governance. Outside executives enhance our efforts to ensure fairness, objectivity and transparency.

Furthermore, after evaluating the effectiveness of our Board of Directors since FY2016, we have decided to revise the board's composition, as was recommended after the evaluation. Presidents of JFE Steel, our core business, conventionally serve concurrently as directors of JFE Holdings. However, the Nomination Committee has decided to also appoint the presidents of JFE Engineering and JFE Shoji Trade as directors for improved governance and strengthened group management.

Further, we added another outside director to enhance the board's checks

and balances. In addition, we added an outside auditor to our Audit & Supervisory Board, which had received high marks in the evaluation, to five members. With outside auditors comprising the majority, we upgraded the neutrality and independence of our audit structure and functions, and we further increased our ratio of total outside executives.

■ Conclusions

In view of the great number of stakeholders that support JFE, we are is deeply committed to the following:

- ◎ Encouraging customers to increasingly choose our brand by offering them superior products and reliable services backed by technological strengths, and by maintaining a strong supply chain to purchase raw materials and equipment through close cooperation with business partners;
- ◎ Providing safe and rewarding workplaces for all employees in the JFE family, including group companies and contractors, to ensure work environments in which people can maximize their capabilities;
- ◎ Vitalizing regional economies and protecting the global environment for prosperous coexistence with local communities;
- ◎ Striving continuously to grow profits and satisfy shareholders with appropriate returns.

While business conditions are expected to remain harsh, we intend to inspire company-wide progress and work ever more closely with our stakeholders to meet their expectations.

JFE GROUP

2015 → 2017

Since its founding in 2002, JFE has undertaken a number of restructurings to strengthen its business structure for sustainable growth. Current efforts to achieve sustainable growth and raise JFE's corporate value center on the Fifth Medium-term Business Plan that was drawn up in the spring of 2015.

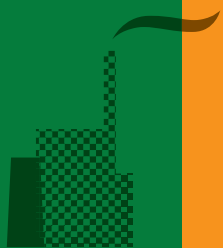
While the external environment continues to be difficult for Group business centering on steel, each group company has steadily implemented measures to targeting sustainable growth for the past two years. This year's JFE Group Today introduces the measures that the group companies have taken so far to achieve the Fifth Medium-term Business Plan.

JFE STEEL

JFE ENGINEERING

JFE SHOJI TRADE

JAPAN MARINE UNITED



Becoming a global steel supplier that steadily creates new value and grows with its customers.

The Fifth Medium-term Business Plan covers key measures for JFE Steel to enhance production capabilities, reinforce world-class technological development, strengthen customer-oriented marketing, develop business overseas, pass on technical skills and develop human resources.

We have strengthened our manufacturing bases in Japan by steadily upgrading our facilities, mainly for upstream processes, and by recruiting and developing diverse human resources. At the same time, we have heightened our presence by investing in countries with growth potential, such as Mexico and Vietnam.

In addition, we have restructured our JFE Steel group to unleash our comprehensive capabilities, including for closer collaboration in product development and sales.

Going forward, we will continue to respond flexibly to changes in society, including to strengthen our revenue base.



President and CEO
JFE Steel Corporation

Koji Kakigi

Efforts of JFE STEEL

Improving manufacturing capabilities

Continuing from the previous medium term, we will further upgrade our manufacturing capabilities, aiming to expand annual sales of JFE-brand steel to 50 million tons and raise return on sales (ROS) to 10%.

Strengthening manufacturing bases in Japan

JFE Steel will make capital investments to strengthen its manufacturing base in Japan with more stable production, reduced costs and a product mix focused on high-grade steel.

Increasing capital investments in Japan: Invest 650 billion yen over the three-year period,
up 170 billion yen from the previous period.

- More stable manufacturing system
- Continued upgrades to reduce costs
- Improved product mix
- Extensive operational reforms

- Continued renovation of manufacturing facilities
- Coke oven upgrades, etc. to cut costs (110 billion yen in three years)
- Increased ratio of high-grade steel
- Renewal of steelworks system

Developing overseas business

JFE Steel will strive to increase its profitability by investing in overseas projects, mainly in Asia, and by leveraging its technological advantages to expand in prioritized business fields.

	Business strategies	Prioritized region
Prioritized business fields	Automobiles	Accelerated global procurements
	Energy	Localization in regions of demand
	Infrastructure materials	Growing Asian markets
		China, Thailand, Indonesia, India and North America
		North America and UAE
		Vietnam

Enhancing technological development

JFE Steel is deploying innovative technologies to reduce costs in upstream processes and data-driven process-control technologies for more stable production.

	Developmental strategies
Prioritized business fields	Automobiles
	Energy
	Infrastructure materials
	Ultra-high tensile strength steel and production technologies for overseas steel plants
	High-quality thick steel plates utilizing innovative TMCP technology and electrical steel sheets offering superior magnetic characteristics
	Steel materials that combine good appearance, functionality, quake-resistance and easy processing for buildings

Support these initiatives by:

Transferring skills and developing talented personnel

Strengthening customer-focused sales

Efforts of JFE STEEL-1

Strengthening Manufacturing Bases in Japan

Active capital investment and restructuring to reduce costs and stabilize manufacturing

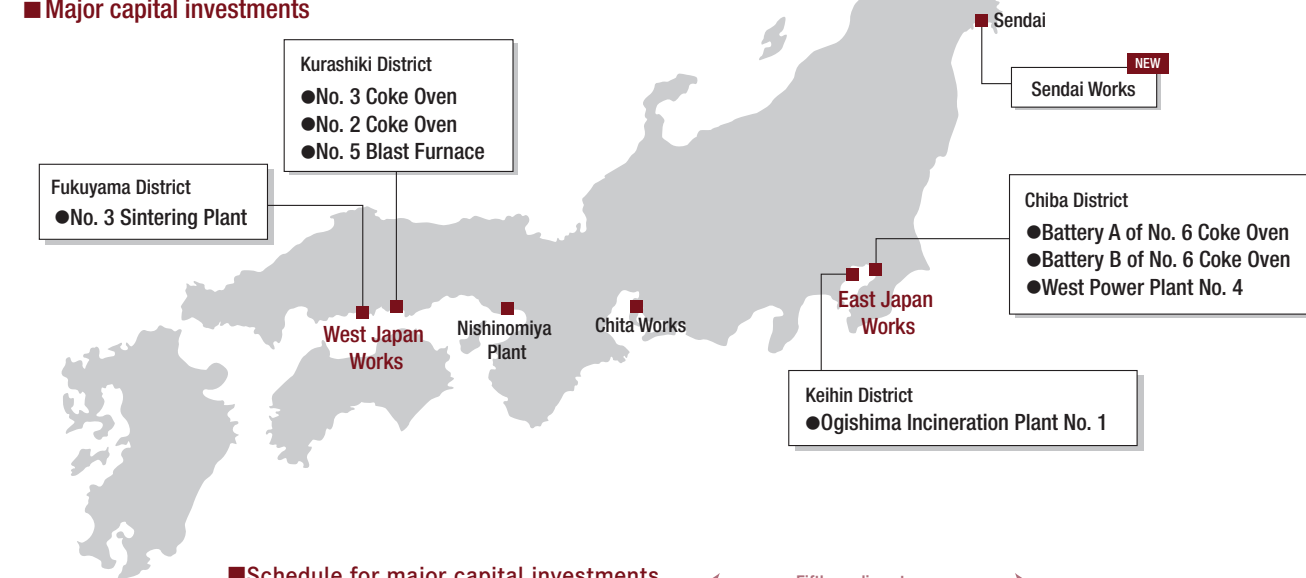
Steel demand in Japan looks strong in light of active corporate activities and construction related to infrastructure for the Tokyo 2020 Olympic and Paralympic Games. The company is fully pursuing this demand while also investing to reduce costs and further stabilize production.

To shift the product mix to higher-grade steel for improved competitiveness, facility upgrades and related investment

have continued to be carried since the previous medium-term. In addition, the company's steelworks system is being upgraded with information and communication technology.

Furthermore, the business is being restructured from a long-range perspective in anticipation of future needs to optimize the business overall, including the steel actually produced.

Major capital investments



Schedule for major capital investments

Process	District	Facility	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Upstream process	Kurashiki	No. 3 Coke Oven			Operating since January 2016			
		No. 2 Coke Oven				Operating since March 2017		
	Chiba	Battery A of No. 6 Coke Oven			Operating since October 2016			
		Battery B of No. 6 Coke Oven		Operation scheduled to start in 2018				
	Fukuyama	No. 3 Sintering Plant		Operation scheduled to start in 2019				
Hot-rolling	Kurashiki	No. 5 Blast Furnace				Operating since March 2017		
Energy	Chiba	West Power Plant No. 4		Operating since July 2015				
	Keihin	Ogishima Incineration Plant No. 1		Operation scheduled to start in second half of FY2019				
System		Core system for steelworks (Phase 1)		Scheduled completion in the second half of FY2018				

Started operating → Operation scheduled to start →



Improving upstream facilities (coke ovens, sintering plants, etc.)

We are enhancing our world-class manufacturing capabilities by upgrading facility functions for upstream processes, such as coke ovens in our Chiba and Kurashiki districts.



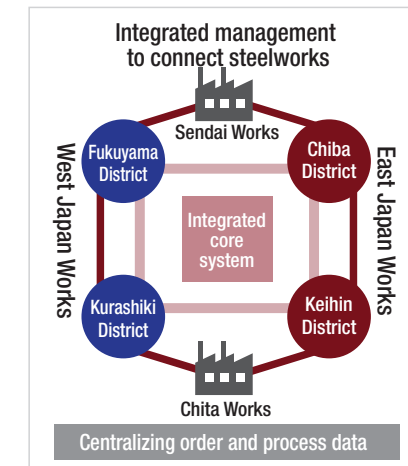
Improving manufacturing capabilities

A fifth blast furnace has been added at the hot strip mill in the Kurashiki District to increase our manufacturing capacity for hot-rolled steel sheet and to reduce CO2 emissions through better energy efficiency.



Improving energy facilities

We introduced leading-edge power-generation facilities in our Chiba and Keihin districts to maximize use of gas obtained as a by-product at steelworks and thereby lower environmental loads and costs.



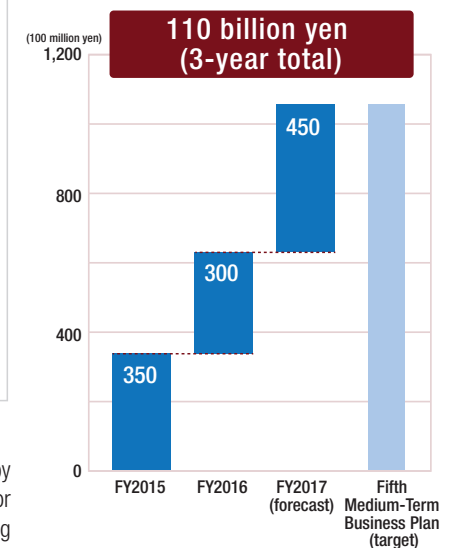
System reform to connect steelworks

Coordination is being strengthened by centralizing a core system database for all manufacturing bases and renovating production and quality-control systems. Also, initiatives are being taken to improve work efficiency and carry out workstyle reforms.

Cost reduction

While the Japanese market condition is gradually recovering as demands for steel materials in the automobile and construction industries increase, a sharp rise in the price of coking coal has triggered a significant cost increase. Consequently, costs must be promptly reduced by introducing efficient new facilities.

By investing in new coke ovens and improving various work procedures, JFE Steel aims to achieve accumulative cost reductions of more than 110 billion yen over the three years to FY2017.



Group Restructuring for New Era of Enhanced Synergy

JFE Plant Engineering

Merger of JFE Mechanical and JFE Electrical & Control Systems

April 2016

JFE Mechanical's business for mechanical system maintenance, construction and engineering has been merged with JFE Electrical & Control Systems' electrical and control systems business to create a core company in charge of maintaining and upgrading steelmaking facilities. An envisioned expansion of business scale is expected to enhance the company's competitiveness and ability to develop new businesses and respond to diverse facility needs in wide range of industrial fields.

JFE Welded Pipe Manufacturing

Merger of small-diameter electric resistance welded (ERW) pipe businesses of JFE Steel, JFE Welded Pipe Manufacturing and Kawasaki Kokan

April 2017

For further growth and development of small-diameter electric resistance welded (ERW) pipe business, JFE Steel, JFE Welded Pipe Manufacturing and Kawasaki Kokan were merged to consolidate the technologies and human resources and thereby strengthen sales capabilities in Japan and abroad.

*Small-diameter ERW pipe manufacturing conducted at JFE Steel's Chita Works was transferred to JFE Welded Pipe Manufacturing on October 1, 2017.

Integration of Steel Bar Business

April 2017

Sendai Works was transferred from JFE Bars & Shapes to JFE Steel to support overseas expansion and improve competitiveness in Japan going forward. Also, the Steel Bars and Wire Rods Department, which integrates product development, sales and production, was established for the prompt development and implementation of strategies and to accelerate exchanges of technology and personnel.

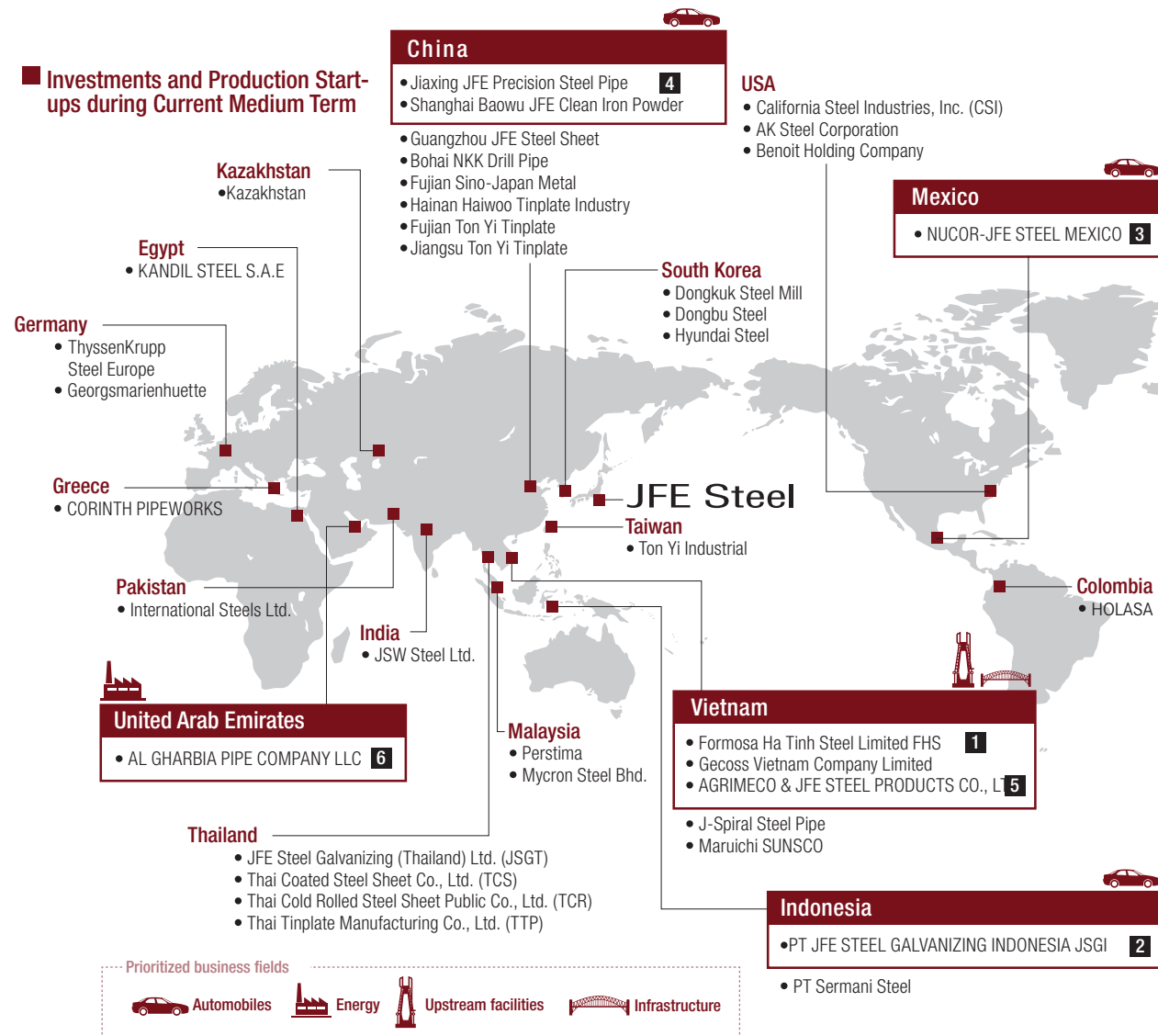
Expansion of Overseas Business

Grasping the Needs of Fast-growing Markets

Demand for steel is expected to increase in fast-growing, so JFE Steel is actively expanding its business overseas, especially in Asia, to capture this demand.

The Fifth Medium-term Business Plan prioritizes automobiles, energy and infrastructure as key business fields and expansion into Mexico and the UAE.

We will leverage our high technical capabilities and know-how to partner with global leaders and local companies to supply high-quality steel that meets the local needs.



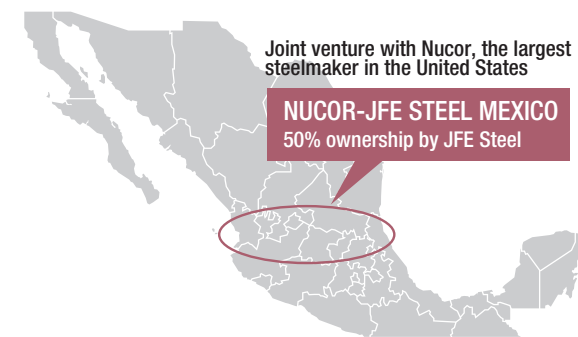
1 Securing interests in upstream facilities in Vietnam

JFE Steel has taken a stake in an integrated steelworks project (FHS) being constructed in Vietnam's Ha Tinh Province by Formosa Plastics Group (FPG), a Taiwanese integrated supplier of petrochemicals. JFE Steel initially expects to provide operational support from an early stage and eventually aims to grow the JFE brand in Vietnam by selling locally made products to partners and customers.



2 JSGL operating Indonesia's first continuous galvanizing line for vehicles

PT. JFE Steel Galvanizing Indonesia (JSGI) began operating Indonesia's first continuous galvanizing line (CGL) for vehicles in January 2016. The company is satisfying demands for locally procured steel sheet for luxury automobiles made in the growing Indonesian market, one of the leading automobile production bases in Southeast Asia.



3 New joint venture to produce auto steel sheet in NAFTA region

JFE Steel and Nucor Corporation, the largest steelmaker in the United States, established a joint venture in Mexico to manufacture and sell steel sheet in high demand for automobiles made in North America. A continuous galvanizing line will be built in central Mexico and start production in 2019.



5 New joint venture in Vietnam to sell processed construction materials

Vietnam has an extensive plan to construct roads, railways and other transportation infrastructure, as well as power plants. To capture this steady demand, JFE Steel and AGRIMECO, a leading construction and material processing company in Vietnam, established a joint venture company, AGRIMECO & JFE STEEL PRODUCTS CO., LTD. (A&J), to sell processed construction materials in the local market.



4 New companies to produce steel pipes and iron powder in China

In China, where automobile production is expected to increase, Jiaying JFE Precision Steel Pipe Co., Ltd. (JJP) began operating as a joint venture company of JFE Steel, Marubeni-Itochu Steel Inc. (MISI) and Shuan Hwa Industrial Co., Ltd., Taiwan's largest cold drawn pipe manufacturer. In addition, Shanghai Baowu JFE Clean Iron Powder Co., Ltd., which manufactures and sells segregation-free premixed iron powders, was established by JFE Steel and a subsidiary of China Baowu Steel Group Corp., Ltd.



6 New joint venture for large-diameter welded steel pipe in UAE

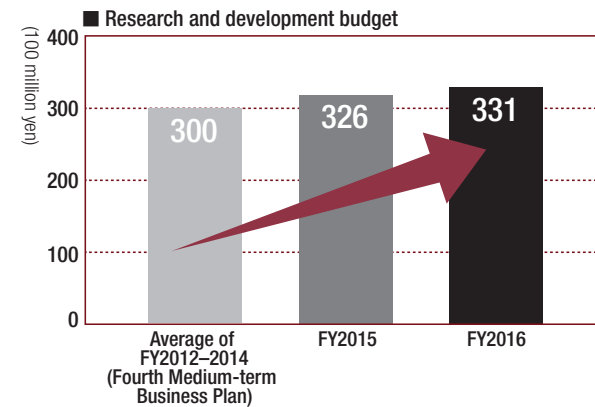
AL GHARBIA PIPE COMPANY held a groundbreaking ceremony for a large-diameter welded steel pipe plant in Abu Dhabi in April 2016. The company is a joint venture established by JFE Steel, Marubeni-Itochu Steel Inc. and SENAT, an investment company wholly owned by the Emirate of Abu Dhabi. Construction is targeted at commercial manufacturing starting up in October 2018.

Efforts of JFE STEEL-3

Furthering Research and Development

Technological development to maximize iron's potential

The Fifth Medium-term Business Plan strengthens initiatives for technological development. With an eye on 10 years ahead, JFE Steel is developing products and application technologies that anticipate the future needs of customers and society, as well as world-class global environmental technologies and resource-conservation technologies. At the same time, the company is firmly moving forward with efforts targeting innovative new processes for groundbreaking products, including manufacturing technologies for extra-high-quality products.

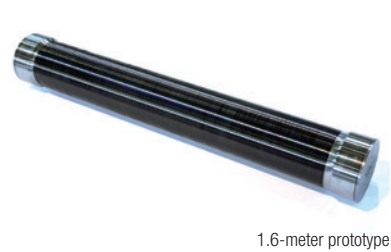


Product Development



ECOGAL-Neo®

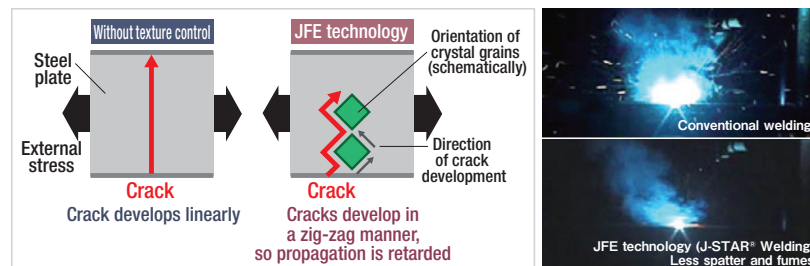
ECOGAL-Neo® boasts improved surface appearances for electric appliances, building materials and automobiles, plus the same excellent formability and weldability of the original ECOGAL. It is produced by JFE Steel and sold jointly with JFE Galvanizing & Coating.



1.6-meter prototype

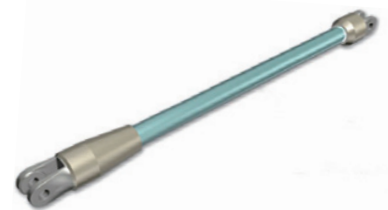
Accumulator for hydrogen filling stations

JFE Steel and JFE Container have developed accumulators that reduce the construction costs of hydrogen filling stations. Designed by JFE Container, the accumulators store hydrogen in special liner units made with steel pipes wound with carbon fiber.



Crack arrest steel plates and design and welding technologies for mega container carriers

YP460 N/mm² class heavy, thick plate with excellent crack arrest enables increasingly large container carriers to be built for improve shipping efficiency. At 100 mm, the plate boasts unrivaled thickness and unprecedented weldability and crack arrest. Furthermore, JFE Steel and JMU jointly developed technology for structurally brittle crack arrest that retards the development of brittle cracks on mega container carriers. Narrow-gap arc welding incorporating J-STAR® technology is used for improved production efficiency.

Buckling-restraint J-ROD® Brace
featuring excellent designability

Steel building materials

The Construction Material & Services Center was established in 2015 to advance strategic product development and sales expansion. JFE Steel develops products and construction methods with customers and group companies such as JFE Civil Engineering & Construction Corporation and JFE Metal Products & Engineering.



Bumper reinforcement made of 1,470 MPa-grade ultra-high-strength steel sheet

Steel sheet for automobiles

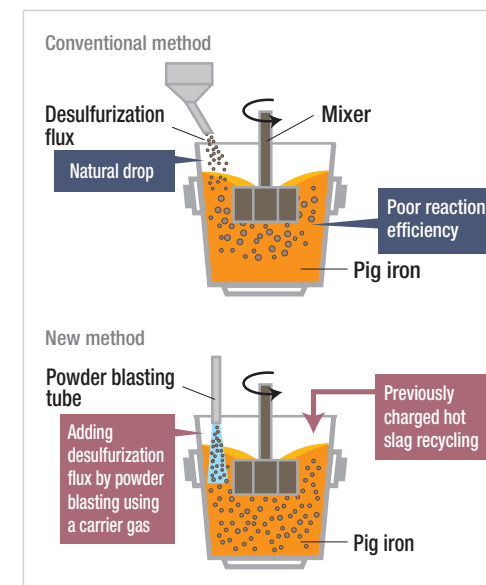
We are developing high-tensile-strength steel for improved collision safety and vehicle weight reduction that leads to better fuel efficiency for reduced CO₂ emissions. Efforts are also being pursued to achieve enhanced formability necessary for certain components.

Developing New Processes



Highly productive hot-rolling skin pass mill with intelligent control

In response to customer requests for further quality improvement, JFE Steel developed the world's first hot-rolling skin pass mill incorporating smart control technology. The world's fastest automatic rolling is achieved by optimally controlling plate thickness, shape and lateral movements and many other variables during threading. The mill's advanced efficiency and quality will help to increase production volume and improve profitability.



Eco-friendly high-efficiency hot metal desulfurization

We have developed desulfurization flux powder blasting and hot slag recycling methods for molten iron pretreatment. They are implemented in all of our steelworks with equipment for mechanically stirred hot metal desulfurization. Compared to conventional processes, these new techniques roughly double desulfurization flux efficiency and reduce desulfurization slag generation by about 30%, thereby contributing to energy efficiency, resource recycling and environmental protection.

JFE STEEL HIGHLIGHT 2016

2016

- April** Groundbreaking ceremony for large-diameter welded steel pipe plant in UAE
Minister of Education, Culture, Sports, Science and Technology Award for high-speed rolling technologies in tandem cold rolling mill
Attended Ichimura Industrial Award Ceremony for Super-CR
- May** Festivals in Fukuyama and Keihin districts
Cold-rolled column with reduced fireproof coating approved by the Minister of Land, Infrastructure, Transport and Tourism
Developed YP460 N/mm² class heavy thick plate with excellent brittle crack arrest, the first such plate used for LNG ships
- June** Started renovating ironworks core system
Agree to Mexican joint venture for automotive steel sheet with Nucor Corp. in U.S.
Wall-panel vibration damper for buildings certified by Building Center of Japan
National Commendation for Invention Award received for 590–980 MPa GA steel sheet with superior press formability
- July** JFE East and West Japan works' baseball teams played in the 87th National Intercity Non-pro Baseball Championship Series
Won contract to supply steel materials to Trans Adriatic Pipeline (TAP) project in Europe
Developed buckling-resistant J-ROD® Brace
- August** Signed cross-licensing contract with Thyssenkrupp Steel Europe AG (tkSE) in Germany
Launched first system to identify fraudulent inspection certificates in Japan
- September** Startup ceremony for Gerdau's plate mill in Brazil, to which JFE provided technical support
Launch ceremony for JFE Steel Galvanizing Indonesia
- October** Announced merge of JFE Welded Pipe Manufacturing and Kawasaki Kokan Festival in Chiba District
- November** JFE West Japan Works' baseball team played in 42nd National Championship
Began operating upgraded Battery A of No. 6 Coke Oven in Chiba District
Festivals in Kurashiki District and at Chita Works
Announced transfer of Sendai Works from JFE Bars & Shapes to JFE Steel
Developed technology for 1,470 MPa-grade cold-rolled –high-strength steel sheet
- December** Marine Stone™ received Nikkei Global Environmental Technology Award
Began operating One JFE® product delivery system
New Machinery Promotion Award received for non-contact threading control device for surface-treated steel sheet

2017

- January** Developed heavy, thick crack-arrest steel plate for mega container carriers
Developed design and welding technologies for mega container carriers
- February** Established joint-venture company to sell processed construction materials in Vietnam
- March** Startup ceremony for No. 5 Blast Furnace in Kurashiki District
Reduced thickness of fireproof coating for cold-rolled column calcium silicate plate
Established joint-venture company for iron powder business with China Baowu Steel Group in China
Announced sintering machine upgrades in Fukuyama District
Opened daycare center on Chiba District premises
Acquired stake in SPINDO in Indonesia
Began operating No. 2 Coke Oven in Kurashiki District

Turning people's dreams into reality, JFE Engineering aims to “Create” and “Underpins” the foundations for life

In the Fifth Medium-term Business Plan, JFE Engineering's key measures include expanding overseas business, supporting electricity generation with power plants of various resources and actively proposing integrated services.

We have made steady progress toward achieving our goals by developing systems for overseas business, contributing to infrastructure creation in Southeast Asia, especially Myanmar, expanding renewable-energy power-generation business and electric-power sales and steadily growing proposal-based integrated services centered on the environment.

We will continue to strive toward our next leap forward with a clear vision and unbroken dreams.



President and CEO
JFE Engineering

Hajime Oshita

Efforts of JFE ENGINEERING

Increasing our presence by accurately grasping needs in Japan and abroad

Expanding overseas business

JFE Engineering is responding to overseas infrastructure demands with superior products, including waste-to-energy plants (waste incinerators), water treatment plants and steel structures. These initiatives have been supported by improving the company's global engineering structure through M&A during the previous medium term.



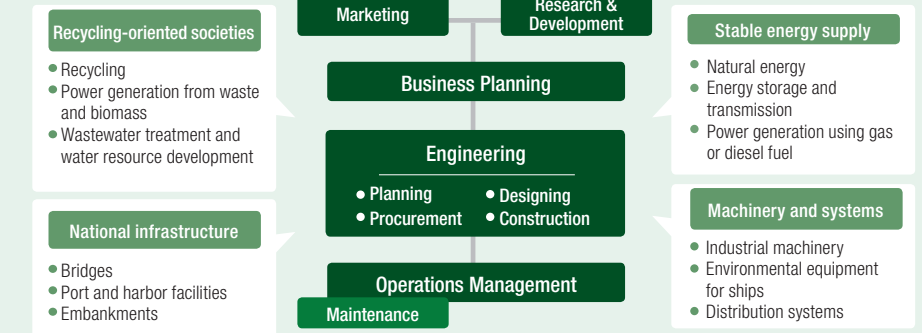
Supporting electric power generation with various kinds of plants

JFE Engineering responds to customer needs with products suited to diverse energy resources, including waste, biomass energy, geothermal power and solar power, and power capacities ranging from 5 to 100 megawatts.

Offering proposal-based integrated services

JFE Engineering is expanding its services by proactively proposing integrated services for developing business plan, engineering, procurement and construction (EPC), as well as facility operation. New technologies and construction methods are being incorporated in total solutions for infrastructure upgrades.

Scope of Business



Developing and launching new products and services

JFE Engineering launches new products and services meet the needs of customers and markets for diverse fields, such as ship ballast-water treatment systems, smart-agriculture, and medical systems.

Efforts of JFE ENGINEERING-1

Expansion of Overseas Business



Establishing and expanding global bases to promote know-how developed in Asia

JFE Engineering is striving to expand business centering around urban infrastructure and environmental energy in overseas markets where infrastructure demands are increasing.

As the center of overseas expansion, we are setting up bases to further develop our markets in Asia. In Myanmar, we established J&M Steel Solutions as a joint

venture with the Ministry of Construction of Myanmar to take a role in infrastructure development associated with rapid economic growth. We also established a design center in India to provide high-quality services at low cost.

In Europe, we acquired a German plant engineering company to undertake projects on full turnkey basis, from design

to construction, for power plants and other infrastructure in Europe and the Middle East.

We also plan to expand existing overseas subsidiaries and optimize our sales, procurement, design and manufacturing functions in each country to build a global engineering network and expand into new regions.



Expanding J&M Steel Solutions from 20,000 tons/year to 30,000 ton/year

J&M Steel Solutions, a joint venture with Myanmar's Ministry of Construction, is undergoing expansion of its steel structure fabrication plant in Thaketa Township, Yangon. The company will respond to demands for high-quality bridges, including for expanding ODA projects in neighboring countries.



First bridge erected with the incremental launching method in Myanmar

To implement an order for the 220-meter Myitnge Rail Bridge near Mandalay, J&M Steel Solutions employed the incremental launching method, which is suitable for locations where the use of cranes is problematic. The company is applying this and other advanced technologies for infrastructure development in Asia.



Expansion of Manila base

In addition to the Manila Branch opening in October 2015, JFE Techno Manila (established in 1995) is expanding its scope of business as a base for core personnel in Southeast Asia, including about 400 engineers who are currently playing an important part of JFE Engineering's global engineering workforce.



Local technicians apply Japanese technologies in Myanmar

Technicians trained at JFE Engineering's Tsu Works are contributing actively to J&M Steel Solutions, including helping to implement steel-bridge technologies from Japan for the ongoing construction of the Gumti Bridge in Bangladesh. JFE Engineering is also training local engineers in designing and construction.



Leveraging overseas bases

JFE Engineering used M&A to set up a structure for the sharing of design work on environmental plants in India. With help from other bases, a cutting-edge IT-based design tool is being developed and 3D drawings are being created along with related programming.



Standardkessel completed a biomass plant

A group company in Germany, Standardkessel, completed a biomass plant in England to supply electrical power to the region, and steam to the Macallan distillery known for its single-malt whisky, to contribute to CO2 reduction.

Efforts of JFE ENGINEERING-2

Provision of Integrated Solutions —Power Generation and Operations Management—



Miho Solar Power plant on former site of Shimizu Shipyard



Kumamoto City Seibu Incineration Plant



Plant No. 2, Higashi-Saitama Resources and Environment Association



Clean Energy Park Nanbu, Fukuoka-Nanbu Waste Treatment Cooperative

One-stop power supply

Electric power generation involving various types of plants has become one of JFE Engineering's core businesses in Japan, where renewable energy is gaining increasing popularity and the energy market is being liberalized.

Since the full deregulation of the electricity market in April 2016, electricity companies have been increasingly upgrading their facilities. In response, JFE Engineering has enhanced

its product appeal with new technologies. Most notably, in collaboration with Urban Energy Corporation, a group company engaged in electricity retailing, JFE Engineering is offering one-stop total solutions ranging from business planning to plant design, construction and operations management of biomass, solar and geothermal power and other renewable-energy facilities.

Advancing into infrastructure management

JFE Engineering is actively engaging in private finance initiatives (PFI) to undertake public works amid the increasing trend of outsourcing municipal services due to tight fiscal budgets and aging municipal workforces in Japan. We are continuously receiving contracts for PFI projects by leveraging expertise accumulated from past projects and by offering business models for not only engineering, procurement and construction

but also operations management. In the future, we will aim to secure stable earnings by expanding our integrated service business while also proposing total solutions including new technologies and construction methods that meet needs for infrastructure upgrades.



Tsu biomass power generation business

A biomass power plant at the Tsu Works operated by Green Energy Tsu, a company in which JFE Engineering owns a stake, started operating in July 2016. JFE Engineering has been fully involved in the business from the start, including retail sales of electricity produced at the plant.



Turnkey contract received for geothermal power facility in Japan

JFE Engineering received its first turnkey contract for steam-production and power-generation facilities in a geothermal power plant in Matsuo-Hachimantai, Japan, where the company has been involved since initial well excavation. The company will be in charge of plant construction and operations management thereafter.



PFI project to turn food waste into bio gas in Japan

Bio gas, which is generated when food waste is fermented and decomposed by microorganisms, is used for high-efficiency power generation. Fermentation residue is also sold as fuel to effectively use food waste without wasting it. JFE Engineering will be involved with operations management for 15 years after completing the construction of a bio-gas plant under a private finance initiative (PFI) in Nagaoka, Japan.



PFI project at Yokohama's North Sludge Recycling Center

JFE Engineering, in addition to conducting comprehensive management of sludge treatment facilities, is also engaged in a PFI project that produces fuels and improved soil from sewage sludge. Our proposed solution is contributing to the creation of a recycling-based city envisioned by Yokohama.



PFI project to utilize biomass resources in Toyohashi, Japan

This is the first project in Japan to generate energy from raw garbage, sewage sludge and human waste collected in one place. Demand for such technology is also expected to increase in overseas markets such as in Southeast Asia where rapid urbanization is taking place.



24-hour centralized management of environmental plants across Japan

At the Remote Service Center (RSC) in the company's Yokohama Head Office, JFE Hyper Remote® has been introduced to support the stable operations of plants and optimized management of power sales.

Development of New Business Areas

Leveraging accumulated know-how and creating business models that satisfy real needs

In response to the diversifying needs in society, the development of and expansion into new business areas are important missions for JFE Engineering. The company strives to accurately assess the needs of customers and the market and then offer new products incorporating existing or newly developed technologies.

Products that are drawing special attention include the company's ballast-water management system and smart agriculture.

Ballast water is stored in cargo ships to increase stability. Discharging ballast water, however, can negatively affect a local ecosystem by introducing alien species from faraway seas. In order to prevent this, JFE Engineering developed a system that combines filtration and formulated chemical injection to eliminate organisms in the ballast water regardless of the water source or water quality, thereby contributing to ecosystem protection.

Smart agriculture is a new system of agricultural production that combines engineering technologies of energy and environmental fields and our unique production know-how. The system creates optimal environments in greenhouses regardless of local climates to enable efficient cultivation diverse crops throughout the year, including using optimal energy sources.

JFE Engineering is also creating successful business models in other new areas. One example is the development of equipment to produce a diagnostic agent for cancer based on the company's medical agents manufacturing system.



Expansion of service network for ballast-water management system

JFE Ballast Ace®, a ballast-water management system, has been installed in more than 400 vessels. JFE Engineering is now expanding its service network to provide follow-up services for customers using this system.



Panoramic view of J Farm Tomakomai Plant



Expansion of smart-agriculture plants in Hokkaido and other areas

Smart-agriculture plants create optimal growing environments through the use of state-of-the-art technologies. In addition to a business expansion being pursued by a smart-agriculture subsidiary in Hokkaido, JFE Engineering received its first EPC order in Niigata based on growing recognition of the company's innovation in this field.



Cyclotron for producing radioactive substances necessary to synthesize PET radiopharmaceutical agent

Development of leading-edge cancer diagnostic agent

PET examination technology is being used to develop new antitumor agent and a therapeutic agent for dementia. The aim is to develop a new cancer diagnostic agent in addition to sales of conventional devices.

2017 Sapporo Asian Winter Games Winning a bronze medal in the 5,000 m speed skating



Mai Kiyama, who belongs to the Smart-Agriculture Division, is training hard every day for the Pyeong Chang Olympic Games.

JFE ENGINEERING HIGHLIGHT 2016

2016

April	Completed south septage treatment plant in Manila, Philippines Received order to upgrade steam turbines for power plant of Ube Industries, Ltd.
May	J&M Steel Solutions started operating 20,000 tons/year production system, which it will expand to 30,000 tons/year Completed Cycle Trees in Otemachi, Chiyoda-ku, Tokyo and Hirakata, Osaka Prefecture
June	Grand prize for technology and technology prize awarded for city-gas supply technologies, AtoMS and MiReMo respectively, by the Japan Gas Association
July	Biomass power plant completed and commercial operations started by Green Energy Tsu First smart-agriculture EPC order received in Niigata Completed Myitnge Rail Bridge with unprecedented application of incremental launching method in Myanmar First order received for 75 MWe-class large biomass power plant in Hachinohe, Japan under cooperative agreement with Valmet, Finland SKG completed biomass plant for Macallan distillery
August	Then-President Kanou accompanied Prime Minister Abe at Tokyo International Conference on African Development
September	Completed shield machine with largest diameter (Φ16.1 m) in Japan for Tokyo Gaikan Expressway construction Contracted operations and maintenance of main water purification plant in Fukuyama, Japan
October	JFE Kankyo started business for temporary storage and marine transport of contaminated soil Completed integration of shield tunneling machine businesses
November	Technology Prize of the Combustion Society of Japan received for low-NOx stoker furnace incorporating countercurrent combustion Completed and started commercial operation of biomass power plant in Saiki, Japan
December	Completed OTA Flower Station, a flower cold-chain facility at Ota Market, Tokyo Completed reinforcement of Koshijihara Plant at Minami-Nagaoka gas field, Japan Received order for bridge replacement construction on international highway in Laos, first ODA project for river bridge Received order for 75 MW-class biomass-fired power plant for Buzen New Energy

2017

January	Received order for 112 MWe CFB boiler power plant by Kushiro Thermal Power Plant Received order for first shaft-type gasifying and direct melting furnace in Southeast Asia from Nanyang Technological University in Singapore Received order for renovation of La Mesa Water Treatment Plant, largest water-purification plant in Philippines
February	Started verification work on regional power system to significantly reduce CO2 in Minamata, Japan Agreed on joint services for renewable energy and municipal infrastructure with TEPCO Fuel & Power, Inc.
March	Received order for 75 MWe-class biomass-fired power plant in Ofunato, Japan Completed No. 5 Plant for Higashiosaka Toshiseisou Union Completed Tatebayashi Clean Center for Tatebayashi Hygiene Facilities Union Completed Mahoroba Clean Center for Cleaning Kounan Union JFE Kankyo entered food recycling business with JR East Group Received order for LNG gasification facility expansion of Fukushima Gas Power Received turnkey contract for geothermal power facility in Matsuo-Hachimantai, Japan

JFE Shoji Trade aims to be a trading company that meets customers' new needs by leveraging technical and sales capabilities it cultivates on the front line

In the Fifth Medium-Term Business Plan, JFE Shoji Trade's main priorities are to develop new markets, create added value and improve its overall strength.

Accordingly, the company made JFE Electrical Steel a subsidiary and jointly invested in Ohmi Sangyo with Hanwa Co., Ltd. in Japan. It also invested in a leading coated steel manufacturer and a wire drawing company, and established a rebar processing company abroad. Such moves are part of a far-sighted effort to restructure the business, strengthen distribution and invest in growing markets and fields centered on the ASEAN region.

As JFE's core trading company, JFE Shoji Trade continues to refine its our functions and sales proposal to contribute to maximize group revenue.



President & CEO
JFE Shoji Trade Corporation

Naosuke Oda

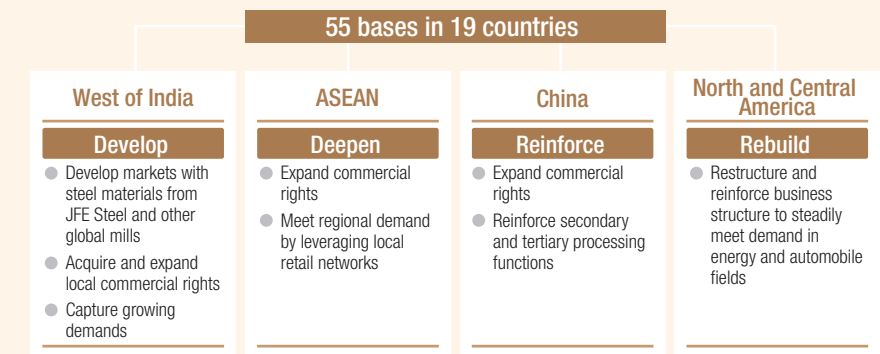
Efforts of JFE SHOJI TRADE

As the group's core trading company, JFE Shoji Trade is refining its strategic capabilities from a far-sighted perspective

As the core trading company of the JFE Group, JFE Shoji Trade works to enhance overall group strengths in Japan and abroad while promptly responding to the increasingly sophisticated needs of customers.

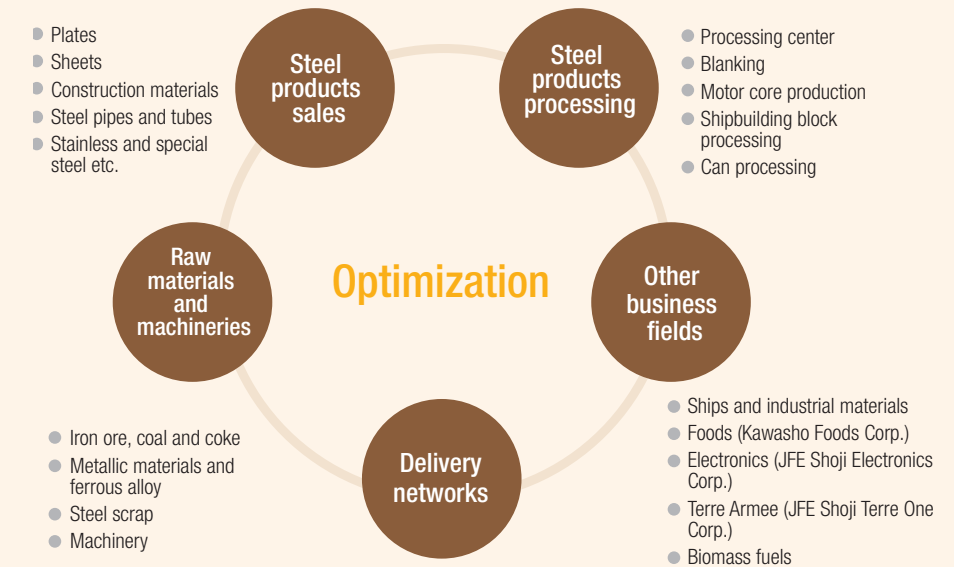
Development of overseas markets

As part of meeting demands in growing regions and fields, JFE Shoji Trade's regional strategies help to facilitate local production for local consumption.



Improving overall strengths in Japan

By optimizing the storage, processing, retailing and other functions of JFE Shoji Group companies, JFE Shoji Trade offers solutions to improve the value of customers' total supply chains.

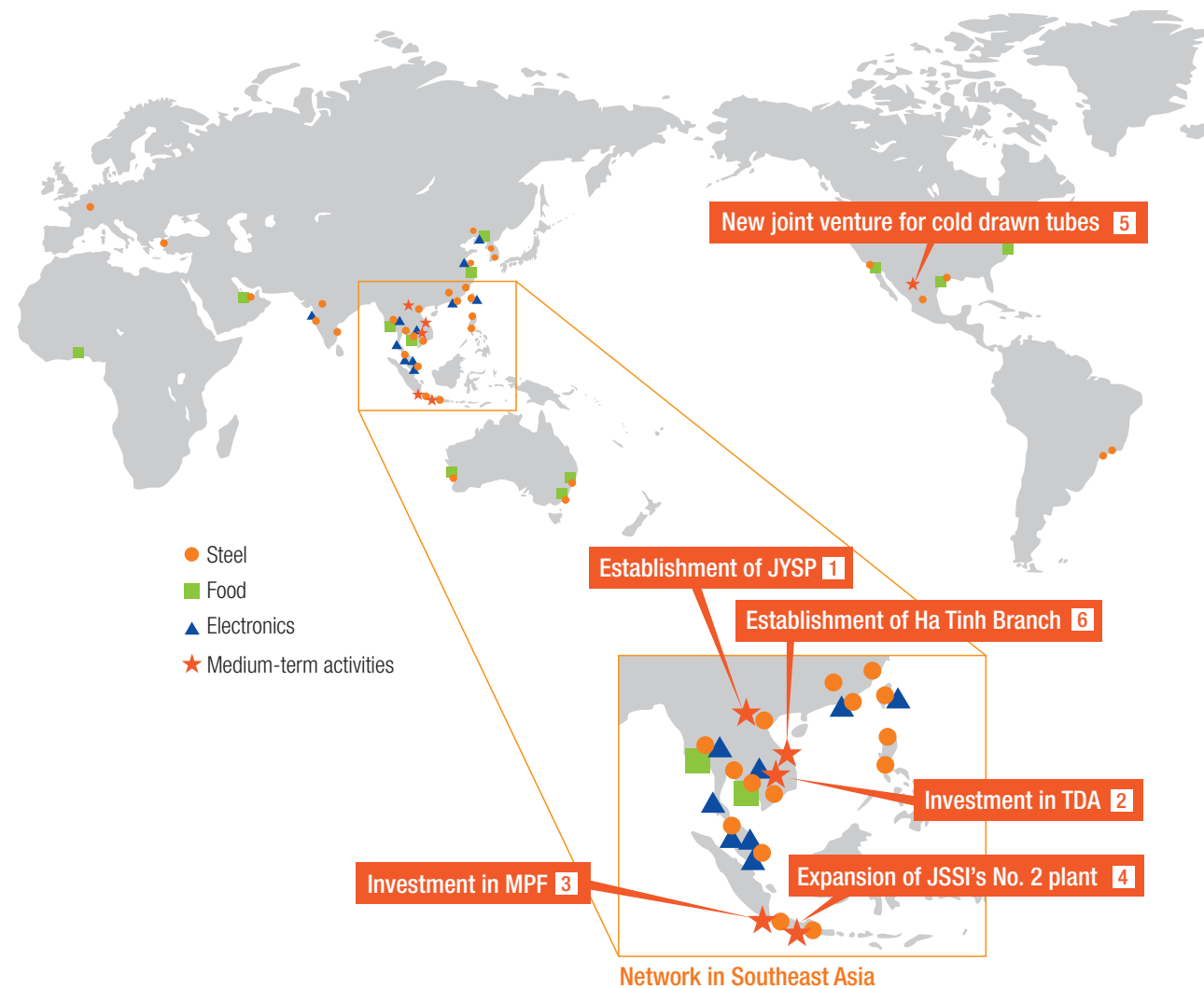


21 bases and 48 group companies in Japan

Efforts of JFE SHOJI TRADE-1

Development of Overseas Markets

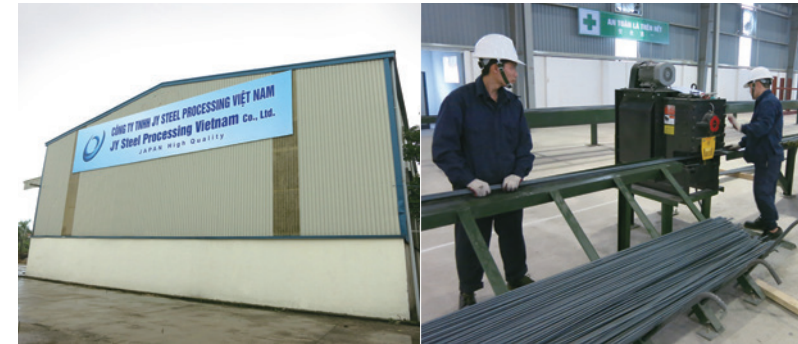
In Asia, North and Central America and new regions, JFE Shoji Trade is responding to customer needs by leveraging its expanding global network.



With 55 bases in 19 countries, JFE Shoji Trade is actively investing in regions and fields where further growth is expected. Particularly in Vietnam and Indonesia, the company has invested in local companies and established its first overseas rebar processing company for construction materials. To promptly respond to local

needs, it is pursuing forward-looking strategies, such as establishing an ASEAN Business Division in April 2017. The America Business Division was established last year for the North/Central America market, where demands in energy and automobile industries are expanding. In Mexico, a joint venture company was set up

with a local steel manufacturer. In short, JFE Shoji Trade is building a worldwide network to multilaterally support customers' manufacturing needs. Furthermore, the company is expanding into other fields to meet new demands, such as producing biomass fuel from PKS and wooden chips.



1 Establishment of JYSP in Vietnam, first overseas processing base for construction materials

JFE Shoji Trade Steel Construction Materials and YB-Techno, a company that produces and sells rebars and wire netting, jointly established JY Steel Processing Vietnam (JYSP) in northern Vietnam to process and sell rebars. As JFE Shoji Trade's first overseas processing base in the construction materials field, the company will sell rebar products for Japanese general contractors. In the future, it is expected to serve as a business model for local production targeted at local consumption by processing deformed bars made by local manufacturers and then supplying the products to local general contractors, thereby contributing to local construction.



2 Investment in a Vietnamese coated steel manufacturer, TDA

In the Vietnamese market where steel consumption growth is expected, JFE Shoji Trade acquired shares of Ton Dong A Corporation (TDA), a leading cold-rolled and galvanized steel sheet manufacturer. We will supply materials, including hot-rolled materials, and conduct export sales of the TDA's products.



3 Investment in MPF, Indonesian wire drawing company

In Indonesia, where demand for cold drawn wire is expected to rise among automobile component manufacturers, JFE Shoji Trade acquired a stake in PT. Mega Pratama Ferindo (MPF), a wire drawing company. JFE Shoji Trade will supply MPF with wire rods produced by JFE Steel and support the company to construct a total supply chain.



4 Establishment of processing base for automotive steel sheets in Indonesia

P.T. JFE Shoji Steel Indonesia (JSSI), our steel processing center in Indonesia, expanded its No. 2 plant for processing automotive steel sheet. The existing plant building was expanded roughly 30% and a large-scale slitter was installed to process high-tensile steel sheet and wide-width coils for automobiles. In partnership with JSGL run by JFE Steel for automotive thin steel sheet, JSSI aims to capture Indonesia's growing demand for such products.



5 Cold drawn tubes joint venture in Mexico

In February 2017, we launched a joint venture with Productos Laminados de Monterrey S.A. de C.V., a large manufacturer of steel pipes in Mexico, and Sankin Corporation, which manufactures and sells cold drawn tubes. The company, named Pro-SANKIN Tuberia de Precision, S.A.P.I de C.V., is producing and selling high-quality cold drawn tubes to meet local demand in Mexico's growing automobile industry.

6 JFE Shoji Trade Vietnam's new Ha Tinh Branch

Ha Tinh Branch was established by JFE Shoji Trade Vietnam in July 2016. In preparation for the full-scale operation of Formosa Ha Tinh Steel (FHS), an integrated steelworks in which JFE Steel has a stake, Ha Tinh Branch will engage in local marketing, mainly for equipment, and eventually as a sales base for steel.

New American Business and ASEAN Business divisions for business expansion

To support regional development and speed up decision-making, JFE Shoji established its America Business Division in April 2016 and ASEAN Business Division in April 2017. The aim is to maximize JFE Group revenue by enhancing overall functions and implementing medium- and long-term growth strategies.

Efforts of JFE SHOJI TRADE-2

Improvement of Group Strengths in Japan

JFE Shoji Trade is optimizing its domestic distribution network to improve JFE Group strengths.

JFE Shoji Trade is strengthening cooperation with its own group companies and optimizing its sales structure to handle comprehensive needs in Japan, including sales of iron and steel raw materials and other materials, processing and sales of steel products, and food, electronics and terre armee equipment and products.

In the current medium term, the company aims to expand revenues by enhancing the functions and optimization of its delivery network and by expanding its market share and our presence.

As part of such efforts, it invested in Ohmi Sangyo, a leading coil center in Kansai area. Furthermore, it is restructuring and strengthening functions from a

broad perspective beyond the Group's conventional framework, for example, by establishing JFE Shoji Electrical Steel after wholly acquiring JFE Steel's electrical steel processing company. By strategically combining products and facilities of various companies, JFE Shoji Trade is improving the entire JFE Group supply chain.



1 Establishment of JFE Shoji Electrical Steel Co., Ltd.

JFE Shoji Electrical Steel was established as a subsidiary of JFE Shoji Trade in April 2017 after its shares were transferred from JFE Steel. Through the new subsidiary, we will facilitate more flexibility in Japan's diversifying electrical steel sheet market. In addition, we will utilize processing technologies and other know-how to strengthen a network of processing centers that JFE Shoji is developing overseas.



2 Investment in Ohmi Sangyo, a leading coil center

JFE Shoji Trade took a stake in Ohmi Sangyo, a leading coil center in Kansai area. As the company's main supplier, our forward-looking collaboration with Hanwa Co., Ltd., the existing shareholder, will help stabilize the company's business and revenue. By growing our processing network, we are preparing to meet anticipated new demands for steel in the Japanese market.

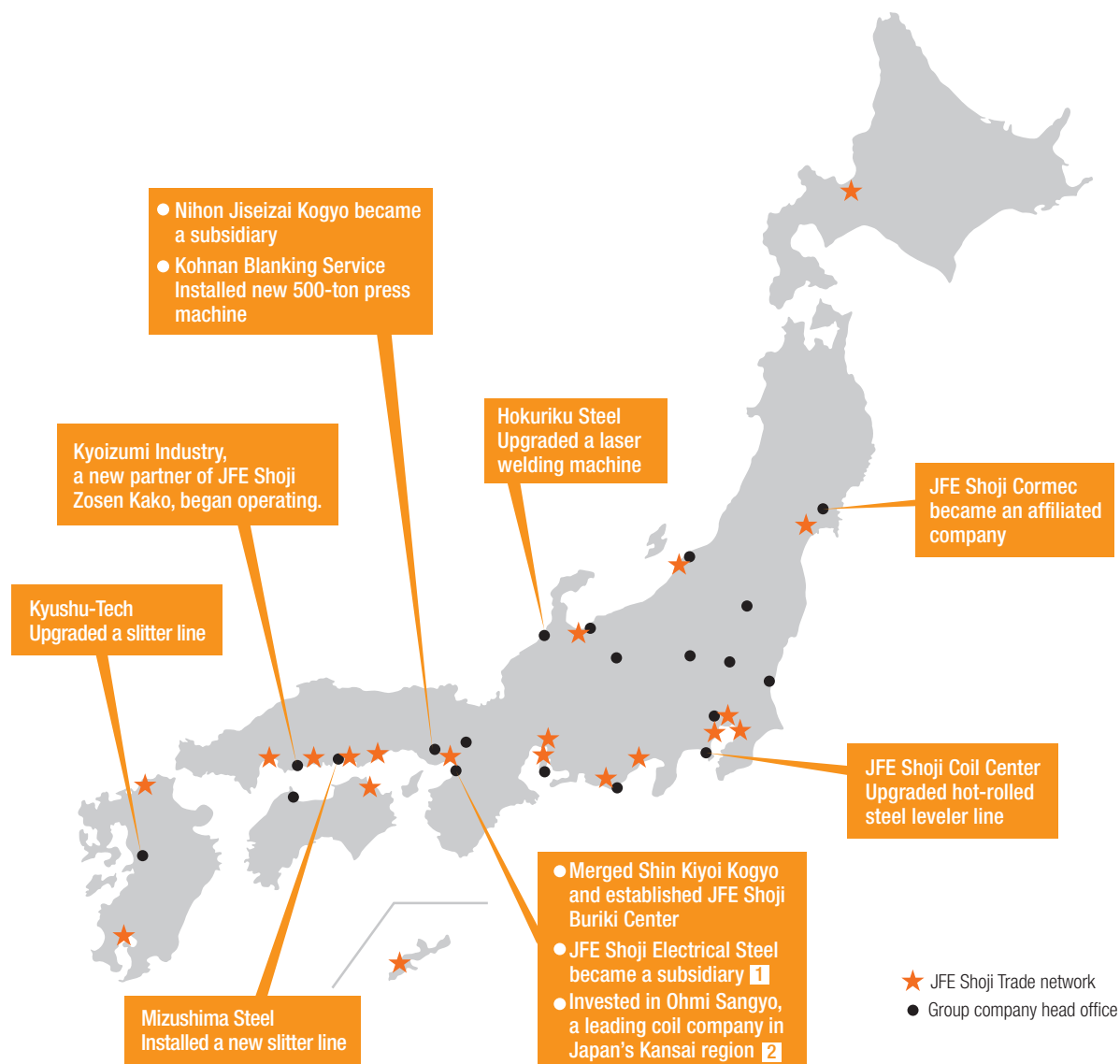
JFE SHOJI TRADE HIGHLIGHT 2016

2016

April	Reorganized stainless & special steel Division Newly established America Business Division Electric Appliance Steel Overseas Section named Premier Partner by Fuji Xerox for 5th time in a row
May	JFE Shoji Steel America, Inc. exhibited at 2016 IEEE PES T&D Conference & Exposition for transformer industry, hosted by Institute of Electrical and Electronics Engineers JFE Shoji Terre One hosted trainees from Myanmar
June	Central Metals (Thailand) Ltd. won Outstanding Supplier Award from Kang Yong Electric Public Co., Ltd. for second year in a row
July	JFE Shoji Trade Vietnam established Ha Tinh Branch
August	JFE Shoji Zosen Kako celebrated its 10th anniversary Kawasho Foods and Nissui jointly exhibited at Food Expo 2016 in Hong Kong Invested in PT. Mega Pratama Ferindo, Indonesian wire drawing company
September	Hanwa Kozai installed solar panels on roof of its Yokawa Plant JFE Shoji Trade Steel Construction Materials and YB-Techno established rebar processing joint venture, JY Steel Processing Vietnam Co., Ltd., in northern Vietnam
October	Formed comprehensive partnership with PT. Jakarta Eco Tuanlaga in Padang, Indonesia for PKS shipments Ship-fitting manufacturer Kyoizumi Industry joined other companies operating on premises of JFE Shoji Zosen Kako
November	Decided to make JFE Electrical Steel a wholly owned subsidiary
December	Kure's steel-frame city hall constructed by JFE Shoji Trade Steel Construction Materials featured in Kindaikenchiku magazine

2017

February	Invested in Ton Dong A Corporation, a leading cold-rolled and galvanized steel sheet manufacturer in Vietnam
March	Decided to invest in Ohmi Sangyo, a leading coil center in Kansai



JAPAN MARINE UNITED

Developing Industry-leading Shipbuilding Capabilities

Supporting society with technology and manufacturing to be a leading shipbuilder.

As a Japanese shipbuilding company, we offer a diverse array of products with our extensive expertise in research, development, technology and sales. We were an early developer of energy-saving and low-impact technologies for advanced solutions that have been praised highly by customers.

Our ships satisfy evolving needs in the maritime industry by offering superlative performance and high quality. As a member of Japan's maritime cluster, we are dedicated to the advancement of maritime logistics and safety.



President and CEO
Japan Marine United

Shinjiro Mishima

Ship of the Year 2016 winner

Advanced PCTC achieves excellent fuel consumption and low CO₂ emissions

We now build strategic products at each of our shipyards to take advantage of our special capabilities in development and design, which were enhanced by our merger. In February 2016, we delivered our first pure car/truck carrier (PCTC), "DRIVE GREEN HIGHWAY", which we built for Kawasaki Kisen Kaisha ("K" Line) at Ariake Shipyard. It is a next-generation PCTC with an extra-wide berth suited to the expanded Panama Canal. The vessel combines substantially increased car-carrying capacity and fuel-saving technologies for reduced CO₂ emissions.



Delivery of JS KAGA Helicopter-carrier Destroyer

JMU delivered the JS KAGA Helicopter Destroyer (DDH) to the Ministry of Defense in March 2017. This through-deck helicopter destroyer with a displacement of 19,500 long tons (standard) is our second ship in the JS IZUMO class. Based on technologies and experience we acquired in previously building the vessels JS HYUGA and JS ISE, this new vessel offers enhanced functions as a main helicopter carrier and a transporter that can serve as an offshore base for international peacekeeping activities. The flight deck has five helicopter landing spots.



Ship of the Year 2016 Large Cargo Ship Category Award

"NYK BLUE JAY", large energy-saving container ship

"NYK BLUE JAY" was built at Kure Shipyard as the first in a series of 14,000 TEU energy-saving container ships. It boasts class-leading container capacity thanks to innovations including the use of YP460, ultra-thick, high-tensile steel developed with JFE Steel. JMU's proprietary energy-saving equipment and electronic-controlled main engine save energy and strengthen operational flexibility.

JAPAN MARINE UNITED HIGHLIGHT 2016

2016

June	Delivered GEM NO.1, first next-generation energy-saving VLCC
July	Marine Day event held at Isogo Works in Yokohama Shipyard Installed 5MW floating offshore wind farm, Fukushima Hamakaze, off Fukushima coast Received order for Aegis Destroyer (28DDG)
September	Delivered first multi-role response vessel to Philippines Department of Transportation
November	Delivered PL MOTOBU 1,000-ton patrol vessel to Japan Coast Guard Received environmental certification from Development Bank of Japan

2017

February	Launched JS HIRADO largest-class FRP minesweeper for Japan Maritime Self-Defense Force (JMSDF)
March	Delivered JS AWAJI largest FRP minesweeper to JMSDF Delivered JS KAGA Helicopter -carrier Destroyer

Workforce Enhancement

—Securing and Nurturing Diverse Personnel

The JFE Group Basic Policy on Human Resources Management was established under the Fifth Medium-term Business Plan in April 2015 to create workplaces where employees can realize their full potential. In addition, the JFE Group Health Declaration was issued in September 2016 to ensure more attractive, safe and rewarding workplaces and a corporate environment in which diverse human resources can fully demonstrate their abilities.

JFE Group’s Basic Policy on Human Resource Management

- ① Respect Human Rights and Facilitate Fair Management of Human Resource**
The Group manages human resources fairly by respecting the human rights of all employees and nurturing employees who embrace the Group’s corporate values and standards of business conduct.
- ② Foster Corporate Culture that Nurtures People and Promotes Satisfying Workplaces**
The Group facilitates interactive communication among employees to cultivate a corporate culture that nurtures human resources and creates safe, attractive environments where everyone can enjoy working.
- ③ Diversify Human Resources**
The Group ensures that diverse people, including women, non-Japanese, the elderly and the disabled, can demonstrate their full potential.
- ④ Recruit and Steadily Nurture Excellent Human Resources**
To survive in an increasingly complicated and diversified global environment, the Group steadily recruits diverse, high-quality human resources, ensures that they receive the skills and knowledge necessary to continue strengthening the Group’s technological capabilities, and nurtures their global capabilities.

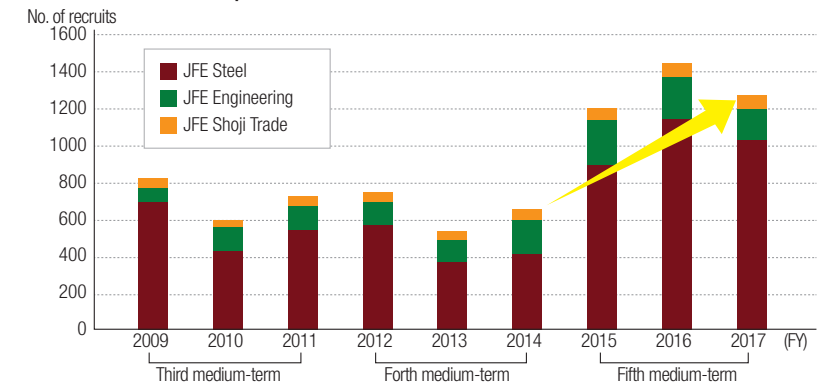
JFE Group Health Declaration

- ① JFE, recognizing that safety and health are fundamental for fulfilling its corporate mission, creates workplaces in which every employee can work with vigor.**
- ② JFE and its health insurance union work together to advance initiatives for maintaining and upgrading the physical and mental health of employees and their families.**
- ③ JFE gives top priority to safety and health, and creating a health culture in which each employee takes personal responsibility.**

Securing Diverse Human Resources

We have been steadfastly recruiting excellent human resources to achieve sustainable growth of the JFE Group and compete globally. We recruit from a diverse pool of applicants, including women, foreign nationals and mid-career personnel and actively conduct year-round recruitment.

■ Transition of JFE Group’s recruitment records



Human Resource Development

To meet the challenges of developing manufacturing bases and expanding overseas, the JFE Group recognizes human resource development as one of its most important undertakings, which it pursues through various initiatives.



Human resource development and skill transfer

The JFE Group makes every possible effort to nurture human resources, focusing on improving the individual abilities of employees and transferring technical skills to respond to a significant generational shift in employees that is taking place.

◆Key measures of group companies

JFE Steel

Using technical data to upgrade skills evaluations

The skills evaluation system at manufacturing sites has been upgraded to better analyze and deploy quantitative skills. JFE Steel provides education that is organically linked to skill data, including intensive on-the-job training by technical experts for irregular tasks associated with relatively low skill levels.

JFE Engineering

Stimulating latent abilities through self-nomination and training

JFE Engineering has adopted an in-house recruitment system for employees who are especially interested in particular positions, allowing them to challenge themselves and make the most of their capabilities. Selective online training courses is provided to enable employees to voluntarily participate in training at convenient times and places. Rank-based training, language training and other courses are contributing broadly to our human resource development.

JFE Shoji Trade

Enhancing communication skills

To improve and strengthen the communication skills of employees, JFE Shoji Trade conducts critical-thinking training to teach employees how to convey messages and negotiation training to facilitate effective negotiations and meetings.

Developing global personnel

Developing globally capable personnel is an integral component of JFE’s overseas expansion and success in global competition. In addition to hiring and developing non-Japanese for career-track positions in Japan and more local hires overseas, JFE is enhancing programs for Japanese employees to gain overseas study and training experience. The company is also developing younger employees through practical experience by dispatching them on overseas assignments.

■ Personnel development programs

Program	Company		
	S	E	T
Study abroad	●	●	●
Short-term overseas language training	●	●	●
Overseas assignments for younger employees	●	●	●
Training for regional employees of overseas offices	●	●	●
Internships for international students	●	●	

S: JFE Steel E: JFE Engineering T: JFE Shoji Trade



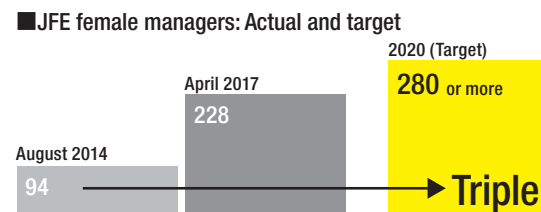
Workforce Diversity

Recognizing that workforce diversity is a key business strategy, JFE has been working to offer a corporate environment in which employees from varied lifestyles and family backgrounds, including women and foreign nationals, can maximize their individual potential.



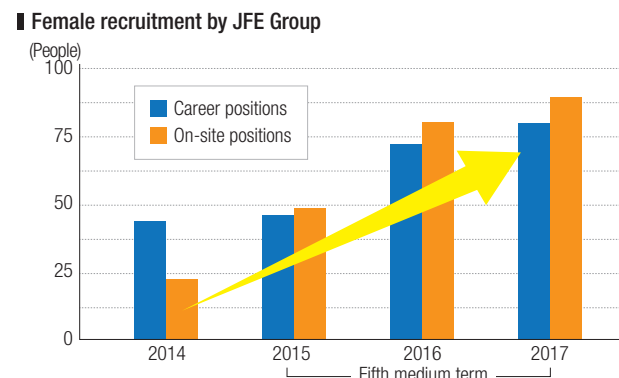
Supporting women in their professional development

JFE is implementing a broad range of initiatives, centering on the Diversity Promotion Section in each company, to recruit and promote female employees. To ensure steady progress in promoting women's careers, JFE aims to triple the number of women it has in managerial positions by 2020, compared to the FY2014 level.



◆Promoting female participation in manufacturing sites

JFE is promoting female participation not only in career positions, but also in manufacturing sites, including through improved work environments and tools designed specifically for female employees and their expanding roles. Moreover, we are implementing various measures to enable employees to balance their personal and professional lives. Examples include the enhancement of our work-life balance support system, which significantly exceeds statutory requirements, and the provision of corporate childcare services, such as JFE Engineering's JFE Children's Forest and JFE Steel's Umikaze Minami Daycare.



◆Career training

JFE Steel

JFE Steel conducts training to encourage female career awareness and is striving to expand job opportunities and actively assign women to managerial positions. Furthermore, supervisors are trained in how manage employees with childrearing responsibilities to enhance their attainment of career and personal achievements.

JFE Engineering

JFE Engineering actively recruits people with diverse personalities and values, including people from other business sectors. To support broader professional development, the personnel system was revised to abolish employee rankings based on operational tasks, thereby broadening career paths for females.

JFE Shoji Trade

JFE Shoji Trade hires diverse people regardless of attributes such as gender or nationality, and adopts diverse workstyles. The company is expanding opportunities for female employees by promoting them to managerial positions, expanding job categories and revising duties. It also supports career development through enhanced training programs.

Advancement of workstyle reform

In anticipation of a declining labor force due to Japan's low birthrate and aging population, JFE is drastically reviewing conventional procedures. The aim is to develop workstyles that enable all employees to feel proud, achieve job satisfaction and develop values linked to high productivity. The challenges also include providing support for female careers and meeting diversifying employee needs. In addition to operational reforms centered on continued systemization and the use of IT tools at each Group company, JFE is implementing support for work-life balance and other measures to achieve more flexible workstyles.

◆Key measures of each Group company

JFE Steel

To accelerate efforts to strengthen our manufacturing bases, overseas expansion and meet other business challenges, such as diversification of employee needs, JFE Steel set 2017 as the first year for workstyle reforms, including the introduction of concrete initiatives. These reforms are targeted at creating an organizational climate in which our diverse workforce can maximize its abilities.

- 1 Establish days for each employee to leave work on time
- 2 Implement off-duty intervals on a trial basis
- 3 Encourage employees to take paid vacation
- 4 Implement a trial telecommuting system
- 5 Promote paternity leaves

JFE Engineering

JFE Engineering is nurturing a corporate culture of "coming early and leaving early" by designating 8:00 am to 4:45 pm as its standard working hours, and in principle prohibiting work after 8 pm. Work-life balance is being promoted with work schedules in which employees and their supervisors coordinate holidays in advance, and by designating days on which employees are encouraged to take paid leave or leave work on time.

The company is also raising operational efficiency through its "Super Shape Up" initiative supported with IT tools.

A telework system was introduced in April 2017 to enable flexible workstyles and a satellite office was introduced in Shinyokohama on a trial basis.

JFE Shoji Trade

JFE Shoji introduced its Change of Work Time initiative to reduce overtime work. In addition to designating Wednesday as a day to leave work on time, the company prohibits work after 10 pm.

Moreover, efforts to adopt diverse workstyles are being strengthened by encouraging employees to take annual paid vacation, expanding flextime around the core hours of 11am to 2pm, and trying out a telecommuting system for employees with time restrictions due to childrearing and caregiving responsibilities.

Measures	Company		
	S	E	T
Introduction of flextime	●	●	●
Recommended days for annual paid leaves	●	●	●
Encouragement to leave work on time	●	●	●
Trial implementation of telecommuting	●	●	●
Trial implementation of satellite office		●	



Selection as a Nadeshiko Brand

In recognition of our Group company efforts to promote female career success, JFE was selected as a Nadeshiko Brand, a designation granted jointly by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange to introduce investors to companies that empower women in the workplace. This is our third selection as a Nadeshiko Brand (previous selection was two years ago).





For realization of sustainable society

JFE's technological advantages and workforce diversity are helping to create sustainable societies.

JFE Group corporate vision

JFE Group corporate values

JFE Group standards of business conduct

Social progress

Environmental protection

Employees with challenging spirits, flexibility and sincerity contribute to JFE's growth.

The development of such traits gives birth to world-class technical capabilities that contribute to society and help protect the environment.

Social progress

Customers and business partners

JFE delivers top-quality products and services that enable customers to strengthen the competitiveness of their businesses. To satisfy customer needs, the Group acquires diverse certifications, deploys wide-ranging quality-management systems and operates product-development facilities where JFE and customers work together.



Customers Solution Lab (CSL)

Shareholders and investors

JFE places a high priority on the timely and appropriate disclosure of corporate information, including through immediate messaging via its website and prompt announcements of financial results. Plant tours and investor briefings are organized to deepen understanding of JFE activities.



Plant tours for shareholders

Local communities and their residents

JFE hosts events at its manufacturing facilities and provides education to contribute to local communities. The company also is actively engaged in social-contribution activities, including providing university research grants and youth-development support in Japan and abroad.



Hosting high school students for career education

Employees

To create a corporate environment in which diverse human resources can work with vitality, JFE promotes work-life balance, support for balanced lifestyles, safe and rewarding workplaces, the enhancement of individual abilities, the transfer of skills and healthy employer-employee relations.



Company childcare facility

Environmental protection

Eco-friendly technologies

JFE offers innovative, world-class technologies and environmentally sound products and services produced with reduced-load processes. In turn, these offerings help to protect the environment by enabling reduced greenhouse gas emissions, resource recycling and biodiversity protection.



Ferro-coke production facility

JFE supports daily life

Technologies from JFE are incorporated in roads, waste-treatment facilities and other infrastructure that support daily life and lower environmental impacts.



Nerima Incineration Plant (Municipal waste-to-energy plant)

JFE technologies around you

JFE's impact-reducing technologies are even found in automobile and bicycle parking lots. In addition, JFE develops technologies for personal energy-saving and environmental protection.



Cycle Tree®

Selected as a Competitive IT Strategy Company for 3 straight years



JFE Group has been designated as a Competitive IT Strategy Company by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange in recognition of the company's efforts to use IT to reform its business and strengthen its competitiveness.

■ JFE Holdings, Inc. and Consolidated Subsidiaries

	(100 million yen)				
	FY2012	FY2013	FY2014	FY2015	FY2016
Operating results (year-long)					
Net sales	31,891	36,668	38,503	34,317	33,089
Operating income	398	1,533	2,225	906	967
Ordinary income before interest and discount expenses ¹	665	1,876	2,455	765	973
Ordinary income	522	1,736	2,310	642	847
Net income attributable to owners of parent	395	1,023	1,393	336	679
Cash flow (year-long)					
Cash flow from operating activities	2,870	2,548	2,973	2,671	1,854
Cash flow from investment activities	△1,636	△1,640	△2,163	△1,373	△1,637
Free cash flow ²	1,234	907	810	1,297	217
Cash flow from financial activities	△1,475	△1,055	△782	△1,445	△181
Financial position (year-end)					
Total assets	41,075	42,417	46,394	42,348	43,360
Property, plant and equipment, net	16,068	15,991	16,295	16,271	16,508
Net assets	15,967	17,459	19,900	18,579	19,218
Debt outstanding	15,963	15,340	15,017	13,793	13,754
Capital investment and others					
Capital investment	1,796	1,757	2,259	2,125	2,347
Depreciation and amortization	1,940	1,813	1,760	1,779	1,826
R&D expenses	336	311	324	351	355
Crude steel output (10,000 tons)	3,068	3,158	3,104	2,975	3,041
Consolidated employees	57,044	57,210	58,856	59,460	60,439
Ratio					
Return on sales (ROS) ³	1.6%	4.7%	6.0%	1.9%	2.6%
Return on assets (ROA) ⁴	1.6%	4.5%	5.5%	1.7%	2.3%
Return on equity (ROE) ⁵	2.7%	6.3%	7.7%	1.8%	3.7%
Equity capital ratio	37.9%	40.1%	41.8%	42.6%	43.0%
Debt-to-equity ratio ⁶	76.9%	67.9%	59.0%	56.9%	51.4%
Per share data					
Net income	71.20	177.44	241.60	58.36	177.81
Net assets	2,700.83	2,950.61	3,362.22	3,128.36	3,235.88
Cash dividends	20	40	60	30	30

¹ Ordinary income before interest and discount expenses = Ordinary income + interest and discount expenses

² Free cash flow = Cash flow from operating activities + cash flow from investment activities

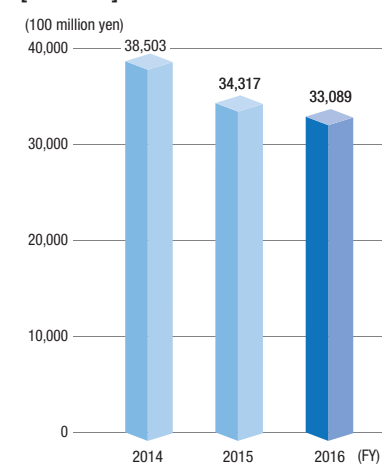
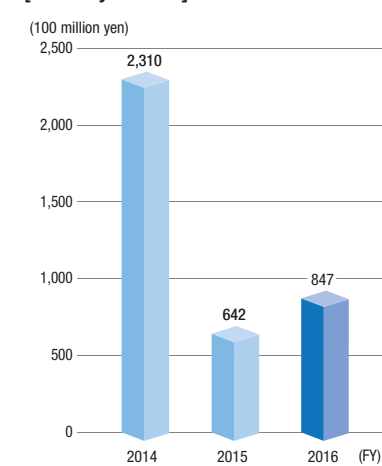
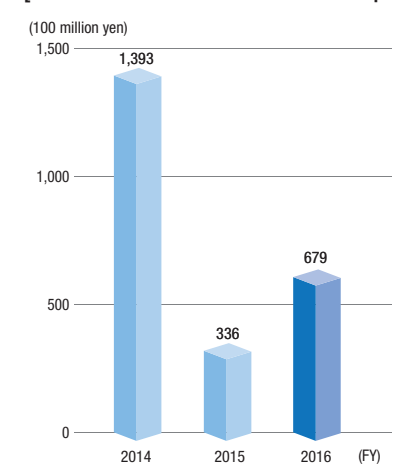
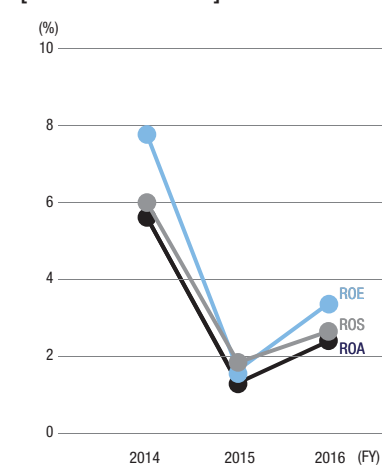
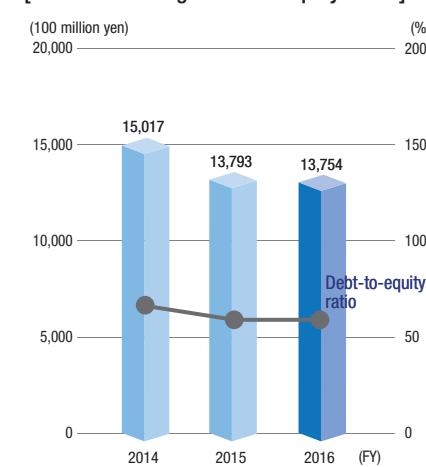
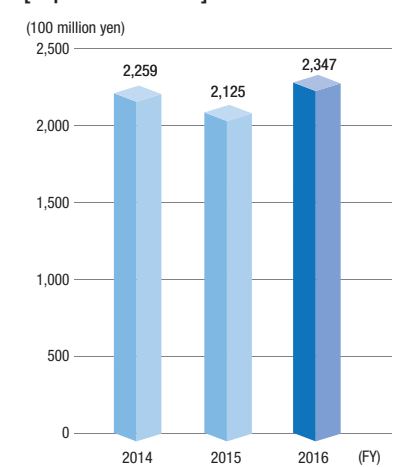
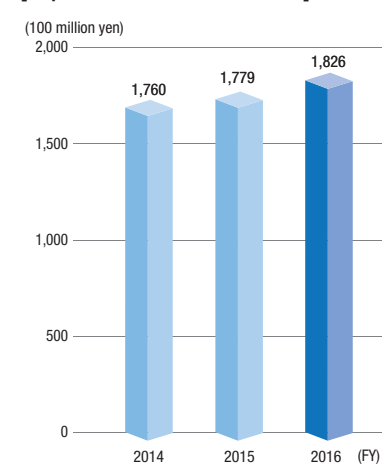
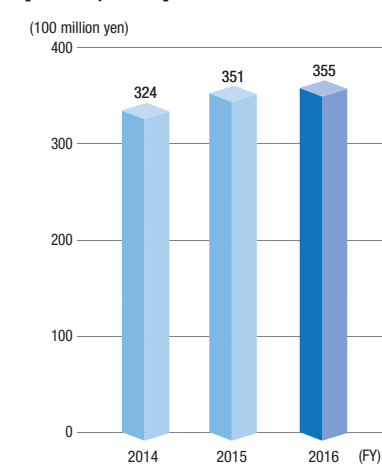
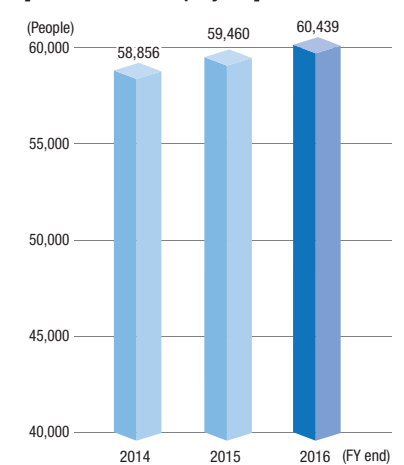
³ Return on sales (ROS) = Ordinary income/net sales × 100

⁴ Return on assets (ROA) = (Ordinary income + interest and discount expenses)/Average total assets × 100

⁵ Return on equity (ROE) = Net income/total shareholders' equity × 100

⁶ Debt-to-equity ratio = Debt outstanding/total shareholders' equity × 100

Financial Information for Shareholders and Investors <http://www.jfe-holdings.co.jp/en/investor/>

[Net sales]**[Ordinary income]****[Net income attributable to owners of parent]****[ROS³ / ROA⁴ / ROE⁵]****[Debt outstanding / Debt-to-equity ratio⁶]****[Capital investment]****[Depreciation and amortization]****[R&D expenses]****[Consolidated employees]**

■Holding Company (as of April 1, 2017)



Head Office: 2-2-3 Uchisaiwaicho, Chiyoda-ku,
Tokyo 100-0011
Phone: +81-3-3597-4321 (main)

Establishment: September 27, 2002
Paid-in Capital: 147.1 billion yen
URL: http://www.jfe-holdings.co.jp/en/

■Operating and Main Group Companies (as of April 1, 2017)

Steel Business

JFE Steel Corporation

Head office: Chiyoda-ku, Tokyo
Net sales**: 2,349.1 billion yen Employees***: 44,395

Domestic group companies	Overseas group companies
JFE Mineral Company, Ltd.	Nova Era Silicon S.A.
Mizushima Ferroalloy Co., Ltd.	Thai Coated Steel Sheet Co., Ltd.
JFE Material Co., Ltd.	Thai Tinplate Manufacturing Co., Ltd.*
Chiba Riverment and Cement Corporation	JFE Steel Galvanizing (Thailand) Ltd.
Mizushima Riverment Corporation	Philippine Sinter Corporation
JFE Precision Co., Ltd.	PT. JFE Steel Galvanizing Indonesia
JFE Plastic Resource Corporation	JFE Steel Australia Resources Pty. Ltd.
JFE Bars & Shapes Corporation	Nucor-JFE Steel Mexico, S. Der. L. Dec.V.*
JFE Metal Products & Engineering, Inc.	California Steel Industries, Inc.*
JFE Galvanizing & Coating Co., Ltd.	Hojalata Y Laminados S.A.*
JFE Welded Pipe Manufacturing Co., Ltd.	Dongkuk Steel Mill Co., Ltd.*
JFE Container Co., Ltd.	Fujian Sino-Japan Metal Co., Ltd.*
JFE Steel Pipe Co., Ltd.	Bohai NKK Drill Pipe Co., Ltd.*
Galvatex Corporation	Guangzhou JFE Steel Sheet Co., Ltd.*
JFE Pipe Fitting Mfg. Co., Ltd.	Inner Mongolia Erdos EJM Manganese Alloys Co., Ltd.*
JFE Tubic Corporation	Jiaxing JFE Precision Steel Pipe Co. Ltd.*
JFE Techno-Wire Corporation	Shanghai Baowu JFE Clean Iron Powder Co., Ltd.*
River Steel Co., Ltd.	JSW Steel Ltd.*
JFE Kozai Corporation	Thai Cold Rolled Steel Sheet Public Co., Ltd.*
Daiwa Kohtai Co., Ltd.	P.T. Sermani Steel*
GECOSS Corporation	Perusahaan Sadur Malaysia (Perstima) Bhd.*
JFE Plant Engineering Co., Ltd.	JFE Steel Tubular Technical Center Pte. Ltd.*
JFE Advantech Co., Ltd.	J-Spiral Steel Pipe Co., Ltd.*
JFE Civil Engineering & Construction Corporation	Agrimeco & JFE Steel Products Co., Ltd.*
JFE Sekkei Ltd.	Al Gharbia Pipe Company*
JFE Logistics Corporation	
JFE West Technology Corporation	
JFE Wing Corporation	
JFE Techno-Research Corporation	
JFE Systems, Inc.	
JFE Chemical Corporation	
JFE Life Corporation	
JFE East Japan GS Co., Ltd.	
JFE West Japan GS Co., Ltd.	
JFE Apple East Corporation	
JFE Apple West Corporation	
Shinagawa Refractories Co., Ltd.*	
Nippon Chuzo K.K.*	
Nippon Chutetsukan K.K.*	
EXA Corporation*	
Setouchi Joint Thermal Power Co., Ltd.*	
K.K. JFE Sanso Center*	
Mizushima Eco-Works Co., Ltd.*	
NKK Seamless Steel Pipe K.K.	

Engineering Business

JFE Engineering Corporation

Head office: Chiyoda-ku, Tokyo
Yokohama head office: Yokohama
Net sales**: 426.1 billion yen Employees***: 9,166

Domestic group companies
Urban Energy Corporation
Asuka Soken Co., Ltd.
Japan Pipeline Engineering Corporation
JFE Urban Recycle Corporation
Japan Recycling Corporation
Recycling Management Japan, Inc.
JFE Environmental Service Corporation
JFE Aqua Machine and Service Corporation
Kitanippon Industrial Co., Ltd.
JFE Rail Link Co., Ltd.
JFE Kankyo Corporation
JFE Technos Corporation
Fujikako Inc.
Tohoku Dock Tekko K.K.
JFE Business Support Yokohama Corporation
Mie Data Craft Co., Ltd.
JFE Career Navi Corporation
J Farm Corporation*
Japan Tunnel Systems Corporation*
JP Steel Plantech Co.*
Overseas group companies
JFE Techno Manila, Inc.
JFE Engineering (M) SDN. Bhd.
PT. JFE Engineering Indonesia
JFE Engineering India Private Limited
Standardkessel Baumgarte Holding GmbH
J&M Steel Solutions Company Limited
Dongjie Environmental Technology Co., Ltd.*

Trading Business

JFE Shoji Trade Corporation

Head office: Osaka City
Tokyo head office: Chiyoda-ku, Tokyo
Net sales**: 1,671.0 billion yen Employees***: 6,838

Domestic group companies	Overseas group companies
JFE Shoji Electrical Steel Co., Ltd.	Guangzhou JFE Shoji Steel Products Co., Ltd.
JFE Shoji Trade Steel Construction Materials Corporation	Dongguan JFE Shoji Steel Products Co., Ltd.
JFE Shoji Pipe & Fitting Trade Corporation	Zhejiang JFE Shoji Steel Products Co., Ltd.
JFE Shoji Usuitakenzai Corporation	Jiangsu JFE Shoji Steel Products Co., Ltd.
Kawasho Foods Corporation	JFE Shoji Steel Philippines, Inc.
JFE Shoji Electronics Corporation	Central Metals (Thailand) Ltd.
JFE Shoji Coil Center Corporation	Steel Alliance Service Center Co., Ltd.
Niigata Steel Corporation	New Bangpoo Manufacturing Co., Ltd.
Nagano Can Corporation	JFE Shoji Steel Vietnam Co., Ltd.
Toyo Kinzoku Corporation	JFE Shoji Steel Hai Phong Co., Ltd.
JFE Shoji Terre One Corporation	JFE Shoji Steel Malaysia Sdn. Bhd.
Tochigi Shearing Corporation	PT. JFE Shoji Steel Indonesia
Hokuriku Steel Co., Ltd.	JFE Shoji Steel India Private Limited
K&I Tubular Corporation	Vest Inc.
Taisei Kogyo Corporation	JFE Shoji Steel America Inc.
Osaka Steel Corporation	Kelly Pipe Co., LLC
Kadota Kozai Corporation	JS Biomass Resources Sdn. Bhd.
JFE Shoji Zosen Kako Corporation	Kawarin Enterprise Pte. Ltd.*
JFE Shoji Kohnan Steel Center Co., Ltd.	r.bourgeois JFE Shoji Magnetic Lamination, Inc.*
Naigai Steel Corporation	Kuroda Precision Industries Malaysia Sdn. Bhd.*
JFE Shoji Buriki Center Co., Ltd.	Pro-SANKIN Tuberia de Precision, S.A.P.I de C.V.*
Mizushima Steel Corporation	JY Steel Processing Vietnam Co., Ltd.
Mizushima Metal Products Corporation	
Nihon Jiseizai Kogyo Co., Ltd.	
Kyushu-Tech Corporation	
JFE Shoji Oil Co., Ltd.	
JFE Shoji Trade Matech Inc.	
JFE Shoji Machinery & Materials Corporation	
JFE Shoji Business Support, Inc.	
JFE Shoji Service Corporation	
Hanwa Kozai Co., Ltd.*	
Kita-Kanto Steel Corporation*	
JKW Co., Ltd.*	
MOBY Corporation*	
Osaka Kowaz Co., Ltd.*	
Kanemitsu Corporation*	
JFE ComService Co., Ltd.*	
Hokuchokin Nichibei Kenzai*	

Shipbuilding Business

Japan Marine United Corporation

Head office: Minato-ku, Tokyo
Net sales**: 319.0 billion yen Employees***: 6,167

Domestic group companies
JMU AMTEC Co., Ltd.
IMC Co., Ltd.
JMU Defense Systems Co., Ltd.

*Affiliated company under equity method.
**Net sales for fiscal 2016 (ended March 31, 2017).
***Employeeas of March 31, 2017.

■ Members of the Board, Corporate Officers and Corporate Auditors of JFE Holdings



Board of Directors and Audit & Supervisory Board Members

- ① President and Representative Director
Eiji Hayashida
- ② Representative Director
Koji Kakigi
- ③ Executive Vice President and Representative Director
Shinichi Okada
- ④ Director
Naosuke Oda
- ⑤ Director
Hajime Oshita
- ⑥ Director
Masafumi Maeda*
- ⑦ Director
Masao Yoshida*
- ⑧ Director
Masami Yamamoto*
- ⑨ Full-time Auditor
Shotaro Tsumura
- ⑩ Full-time Auditor
Nobuya Hara
- ⑪ Corporate Auditor
Hiroyuki Itami**
- ⑫ Corporate Auditor
Shigeo Oyagi**
- ⑬ Corporate Auditor
Isao Saiki**

Corporate Officers

- Corporate Officers
Eiji Hayashida President & CEO
- Executive Vice President & CFO
Shinichi Okada Supervision of General Administration Dept., Investor Relations Dept. and Finance Dept., and in charge of Corporate Planning Dept.
- Senior Vice President
Masashi Terahata In charge of General Administration Dept.
- Vice President
Tetsuo Ohki In charge of Investor Relations Dept. and Finance Dept.

*External members of the board
**External corporate auditors

Financial Information

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Note:Fiscal Year(FY) 2016 in the following pages refers to the period beginning
April 1, 2016 and ended March 31, 2017

Consolidated Balance Sheets

JFE Holdings, Inc. and Subsidiaries
March 31, 2017 and 2016

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2016	FY2015	FY2016
Assets			
Current assets:			
Cash and deposits (Notes 5 and 13)	69,936	¥ 64,654	\$ 623,371
Notes and accounts receivable (Note 13)	798,058	720,639	7,113,450
Allowance for doubtful accounts	(1,416)	(1,434)	(12,621)
Merchandise and finished goods	313,368	311,234	2,793,190
Work in process	50,834	43,657	453,106
Raw materials and supplies	408,728	402,406	3,643,176
Other current assets (Note 8)	169,336	166,672	1,509,368
Total current assets	1,808,846	1,707,829	16,123,059
Property, plant and equipment (Note 8):			
Land (Note 9)	496,678	497,285	4,427,114
Buildings and structures	1,827,845	1,806,573	16,292,405
Machinery and equipment	5,811,748	5,719,146	51,802,727
Construction in progress	59,982	85,981	534,646
Subtotal	8,196,255	8,108,986	73,056,912
Accumulated depreciation	(6,545,376)	(6,481,800)	(58,341,884)
Property, plant and equipment, net	1,650,879	1,627,186	14,715,028
Investments and other assets:			
Investments in unconsolidated subsidiaries and affiliates (Notes 8 and 13)	349,864	354,639	3,118,495
Investments in securities (Notes 6, 8 and 13)	372,196	394,538	3,317,550
Allowance for doubtful accounts	(2,953)	(4,521)	(26,321)
Net defined benefit asset (Note 10)	13,067	9,103	116,472
Other assets (Note 8)	144,168	146,108	1,285,034
Total investments and other assets	876,343	899,868	7,811,239
Total assets	¥ 4,336,069	¥ 4,234,884	\$ 38,649,335

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2016	FY2015	FY2016
Liabilities			
Current liabilities:			
Short-term borrowings (Note 13)	¥ 106,966	¥ 116,759	\$ 953,436
Current portion of long-term debt (Notes 7 and 13)	147,412	256,623	1,313,949
Commercial paper (Note 13)	8,000	36,000	71,307
Notes and accounts payable (Note 13)	446,645	422,331	3,981,148
Other current liabilities	330,433	326,471	2,945,298
Total current liabilities	1,039,458	1,158,185	9,265,157
Long-term liabilities:			
Long-term debt (Notes 7 and 13)	1,113,089	969,990	9,921,463
Deferred tax liabilities on revaluation reserve for land (Note 9)	9,118	9,121	81,272
Net defined benefit liability (Note 10)	123,745	125,283	1,102,994
Other long-term liabilities	128,848	114,381	1,148,480
Total long-term liabilities	1,374,801	1,218,776	12,254,220
Total liabilities	2,414,259	2,376,962	21,519,377

Contingencies (Note 11)

Net assets

Shareholders' equity:

Common stock:			
Authorized 2,298,000,000 shares			
Issued 614,438,399 shares as of March 31, 2017			
614,438,399 shares as of March 31, 2016	147,143	147,143	1,311,551
Capital surplus	646,582	646,380	5,763,276
Retained earnings	1,126,633	1,065,037	10,042,187
Treasury stock, at cost:			
37,829,548 shares as of March 31, 2017			
37,714,629 shares as of March 31, 2016	(178,853)	(178,654)	(1,594,197)
Total shareholders' equity	1,741,505	1,679,906	15,522,818

Accumulated other comprehensive income:

Net unrealized gains and losses on securities	112,545	101,709	1,003,164
Net unrealized gains and losses on hedges	(544)	(3,119)	(4,848)
Revaluation reserve for land, net of tax (Note 9)	16,321	16,328	145,476
Translation adjustments	(3,596)	14,503	(32,052)
Remeasurements of defined benefit plans (Note 10)	(395)	(5,130)	(3,520)
Total accumulated other comprehensive income	124,330	124,290	1,108,209

Noncontrolling interests (Note 9)	55,972	53,724	498,903
Total net assets	1,921,809	1,857,921	17,129,949
Total liabilities and net assets	¥ 4,336,069	¥ 4,234,884	\$ 38,649,335

The accompanying notes are an integral part of these statements.

Consolidated Statements of Income

JFE Holdings, Inc. and Subsidiaries
Years ended March 31, 2017 and 2016

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2016	FY2015	FY2016
Net sales	¥ 3,308,992	¥ 3,431,740	\$ 29,494,536
Cost of sales	2,889,652	3,017,757	25,756,769
Gross profit	419,339	413,982	3,737,757
Selling, general and administrative expenses	322,593	323,343	2,875,416
Operating income.....	96,746	90,638	862,340
Non-operating income (expenses):			
Interest income	1,474	1,190	13,138
Interest expense	(12,613)	(12,279)	(112,425)
Dividends received	9,566	10,438	85,266
Inventory related income	5,521	--	49,211
Equity in earnings (losses) of affiliates	12,006	(8,821)	107,014
Foreign exchange losses	(6,039)	(5,914)	(53,828)
Other, net	(21,926)	(11,012)	(195,436)
Ordinary income	84,735	64,239	755,281
Extraordinary income (Note 20)	20,737	10,097	184,838
Income before income taxes	105,472	74,337	940,119
Income taxes (Note 16):			
Current	23,359	21,629	208,209
Deferred	9,487	15,054	84,561
	32,846	36,684	292,771
Net income	72,625	37,652	647,339
Net income attributable to noncontrolling interests	(4,685)	(3,995)	(41,759)
Net income attributable to shareholders of the parent	¥ 67,939	¥ 33,657	\$ 605,570

	yen		U.S. dollars (Note 1)
	FY2016	FY2015	FY2016
Net income per share	¥ 117.81	¥ 58.36	\$ 1.05
Cash dividends per share	30	30	0.26

The accompanying notes are an integral part of these statements.

Consolidated Statements of Comprehensive Income

JFE Holdings, Inc. and Subsidiaries
Years ended March 31, 2017 and 2016

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2016	FY2015	FY2016
Net income	¥ 72,625	¥ 37,652	\$ 647,339
Other comprehensive income (Note 17):			
Net unrealized gains and losses on securities	10,549	(90,438)	94,027
Net unrealized gains and losses on hedges	3,192	(2,429)	28,451
Revaluation reserve for land	--	648	--
Translation adjustments	(6,747)	(12,208)	(60,139)
Remeasurements of defined benefit plans	4,436	(11,967)	39,540
Share of other comprehensive income of affiliates accounted for using equity method	(11,704)	(18,418)	(104,323)
Total other comprehensive income	(273)	(134,814)	(2,433)
Comprehensive income	¥ 72,352	¥ (97,161)	\$ 644,905
Total comprehensive income attributable to:			
Shareholders of the parent	¥ 67,988	¥ (99,629)	\$ 606,007
Noncontrolling interests	4,363	2,467	38,889

The accompanying notes are an integral part of these statements.

Consolidated Statements of Changes in Net Assets

JFE Holdings, Inc. and Subsidiaries
Years ended March 31, 2017 and 2016

	Millions of yen				
	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2015	¥ 147,143	¥ 647,121	¥ 1,066,517	¥ (179,430)	¥ 1,681,350
Cash dividends			(34,619)		(34,619)
Net income attributable to shareholders of the parent			33,657		33,657
Acquisition of treasury stock				(273)	(273)
Disposal of treasury stock			(527)	1,049	521
Change in shares of parent arising from transactions with noncontrolling shareholders		(740)			(740)
Transfer from land revaluation account			10		10
Net changes in items other than shareholders' equity					--
Total changes in items during the year		(740)	(1,479)	775	(1,444)
Balance at March 31, 2016	¥ 147,143	¥ 646,380	¥ 1,065,037	¥ (178,654)	¥ 1,679,906

	Millions of yen							
	Accumulated other comprehensive income							
	Net unrealized gains and losses on securities	Net unrealized gains and losses on hedges	Revaluation reserve for land, net of tax	Translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Noncontrolling interests	Total net assets
Balance at April 1, 2015	¥ 194,733	¥ (535)	¥ 15,654	¥ 41,107	¥ 6,626	¥ 257,587	¥ 51,085	¥ 1,990,023
Cash dividends								(34,619)
Net income attributable to shareholders of the parent								33,657
Acquisition of treasury stock								(273)
Disposal of treasury stock								521
Change in shares of parent arising from transactions with noncontrolling shareholders								(740)
Transfer from land revaluation account								10
Net changes in items other than shareholders' equity	(93,023)	(2,584)	673	(26,604)	(11,757)	(133,296)	2,639	(130,657)
Total changes in items during the year	(93,023)	(2,584)	673	(26,604)	(11,757)	(133,296)	2,639	(132,102)
Balance at March 31, 2016	¥ 101,709	¥ (3,119)	¥ 16,328	¥ 14,503	¥ (5,130)	¥ 124,290	¥ 53,724	¥ 1,857,921

	Millions of yen				
	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2016	¥ 147,143	¥ 646,380	¥ 1,065,037	¥ (178,654)	¥ 1,679,906
Cash dividends			(5,768)		(5,768)
Net income attributable to shareholders of the parent			67,939		67,939
Acquisition of treasury stock				(216)	(216)
Disposal of treasury stock			(10)	16	6
Change in treasury shares arising from change in equity in entities accounted for using equity method				0	0
Change in scope of equity method			(572)		(572)
Change in shares of parent arising from transactions with noncontrolling shareholders		202			202
Transfer from land revaluation account			8		8
Net changes in items other than shareholders' equity					--
Total changes in items during the year		202	61,596	(199)	61,599
Balance at March 31, 2017	¥ 147,143	¥ 646,582	¥ 1,126,633	¥ (178,853)	¥ 1,741,505

	Millions of yen							
	Accumulated other comprehensive income							
	Net unrealized gains and losses on securities	Net unrealized gains and losses on hedges	Revaluation reserve for land, net of tax	Translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Noncontrolling interests	Total net assets
Balance at April 1, 2016	¥ 101,709	¥ (3,119)	¥ 16,328	¥ 14,503	¥ (5,130)	¥ 124,290	¥ 53,724	¥ 1,857,921
Cash dividends								(5,768)
Net income attributable to shareholders of the parent								67,939
Acquisition of treasury stock								(216)
Disposal of treasury stock								6
Change in treasury shares arising from change in equity in entities accounted for using equity method								0
Change in scope of equity method								(572)
Change in shares of parent arising from transactions with noncontrolling shareholders								202
Transfer from land revaluation account								8
Net changes in items other than shareholders' equity	10,835	2,575	(6)	(18,099)	4,735	40	2,248	2,288
Total changes in items during the year	10,835	2,575	(6)	(18,099)	4,735	40	2,248	63,887
Balance at March 31, 2017	¥ 112,545	¥ (544)	¥ 16,321	¥ (3,596)	¥ (395)	¥ 124,330	¥ 55,972	¥ 1,921,809

The accompanying notes are an integral part of these statements.

	Thousands of U.S. dollars (Note 1)				
	Shareholders' equity				
	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity
Balance at April 1, 2016	\$ 1,311,551	\$ 5,761,476	\$ 9,493,154	\$ (1,592,423)	\$ 14,973,758
Cash dividends			(51,412)		(51,412)
Net income attributable to shareholders of the parent			605,570		605,570
Acquisition of treasury stock				(1,925)	(1,925)
Disposal of treasury stock			(89)	142	53
Change in treasury shares arising from change in equity in entities accounted for using equity method				0	0
Change in scope of equity method			(5,098)		(5,098)
Change in shares of parent arising from transactions with noncontrolling shareholders		1,800			1,800
Transfer from land revaluation account			71		71
Net changes in items other than shareholders' equity					--
Total changes in items during the year		1,800	549,032	(1,773)	549,059
Balance at March 31, 2017	\$ 1,311,551	\$ 5,763,276	\$ 10,042,187	\$ (1,594,197)	\$ 15,522,818

	Thousands of U.S. dollars (Note 1)							
	Accumulated other comprehensive income							
	Net unrealized gains and losses on securities	Net unrealized gains and losses on hedges	Revaluation reserve for land, net of tax	Translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Noncontrolling interests	Total net assets
Balance at April 1, 2016	\$ 906,578	\$ (27,801)	\$ 145,538	\$ 129,271	\$ (45,726)	\$ 1,107,852	\$ 478,866	\$ 16,560,486
Cash dividends								(51,412)
Net income attributable to shareholders of the parent								605,570
Acquisition of treasury stock								(1,925)
Disposal of treasury stock								53
Change in treasury shares arising from change in equity in entities accounted for using equity method								0
Change in scope of equity method								(5,098)
Change in shares of parent arising from transactions with noncontrolling shareholders								1,800
Transfer from land revaluation account								71
Net changes in items other than shareholders' equity	96,577	22,952	(53)	(161,324)	42,205	356	20,037	20,393
Total changes in items during the year	96,577	22,952	(53)	(161,324)	42,205	356	20,037	569,453
Balance at March 31, 2017	\$ 1,003,164	\$ (4,848)	\$ 145,476	\$ (32,052)	\$ (3,520)	\$ 1,108,209	\$ 498,903	\$ 17,129,949

The accompanying notes are an integral part of these statements.

Consolidated Statements of Cash Flows

JFE Holdings, Inc. and Subsidiaries
Years ended March 31, 2017 and 2016

	Millions of yen		Thousands of U.S. dollars (Note 1)
	FY2016	FY2015	FY2016
Cash flows from operating activities:			
Income before income taxes	¥ 105,472	¥ 74,337	\$ 940,119
Adjustments for:			
Depreciation and amortization	182,638	177,946	1,627,934
Decrease in reserves	(6,241)	(15,142)	(55,628)
Interest and dividend income	(11,041)	(11,628)	(98,413)
Interest expense	12,613	12,279	112,425
Changes in assets and liabilities:			
Changes in notes and accounts receivable	(90,601)	50,355	(807,567)
Changes in inventories	(17,070)	52,960	(152,152)
Changes in notes and accounts payable	16,262	(24,064)	144,950
Other, net	2,033	(16,989)	18,121
Subtotal	194,066	300,053	1,729,797
Interest and dividend income received	16,324	17,244	145,503
Interest paid	(12,486)	(12,673)	(111,293)
Income taxes paid	(12,421)	(37,521)	(110,713)
Net cash provided by operating activities	185,481	267,102	1,653,275

Cash flows from investing activities:			
Payments for purchases of property, plant and equipment	(226,327)	(205,992)	(2,017,354)
Proceeds from sales of property, plant and equipment	1,992	4,155	17,755
Payments for purchases of investments in securities	(9,676)	(29,874)	(86,246)
Proceeds from sales of investments in securities	69,900	50,051	623,050
Proceeds from capital reduction of investments	--	30,240	--
Other, net	310	14,097	2,763
Net cash used in investing activities	(163,799)	(137,321)	(1,460,014)

Cash flows from financing activities:			
(Decrease) increase in short-term borrowings, net	(33,425)	29,105	(297,932)
Increase in long-term debt	291,232	115,249	2,595,881
Repayments of long-term debt	(256,944)	(262,428)	(2,290,257)
Payments for purchases of treasury stock	(216)	(258)	(1,925)
Payments for dividends by parent company	(5,795)	(34,551)	(51,653)
Other, net	(13,010)	8,322	(115,963)
Net cash used in financing activities	(18,159)	(144,561)	(161,859)

Effects of exchange rate change on cash and cash equivalents	1,861	(6,038)	16,587
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Net increase (decrease) in cash and cash equivalents	5,384	(20,819)	47,990
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Cash and cash equivalents at beginning of the year	63,873	83,542	569,328
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Increase in cash and cash equivalents at beginning of the year by newly consolidated or deconsolidated subsidiaries	125	1,150	1,114
Cash and cash equivalents at end of the year (Note 5)	¥ 69,383	¥ 63,873	\$ 618,441

The accompanying notes are an integral part of these statements.

Notes to Consolidated Financial Statements

JFE Holdings, Inc. and Subsidiaries
Years ended March 31, 2017 and 2016

1. Basis of Presentation

The accompanying consolidated financial statements of JFE Holdings, Inc. (the “Company” hereinafter) and consolidated subsidiaries are prepared on the basis of accounting principles generally accepted in Japan, which are different in certain respects as to application and disclosure requirements of International Financial Reporting Standards, and are compiled from the consolidated financial statements prepared by the Company as required by the Financial Instruments and Exchange Act of Japan.

The Company’s overseas subsidiaries maintain their accounts and records in conformity with generally accepted accounting principles and practices prevailing in their respective countries of domicile.

The notes to the consolidated financial statements include information that is not required under the Japanese GAAP but is presented herein as additional information.

As permitted by the Financial Instruments and Exchange Act, amounts of less than one million yen have been omitted. Consequently, the totals shown in the accompanying consolidated financial statements (both in yen and U.S. dollars) do not necessarily agree with the sums of the individual amounts.

Certain amounts in the prior years’ financial statements have been reclassified to conform to the 2017 presentation.

The translation of the Japanese yen amounts into U.S. dollars is included solely for the convenience of the reader, using the approximate exchange rate at March 31, 2017, which was ¥112.19 to US\$1.00. These convenient translations should not be construed as representations that the Japanese yen amounts have been, could have been, or could in the future be converted into U.S. dollars at this or any other rate of exchange.

2. Summary of Significant Accounting Policies

(a) Consolidation principles

The consolidated financial statements include the accounts of the Company’s 315 domestic and foreign subsidiaries (the “Group” as JFE Holdings, Inc. consolidated group, hereinafter). All significant inter-company transactions and accounts are eliminated in consolidation.

62 affiliates are accounted for by the equity method whereby the Group includes in net income its share of income or losses of these companies, and records its investments at cost adjusted for its share of income, losses or dividends received.

(b) Translation of foreign currencies

Revenues and expenses are translated at the rates of exchange prevailing when transactions are made, and assets and liabilities are translated into Japanese yen at the exchange rates in effect on the respective balance sheet date.

The balance sheet accounts of the foreign subsidiaries are translated into Japanese yen at the current exchange rates at the balance sheet dates except for shareholders’ equity, which is translated at historical rates. Differences arising from such translation are shown as “translation adjustments” in a separate component of net assets in the balance sheets.

(c) Valuation of securities

Available-for-sale securities

Marketable:

Valued primarily at market based on an average of the market prices for a period of one month prior to the settlement date. (Valuation differences are recorded as net unrealized gains and losses on securities, net of tax, in net assets in the balance sheets by the direct capitalization method, with the costs of sales calculated primarily by the moving average method.)

Non-marketable:

Valued primarily at cost by the moving average method.

(d) Valuation of inventories

Inventories are stated at cost determined by the weighted average method. These inventories with lower profitability are written down to their net realizable value.

(e) Depreciation method for property, plant and equipment (except for leased assets)

Depreciation is calculated primarily by the declining-balance method.

(f) Intangible assets (except for leased assets)

Amortization of intangible assets is calculated primarily by the straight-line method.
Amortization of the software for internal use is computed by the straight-line method based on the estimated useful lives (primarily 5 years).

(g) Allowance for doubtful accounts

The projected uncollectible amount is provided as the allowance using historical default rates in the past for ordinary credits and individual collectability assessments for credits deemed to have high likelihood of default and for other specific credits.

(h) Retirement benefits

The straight-line method is used to attribute expected retirement benefits to each period through the end of the year in calculating retirement benefit obligation.
Prior service cost is primarily amortized in projected average years of service of the employees.
Actuarial losses are primarily amortized in projected average years of service of the employees from the following fiscal year after the year in which they occurred.

(i) Leases

Leased assets under finance leases that do not transfer ownership to the lessees are capitalized and depreciated to a residual value of zero using the straight-line method with useful life defined by the terms of the contract.

(j) Revenue recognition for long-term construction-type contracts

The percentage-of-completion method (cost-comparison method to estimate the percentage of completion) is applied for construction contracts where the percentage of completion can be reliably estimated. For other contracts, the completed-contract method is applied.

(k) Consolidated tax return

The Company files a consolidated tax return with certain domestic subsidiaries.

(l) Per share information

Basic net income per share is computed by dividing net income attributable to shareholders of the parent available to common shareholders by the weighted average number of shares of common stock outstanding during the period. Net income attributable to shareholders of the parent used in the computation was ¥67,939 million (\$605,570 thousand) and ¥33,657 million, and the average number of shares used in the computation was 576,686 thousand and 576,740 thousand for the years ended March 31, 2017 and 2016, respectively.
Cash dividends per share shown in the consolidated statements of income are the amounts applicable to the respective year.

3. Changes in Accounting Policies and Adoption of New Accounting Standards

Practical Solution on a Change in Depreciation Method due to Tax Reform 2016

Pursuant to revisions to corporate tax law in Japan, effective from the year ended March 31, 2017, the Company has adopted “Practical Solution on a Change in Depreciation Method due to Tax Reform 2016” (Practical Issues Task Force No. 32, issued on June 17, 2016) and changed the depreciation method of facilities attached to buildings and structures acquired on or after April 1, 2016 from the declining-balance method to the straight-line method.
As a result, operating income increased by ¥397 million (\$3,538 thousand) and ordinary income and income before income taxes increased by ¥399 million (\$3,556 thousand) for the year ended March 31, 2017.

4. Additional Information

Implementation Guidance on Recoverability of Deferred Tax Assets

Effective from the year ended March 31, 2017, the Company has adopted “Revised Implementation Guidance on Recoverability of Deferred Tax Assets” (Accounting Standards Board of Japan Guidance No. 26, issued on March 28, 2016).

5. Cash and Cash Equivalents

Cash and cash equivalents at March 31, 2017 and 2016 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Cash and deposits	¥ 69,936	¥ 64,654	\$ 623,371
Time deposits with a maturity of more than three months	(553)	(780)	(4,929)
	¥ 69,383	¥ 63,873	\$ 618,441

6. Securities

The following is a summary of available-for-sale securities at March 31, 2017 and 2016:

Marketable:	Millions of yen					
	Available-for-sale securities					
	FY2016			FY2015		
	Book value (Estimated fair value)	Cost, net of accumulated impairment losses	Unrealized gain (loss)	Book value (Estimated fair value)	Cost, net of accumulated impairment losses	Unrealized gain (loss)
Cost lower than book value:						
Equity securities	¥ 325,545	¥ 156,161	¥ 169,383	¥ 319,016	¥ 159,513	¥ 159,502
Bonds	—	—	—	—	—	—
Sub total	325,545	156,161	169,383	319,016	159,513	159,502
Cost exceeding book value:						
Equity securities	4,446	6,654	(2,207)	33,994	40,927	(6,933)
Other	—	—	—	—	—	—
Sub total	4,446	6,654	(2,207)	33,994	40,927	(6,933)
Total	¥ 329,992	¥ 162,815	¥ 167,176	¥ 353,010	¥ 200,440	¥ 152,569

	Thousands of U.S. dollars		
	Available-for-sale securities		
	FY2016		
	Book value (Estimated fair value)	Cost, net of accumulated impairment losses	Unrealized gain (loss)
Cost lower than book value:			
Equity securities	\$ 2,901,729	\$ 1,391,933	\$ 1,509,786
Bonds	—	—	—
Sub total	2,901,729	1,391,933	1,509,786
Cost exceeding book value:			
Equity securities	39,629	59,310	(19,671)
Other	—	—	—
Sub total	39,629	59,310	(19,671)
Total	\$ 2,941,367	\$ 1,451,243	\$ 1,490,114

Available-for-sale securities that the Group sold during the years ended March 31, 2017 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Equity securities:			
Proceeds from sales	¥ 70,438	¥ 30,548	\$ 627,845
Aggregate gain on sales	33,495	15,895	298,556
Aggregate loss on sales	(3,349)	(804)	(29,851)

The impairment losses on available-for-sale securities for the years ended March 31, 2017 and 2016 were ¥160 million (\$1,426 thousand) and ¥1,429 million, respectively.

7. Long-term Debt

Long-term debt at March 31, 2017 and 2016 consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
0.858% yen bonds, due May 2017	¥ 20,000	¥ 20,000	\$ 178,269
1.326% yen bonds, due June 2021	30,000	30,000	267,403
0.455% yen bonds, due September 2016	—	20,000	—
0.686% yen bonds, due September 2018	15,000	15,000	133,701
0.453% yen bonds, due April 2017	30,000	30,000	267,403
0.804% yen bonds, due March 2024	10,000	10,000	89,134
0.703% yen bonds, due September 2024	20,000	20,000	178,269
Loans, principally from banks and insurance companies, due 2018-2076	1,135,501	1,081,613	10,121,231
Less current portion	(147,412)	(256,623)	(1,313,949)
Total long-term debt	¥ 1,113,089	¥ 969,990	\$ 9,921,463

8. Pledged Assets

At March 31, 2017 and 2016, pledged assets were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Property, plant and equipment	¥ 3,149	¥ 3,359	\$ 28,068
Investments in securities	113	334	1,007
Investments in unconsolidated subsidiaries and affiliates	200	—	1,782
Other assets	331	354	2,950

The Company sets up collateral on the shares of consolidated subsidiaries of ¥242 million (\$2,157 thousand), which is carrying value on the non-consolidated financial statements of consolidated subsidiaries at March 31, 2017. There was no such collateral at March 31, 2016.

9. Revaluation of Land for Business

In the years ended March 31, 2001 and 2002, part of the subsidiaries and affiliates revaluated the land for business purposes based on the Law Concerning Revaluation of Land and its amendment issued on March 31, 2001 and 2002, respectively. Revaluation differences, net of the portion charged to “deferred tax liabilities on revaluation reserve for land” and “noncontrolling interests,” were recorded as “revaluation reserve for land, net of tax” in net assets.

The fair value of these lands is lower than the revaluated book value, and the difference was ¥16,756 million (\$149,353 thousand) and ¥16,772 million on March 31, 2017 and 2016, respectively.

10. Retirement Benefits

Defined benefit plans

The changes in retirement benefit obligation for the years ended March 31, 2017 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Balance at beginning of year	¥ 277,121	¥ 284,702	\$ 2,470,104
Service cost	13,703	13,907	122,141
Interest cost	1,391	1,522	12,398
Actuarial losses	2,015	3,824	17,960
Retirement benefits paid	(28,975)	(27,007)	(258,267)
Prior service cost	346	307	3,084
Other	(2,313)	(136)	(20,616)
Balance at end of year	¥ 263,288	¥ 277,121	\$ 2,346,804

The changes in plan assets for the years ended March 31, 2017 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Balance at beginning of year	¥ 160,941	¥ 178,601	\$ 1,434,539
Expected return on plan assets	2,899	3,025	25,840
Actuarial losses	5,881	(13,748)	52,420
Contributions from the employer	2,829	6,405	25,216
Retirement benefits paid	(18,293)	(13,149)	(163,053)
Other	(1,646)	(193)	(14,671)
Balance at end of year	¥ 152,611	¥ 160,941	\$ 1,360,290

Reconciliation between the balances of retirement benefit obligation and plan assets and net defined benefit liability and net defined benefit asset recorded on the consolidated balance sheets at March 31, 2017 and 2016 was as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Funded retirement benefit obligation	¥ 217,951	¥ 231,854	\$ 1,942,695
Fair value of plan assets	(152,611)	(160,941)	(1,360,290)
	65,340	70,912	582,404
Unfunded retirement benefit obligation	45,337	45,266	404,109
Net liability and asset recorded on the consolidated balance sheet	¥ 110,677	¥ 116,179	\$ 986,513

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Net defined benefit liability	¥ 123,745	¥ 125,283	\$ 1,102,994
Net defined benefit asset	(13,067)	(9,103)	(116,472)
Net liability and asset recorded on the consolidated balance sheet	¥ 110,677	¥ 116,179	\$ 986,513

The components of retirement and pension costs for the years ended March 31, 2017 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Service cost	¥ 13,703	¥ 13,907	\$ 122,141
Interest cost	1,391	1,522	12,398
Expected return on plan assets	(2,899)	(3,025)	(25,840)
Recognized actuarial losses	2,765	554	24,645
Amortization of prior service cost	132	169	1,176
Other	334	655	2,977
Total	¥ 15,428	¥ 13,783	\$ 137,516

The components of remeasurements of defined benefit plans (before income tax effect) in other comprehensive income for the years ended March 31, 2017 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Prior service cost	¥ 161	¥ 132	\$ 1,435
Actuarial (gains) losses	(6,723)	17,566	(59,925)
Total	¥ (6,561)	¥ 17,698	\$ (58,481)

The components of remeasurements of defined benefit plans (before income tax effect) in accumulated other comprehensive income at March 31, 2017 and 2016 were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Unrecognized prior service cost	¥ (295)	¥ 10	\$ (2,629)
Unrecognized actuarial losses	530	7,194	4,724
Total	¥ 235	¥ 7,204	\$ 2,094

The components of plan assets at March 31, 2017 and 2016 were as follows:

	FY2016	FY2015
General account	35%	37%
Equity securities	43	44
Bonds	16	16
Cash and deposits	5	2
Others	1	1
Total	100%	100%

38% and 36% of the total plan assets is retirement benefit trust at March 31, 2017 and 2016, respectively.

The expected long-term rate of return on plan assets is determined considering current and expected distribution of plan assets and current and expected long-term rate of return derived from various components of the plan assets.

Principal assumptions used for the actuarial calculation for the years ended March 31, 2017 and 2016 were as follows:

	FY2016	FY2015
Discount rate	Primarily 0.3%	Primarily 0.3%
Expected long-term rate of return on plan assets	Primarily 1.8%	Primarily 1.5%
Expected rate of salary increase	Primarily 0.9 - 3.0%	Primarily 0.9 - 3.0%

Defined contribution plans

The required contribution amount to the defined contribution plan by the Group was ¥3,609 million (\$32,168 thousand) and ¥3,412 million for the years ended March 31, 2017 and 2016, respectively.

11. Contingencies

At March 31, 2017 and 2016, trade notes discounted or endorsed were as follows:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Trade notes discounted	¥ 8,686	¥ 2,132	\$ 77,422
Trade notes endorsed	1,073	466	9,564

At March 31, 2017 and 2016, commitments outstanding for loan commitments were ¥281 million (\$2,504 thousand) and ¥601 million, respectively.

At March 31, 2017 and 2016, the Group provided the guarantees of bank loans and others for the following companies:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Formosa Ha Tinh (Cayman) Limited	¥ 18,960	¥ –	\$ 168,999
Japan-Brazil Niobium Corporation	8,512	9,491	75,871
Kawarin Enterprise Pte. Ltd.	2,832	1,281	25,242
Al Gharbia Pipe Company	2,477	–	22,078
JIM Technology Corporation	2,230	–	19,876
Japan Tunnel Systems Corporation	–	2,999	–
Others	944	1,223	8,414
Total	¥ 35,957	¥ 14,995	\$ 320,500

In addition to above, at March 31, 2017 and 2016, the Group provided the following guarantees of the possible obligations in the future for Byerwen Coal Pty. Ltd. and MIZUSHIMA ECO-WORKS CO., LTD.:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Guarantee limit	¥ 10,291	¥ 10,900	\$ 91,728

12. Leases

The Group leases certain buildings and structures, machinery and equipment, office space and other assets.

As discussed in Note 2 (i), lease assets under finance leases that do not transfer ownership to lessees are capitalized and depreciated to residual value of zero using the straight-line method with useful life defined by the terms of the contract.

Future minimum lease payments subsequent to March 31, 2017 and 2016 for non-cancelable operating leases are summarized as follows:

As a lessee:

(Year ending March 31)

	Millions of yen	Thousands of U.S. dollars
2017		
2018	¥ 3,281	\$ 29,245
2019 and thereafter	19,406	172,974
Total	¥ 22,688	\$ 202,228
2016		
2017	¥ 2,384	
2018 and thereafter	15,370	
Total	¥ 17,754	

As a lessor:

(Year ending March 31)

	Millions of yen	Thousands of U.S. dollars
2017		
2018	¥ 143	\$ 1,274
2019 and thereafter	637	5,677
Total	¥ 780	\$ 6,952
2016		
2017	¥ –	
2018 and thereafter	–	
Total	¥ –	

13. Financial Instruments

(a) Overview

(1) Group policy for financial instruments

The Group raises funds mainly through the bank loans or by commercial paper/ bond issues based on the capital investment plans considering the stability of the fund and financing costs. Temporary surplus of funds are operated only for short-term investments. Derivative transactions are only utilized to hedge the following risks and the Group does not enter into derivative transactions for trading or speculative purposes.

(2) Types of financial instruments and related risk and risk management

Trade receivables such as notes and accounts receivable are exposed to credit risk. The Group manages this risk by monitoring the financial conditions of its customers periodically. Some trade receivables are sold before their maturities.

Trade payables such as notes and accounts payable are due within one year. Some accounts receivable and accounts payable are denominated in foreign currency and exposed to foreign currency risk. Foreign exchange forward contracts are utilized in a timely manner to hedge the net balance of foreign currencies received from export and foreign currencies paid for raw material purchase.

Stocks as investment securities are exposed to market fluctuation risk. Investment securities denominated in foreign currencies are exposed to foreign currency risk. Investment securities mainly consist of securities of companies with which a business relationship has been established and the Group reviews these fair values periodically.

Debts and bonds are managed so as not to concentrate the maturities considering the liquidity risk. Variable interest rate debts are exposed to interest fluctuation risk. Some of the debts and bonds, which are exposed to interest fluctuation risk, are hedged by the interest rate swap agreements to correspond with and to decrease interest payments.

Derivative transactions are exposed to market fluctuation risk of future foreign exchange and interest rates. However, the Group utilizes the derivative transactions to correspond with the actual demands of imports and exports, debts and bonds, and thus the risk is limited to the extent of opportunity loss. The Group enters into derivative transactions only with financial institutions with high credit ratings, and thus there is almost no credit risk, which is the risk of default by the counterparties' bankruptcy, etc. The Group implemented the internal rules of derivative transactions and transactions are operated based on these rules. Derivative transactions are executed based on the above internal rules, which require getting the approval from the financial operating officer. The balances, fair values and valuation differences are reported to the management meetings periodically. Consolidated subsidiaries operate the derivative transactions based on the internal rules.

(3) Supplemental information on fair value of financial instruments

As well as the values based on market prices, fair values of financial instruments include values, which are reasonably calculated in cases where market prices do not exist. As the calculation of those values uses certain assumptions, those values may vary in cases where different assumptions are applied. Also, for the contract amount regarding derivative transactions described in Note 14. "Derivatives and Hedging Activities," the contract amount itself does not indicate market risk related to derivative transactions.

(b) Fair value of financial instruments

Carrying value on the consolidated balance sheets, fair value and difference at March 31, 2017 and 2016 are as follows. The financial instruments whose fair value is extremely difficult to determine are not included below.

	Millions of yen					
	FY2016			FY2015		
	Carrying value	Fair value	Difference	Carrying value	Fair value	Difference
Cash and deposits	¥ 69,936	¥ 69,936	¥ –	¥ 64,654	¥ 64,654	¥ –
Notes and accounts receivable	798,058	798,058	–	720,639	720,639	–
Investments in securities:						
Available-for-sale securities	329,992	329,992	–	353,010	353,010	–
Total assets	¥ 1,197,986	¥ 1,197,986	¥ –	¥ 1,138,303	¥ 1,138,303	¥ –
Notes and accounts payable	¥ 446,645	¥ 446,645	¥ –	¥ 422,331	¥ 422,331	¥ –
Short-term borrowings	106,966	106,966	–	116,759	116,759	–
Commercial paper	8,000	8,000	–	36,000	36,000	–
Current portion of long-term debt	147,412	147,439	27	256,623	256,795	172
Long-term debt:						
Bonds	75,000	75,739	739	125,000	125,938	938
Long-term borrowings	1,038,089	1,041,858	3,768	844,990	853,404	8,413
Total liabilities	¥ 1,822,113	¥ 1,826,648	¥ 4,534	¥ 1,801,705	¥ 1,811,229	¥ 9,524
Derivative transactions*1:						
Hedge accounting not applied	¥ 141	¥ 141	¥ –	¥ 403	¥ 403	¥ –
Hedge accounting applied	1,207	1,207	–	(3,708)	(3,708)	–
Total derivative transactions	¥ 1,349	¥ 1,349	¥ –	¥ (3,305)	¥ (3,305)	¥ –

	Thousands of U.S. dollars		
	FY2016		
	Carrying value	Fair value	Difference
Cash and deposits	\$ 623,371	\$ 623,371	\$ –
Notes and accounts receivable	7,113,450	7,113,450	–
Investments in securities:			
Available-for-sale securities	2,941,367	2,941,367	–
Total assets	\$ 10,678,188	\$ 10,678,188	\$ –
Notes and accounts payable	\$ 3,981,148	\$ 3,981,148	\$ –
Short-term borrowings	953,436	953,436	–
Commercial paper	71,307	71,307	–
Current portion of long-term debt	1,313,949	1,314,190	240
Long-term debt:			
Bonds	668,508	675,095	6,587
Long-term borrowings	9,252,954	9,286,549	33,585
Total liabilities	\$ 16,241,313	\$ 16,281,736	\$ 40,413
Derivative transactions*1:			
Hedge accounting not applied	\$ 1,256	\$ 1,256	\$ –
Hedge accounting applied	10,758	10,758	–
Total derivative transactions	\$ 12,024	\$ 12,024	\$ -

*1 Derivative transactions are presented on a net basis and net liability position is shown in parenthesis.

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Note 1. Valuation method for financial instruments and information of investments in securities and derivative transactions

Assets:	the foreign exchange forward contracts.
<u>Cash and deposits and Notes and accounts receivable</u>	<u>Bonds and bonds due within one year (included in current portion of long-term debt)</u>
These are paid in short-term and the fair value approximates carrying value.	Fair value of bonds is based on the quoted market price. Fair value of the bonds subject to the special treatment of the interest rate swaps are calculated by discounting the sum of principal and interest including the interest swap, using the reasonable interest rate applied to the same kind of bond issues.
Some accounts receivable are subject to the allocation treatment of the foreign exchange forward contracts.	<u>Long-term borrowings</u>
<u>Securities</u>	Fair value of long-term borrowings is estimated by discounting the sum of principal and interest, using the reasonable interest rate applied to the same kind of new borrowings. Fair value of the long-term borrowings subject to the special treatment of the interest rate swaps is calculated by discounting the sum of principal and interest including the interest swap, using the reasonable interest rate applied to the same kind of long-term debt.
Fair value of stocks is based on the quoted price on stock exchanges and that of bonds is based on the quoted price on bond markets or price presented by the counter party financial institutions. Please see Note 6. "Securities" regarding the information of the fair value for the investment in securities by classification.	<u>Derivative transactions</u>
	Please see Note 14. "Derivatives and Hedging Activities."
Liabilities:	
<u>Notes and accounts payable, Short-term borrowings, Current portion of long-term debt (except for bonds due within one year) and Commercial paper</u>	
These are paid in short-term and the fair value approximates the equivalent of carrying value. Some accounts payable are subject to the allocation treatment of	

Note 2. Financial instruments whose fair value cannot be reliably determined

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
	Carrying value		
Unlisted stock	¥ 41,605	¥ 41,281	\$ 370,844
Subscription certificates	599	246	5,339

Financial instruments above are not included in securities on the table in (b) "Fair value of financial instruments" because there are no market prices available and it is extremely difficult to determine the fair value.

Note 3. The redemption schedule for financial instruments and securities with maturities

	Millions of yen							
	FY2016				FY2015			
	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years
Cash and deposits	¥ 69,936	¥ –	¥ –	¥ –	¥ 64,654	¥ –	¥ –	¥ –
Notes and accounts receivable	648,748	–	–	–	565,478	–	–	–
Securities:								
Available-for-sale securities with maturities	–	–	–	–	–	–	–	–
Total	¥ 718,685	¥ –	¥ –	¥ –	¥ 630,132	¥ –	¥ –	¥ –

	Thousands of U.S. dollars			
	FY2016			
	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years
Cash and deposits	\$ 623,371	\$ –	\$ –	\$ –
Notes and accounts receivable	5,782,583	–	–	–
Securities:				
Available-for-sale securities with maturities	–	–	–	–
Total	\$ 6,405,963	\$ –	\$ –	\$ –

Note 4. Scheduled maturities of short-term borrowings, current portion of long-term debt and long-term debt

	Millions of yen					
	FY2016					
	Due in one year or less	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
Short-term borrowings	¥ 106,966	¥ –	¥ –	¥ –	¥ –	¥ –
Commercial paper	8,000	–	–	–	–	–
Current portion of long-term debt	147,412	–	–	–	–	–
Long-term debt:						
Bonds	–	15,000	–	–	30,000	30,000
Long-term borrowings	–	170,724	52,119	74,477	46,437	694,331
Total	¥ 262,379	¥ 185,724	¥ 52,119	¥ 74,477	¥ 76,437	¥ 724,331

	Millions of yen					
	FY2015					
	Due in one year or less	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
Short-term borrowings	¥ 116,759	¥ –	¥ –	¥ –	¥ –	¥ –
Commercial paper	36,000	–	–	–	–	–
Current portion of long-term debt	256,623	–	–	–	–	–
Long-term debt:						
Bonds	–	50,000	15,000	–	–	60,000
Long-term borrowings	–	97,402	169,594	13,888	64,468	499,636
Total	¥ 409,382	¥ 147,402	¥ 184,594	¥ 13,888	¥ 64,468	¥ 559,636

	Thousands of U.S. dollars					
	FY2016					
	Due in one year or less	Due after one year through two years	Due after two years through three years	Due after three years through four years	Due after four years through five years	Due after five years
Short-term borrowings	\$ 953,436	\$ –	\$ –	\$ –	\$ –	\$ –
Commercial paper	71,307	–	–	–	–	–
Current portion of long-term debt	1,313,949	–	–	–	–	–
Long-term debt:						
Bonds	–	133,701	–	–	267,403	267,403
Long-term borrowings	–	1,521,739	464,560	663,847	413,913	6,188,884
Total	\$ 2,338,702	\$ 1,655,441	\$ 464,560	\$ 663,847	\$ 681,317	\$ 6,456,288

14. Derivatives and Hedging Activities

Derivative transactions for which hedge accounting is not applied for the years ended March 31, 2017 and 2016 were as follows:

	Millions of yen				Thousands of U.S. dollars	
	FY2016		FY2015		FY2016	
	Contracted amount	Recognized gain (loss)	Contracted amount	Recognized gain (loss)	Contracted amount	Recognized gain (loss)
Foreign exchange forward contracts:						
USD (Selling)	¥ 9,233	¥ 146	¥ 11,044	¥ 446	\$ 82,297	\$ 1,301
EUR (Selling)	122	1	123	0	1,087	8
THB (Selling)	—	—	2	0	—	—
MYR (Selling)	503	1	588	17	4,483	8
CNY (Selling)	256	(22)	—	—	2,281	(196)
USD (Buying)	2,979	41	6,292	(19)	26,553	365
EUR (Buying)	171	(10)	1,006	(41)	1,524	(89)
GBP (Buying)	4	0	6	0	35	0
CHF (Buying)	—	—	3	0	—	—
THB (Buying)	1	0	2	(0)	8	0
JPY (Buying)	6	(0)	9	(0)	53	(0)
Total		¥ 158		¥ 404		\$ 1,408
Commodity forward contracts:						
Nonferrous metal (Selling)	¥ 237	¥ (26)	¥ 148	¥(0)	\$ 2,112	\$ (231)
Nonferrous metal (Buying)	112	8	50	0	998	71
Total		¥ (17)		¥ (0)		\$ (151)

Derivative transactions for which hedge accounting is applied for the years ended March 31, 2017 and 2016 were as follows:

(a)Currency related

Hedged item		Millions of yen				Thousands of U.S. dollars	
		FY2016		FY2015		FY2016	
		Contract amount	Fair value	Contract amount	Fair value	Contract amount	Fair value
Benchmark method							
Foreign exchange forward contracts:							
USD (Selling)	Accounts receivable (forecasted transactions)	¥ 3,719	¥ 47	¥ 2,413	¥ 106	\$ 33,149	\$ 418
EUR (Selling)	Accounts receivable (forecasted transactions)	63	7	222	14	561	62
GBP (Selling)	Accounts receivable (forecasted transactions)	584	7	522	(53)	5,205	62
SAR (Selling)	Accounts receivable (forecasted transactions)	3,688	(302)	1,796	(311)	32,872	(2,691)
KWD (Selling)	Accounts receivable (forecasted transactions)	429	(17)	661	(65)	3,823	(151)
THB (Selling)	Accounts receivable (forecasted transactions)	10	(0)	—	—	89	(0)
USD (Buying)	Accounts payable (forecasted transactions)	61,287	1,175	85,512	(2,489)	546,278	10,473
EUR (Buying)	Accounts payable (forecasted transactions)	13,469	604	656	(28)	120,055	5,383
GBP (Buying)	Accounts payable (Forecasted transactions)	344	(5)	1,092	(24)	3,066	(44)
CNY (Buying)	Accounts payable (forecasted transactions)	203	(2)	215	0	1,809	(17)
THB (Buying)	Accounts payable (forecasted transactions)	70	0	58	(0)	623	0
SAR (Buying)	Accounts payable (forecasted transactions)	614	(6)	—	—	5,472	(53)
KWD (Buying)	Accounts payable (forecasted transactions)	229	(1)	—	—	2,041	(8)
JPY (Buying)	Accounts payable (forecasted transactions)	7	(0)	—	—	62	(0)
SGD (Buying)	Accounts payable (forecasted transactions)	18	(0)	—	—	160	(0)
KRW (Buying)	Accounts payable (forecasted transactions)	—	—	297	10	—	—
SEK (Buying)	Accounts payable (forecasted transactions)	—	—	8	0	—	—
Allocation method							
Foreign exchange forward contracts:							
USD (Selling)	Accounts receivable	1,260	Note 1	1,135	Note 1	11,230	Note 1
EUR (Selling)	Accounts receivable	2	Note 1	3	Note 1	17	Note 1
THB (Selling)	Accounts receivable	5	Note 1	5	Note 1	44	Note 1
USD (Buying)	Accounts payable and deposits received	33,872	Note 1	25,743	Note 1	301,916	Note 1
EUR (Buying)	Accounts payable and deposits received	222	Note 1	38	Note 1	1,978	Note 1
Cross currency swap contracts:							
To receive USD floating and pay JPY fixed rates		70,758	Note 1	60,997	Note 1	630,697	Note 1
To receive USD floating and pay JPY floating rates		6,000	Note 1	6,000	Note 1	53,480	Note 1

Fair value of derivative transactions is measured at the quoted price obtained from financial institutions.

Note 1. Fair value of the foreign exchange forward contracts to which allocation treatment has been applied is included in the fair value of corresponding accounts receivable, accounts payable and long-term debt as hedged item.

(b) Interest rate related

			Millions of yen				Thousands of U.S. dollars	
			FY2016		FY2015		FY2016	
			Contract amount	Fair value	Contract amount	Fair value	Contract amount	Fair value
Benchmark method								
Interest rate swap agreements:								
To receive floating and pay fixed rates	Long-term debt	.....	¥ 90,623	¥ (300)	¥ 110,669	¥ (866)	\$ 807,763	\$ (2,674)
Special treatment								
Interest rate swap agreements:								
To receive floating and pay fixed rates	Bonds and long-term debt	---	101,200	Note 1	234,050	Note 1	902,041	Note 1
To receive fixed rates and pay floating	.....		58,000	Note 1	60,000	Note 1	516,980	Note 1

Fair value of derivative transactions is measured at the quoted price obtained from financial institutions.

Note 1. Fair value of the interest rate swap agreements to which special treatment method has been applied is included in the fair value of corresponding bonds and long-term debt as hedged item.

15. Research and Development Expenses

Research and development expenses charged to income were ¥35,536 million (\$316,748 thousand) and ¥35,153 million for the years ended March 31, 2017 and 2016, respectively.

16. Income Taxes

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets at March 31, 2017 and 2016 are presented below:

			Millions of yen	Thousands of U.S. dollars
			FY2016	FY2015
				FY2016
Deferred tax assets:				
Loss carry-forwards	.....		¥ 32,756	¥ 46,547
Net defined benefit liability	.....		32,362	32,784
Loss on impairment of property, plant and equipment	.....		13,952	16,604
Accrued bonuses	.....		13,059	11,432
Elimination of unrealized gains on property, plant and equipment	.....		7,802	7,951
Provision for special repairs	.....		5,732	5,876
Others	.....		44,117	40,503
Total deferred tax assets	.....		149,782	161,699
Valuation allowance	.....		(60,730)	(59,859)
Deferred tax assets net of valuation allowances	.....		89,052	101,840
Deferred tax liabilities:				
Net unrealized gains and losses on securities	.....		(49,552)	(46,191)
Others	.....		(20,659)	(19,996)
Total deferred tax liabilities	.....		(70,212)	(66,187)
Net deferred tax assets	.....		¥ 18,840	¥ 35,652

Reconciliation of the statutory tax rate to the effective tax rate for the year ended March 31, 2016 was as follows:

	FY2016
Statutory tax rate	33.0%
Entertainment and other non-deductible expenses	4.1
Dividend income and other non-taxable income	(0.7)
Valuation allowance	10.1
Equity in earnings of affiliates	3.9
Other	(1.0)
Effective tax rate	49.3%

The reconciliation of the difference between the statutory tax rate and the effective tax rate for the year ended March 31, 2017 was not presented since the difference was less than 5% of the statutory tax rate.

“Act for partial amendment of the consumption tax act and others for the drastic reform of the taxation system for ensuring stable financial resources for social security” and “Act for partial amendment of the local tax act and the local allocation tax act and others for the drastic reform of the taxation system for ensuring stable financial resources for social security” were enacted into law on November 18, 2016, and a scheduled increase in the consumption tax rate to

10 percent was postponed from April1, 2017 to October 1, 2019. Accordingly, scheduled abolishment of special local corporation tax, reimposition of corporate enterprise tax, amendment of local corporation tax rate and amendment of corporation tax rate for inhabitant tax were also postponed from the years beginning on or after April1, 2017 to the years beginning on or after October 1, 2019. There was no change on the effective statutory tax rate that was utilized for the measurement of deferred tax assets and deferred tax liabilities. However, the reclassification of national tax rate and local tax rate was made. As a result, deferred tax assets, net of deferred tax liabilities, increased by ¥86 million (\$766 thousand) and income taxes – deferred decreased by the same amount for the year ended March 31, 2017.

17. Comprehensive Income

Reclassification adjustments and income tax effects attributable to other comprehensive income for the years ended March 31, 2017 and 2016 were as follows:

			Millions of yen	Thousands of U.S. dollars
			FY2016	FY2015
				FY2016
Net unrealized gains and losses on securities:				
Gains and losses arising during the year	.....		¥ 44,509	¥ (124,398)
Reclassification adjustments	.....		(30,067)	(12,505)
Amounts before income tax effects	.....		14,441	(136,903)
Income tax effects	.....		(3,892)	46,465
Net unrealized gains and losses on securities	.....		10,549	(90,438)
Net unrealized gains and losses on hedges:				
Gains and losses arising during the year	.....		(1,673)	(3,042)
Reclassification adjustments	.....		6,413	(518)
Amounts before income tax effects	.....		4,739	(3,561)
Income tax effects	.....		(1,547)	1,132
Net unrealized gains and losses on hedges	.....		3,192	(2,429)
Revaluation reserve for land:				
Income tax effects	.....		–	648
Revaluation reserve for land	.....		–	648
Translation adjustments:				
Adjustments arising during the year	.....		(6,713)	(12,241)
Reclassification adjustments	.....		(33)	32
Amounts before income tax effects	.....		(6,747)	(12,208)
Income tax effects	.....		–	–
Translation adjustments	.....		(6,747)	(12,208)
Remeasurements of defined benefit plans:				
Adjustments arising during the year	.....		3,791	(18,267)
Reclassification adjustments	.....		2,770	568
Amounts before income tax effects	.....		6,561	(17,698)
Income tax effects	.....		(2,125)	5,731
Remeasurements of defined benefit plans	.....		4,436	(11,967)
Share of other comprehensive income of affiliates accounted for using equity method:				
Gains and losses arising during the year	.....		(12,250)	(18,186)
Reclassification adjustments	.....		545	(231)
Share of other comprehensive income of affiliates accounted for using equity method	----		(11,704)	(18,418)
Total other comprehensive income	.....		¥ (273)	¥ (134,814)

18. Segment Information

(a) Overview of reportable segments

The Group places three operating companies, JFE Steel Corporation, JFE Engineering Corporation and JFE Shoji, and executes business based on an operating system specifically designed for its industry under the Company as a holding company. The reportable segments are identified by products and services belonging to the operating companies.

Products and services for each reportable segment are as follows:
“Steel” produces and sells a wide range of steel products, steel processed products and raw materials and operates peripheral business, such as transporting, and maintenance and construction of equipment.
“Engineering” provides engineering services for energy, urban environment, steel construction, industrial machines and systems, recycle service and electric

power retail service.
“Trading” purchases, processes and sells steel products, raw materials for steel production, nonferrous metal products, food, etc.

(b) Method of calculating net sales, income (loss), assets, liabilities and other items by reportable segment

Accounting policies of the reportable segments are consistent with those described in Note 2. “Summary of Significant Accounting Policies.” Income by reportable segment is based on ordinary income. Intersegment transactions are based on prevailing market price.

(c) Net sales, income (loss), assets, liabilities and other items by reportable segment

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Sales:			
Steel			
Sales to customers	¥ 1,500,929	¥ 1,569,518	\$ 13,378,456
Intersegment sales or transfers	848,199	875,655	7,560,379
Total	¥ 2,349,129	¥ 2,445,173	\$ 20,938,844
Engineering			
Sales to customers	¥ 416,220	¥ 387,750	\$ 3,709,956
Intersegment sales or transfers	9,916	9,826	88,385
Total	¥ 426,136	¥ 397,577	\$ 3,798,342
Trading			
Sales to customers	¥ 1,391,842	¥ 1,474,471	\$ 12,406,114
Intersegment sales or transfers	279,189	281,973	2,488,537
Total	¥ 1,671,032	¥ 1,756,445	\$ 14,894,660
Total			
Sales to customers	¥ 3,308,992	¥ 3,431,740	\$ 29,494,536
Intersegment sales or transfers	1,137,305	1,167,455	10,137,311
Total	¥ 4,446,298	¥ 4,599,195	\$ 39,631,856
Adjustments			
Sales to customers	¥ –	¥ –	\$ –
Intersegment sales or transfers	(1,137,305)	(1,167,455)	(10,137,311)
Total	¥ (1,137,305)	¥ (1,167,455)	\$ (10,137,311)
Consolidated			
Sales to customers	¥ 3,308,992	¥ 3,431,740	\$ 29,494,536
Intersegment sales or transfers	–	–	–
Total	¥ 3,308,992	¥ 3,431,740	\$ 29,494,536

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Segment income:			
Steel	¥ 40,544	¥ 27,817	\$ 361,386
Engineering	26,616	20,030	237,240
Trading	21,834	15,760	194,616
Total	88,996	63,608	793,261
Adjustments	(4,260)	630	(37,971)
Consolidated	¥ 84,735	¥ 64,239	\$ 755,281

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Segment assets:			
Steel	¥ 3,723,479	¥ 3,596,123	\$ 33,189,045
Engineering	390,445	370,767	3,480,212
Trading	643,273	619,783	5,733,781
Total	4,757,198	4,586,674	42,403,048
Adjustments	(421,129)	(351,790)	(3,753,712)
Consolidated	¥ 4,336,069	¥ 4,234,884	\$ 38,649,335

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Depreciation:			
Steel	¥ 169,639	¥ 164,952	\$ 1,512,068
Engineering	7,536	7,037	67,171
Trading	5,457	5,950	48,640
Total	182,633	177,940	1,627,890
Adjustments	5	5	44
Consolidated	¥ 182,638	¥ 177,946	\$ 1,627,934

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Amortization of goodwill:			
Steel	¥ 0	¥ 119	\$ 0
Engineering	1,331	1,876	11,863
Trading	1,815	1,728	16,177
Total	3,146	3,724	28,041
Adjustments	–	15	–
Consolidated	¥ 3,146	¥ 3,739	\$ 28,041

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Interest income:			
Steel	¥ 1,334	¥ 1,051	\$ 11,890
Engineering	71	127	632
Trading	405	467	3,609
Total	1,811	1,646	16,142
Adjustments	(336)	(455)	(2,994)
Consolidated	¥ 1,474	¥ 1,190	\$ 13,138

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Interest expense:			
Steel	¥ 11,375	¥ 11,132	\$ 101,390
Engineering	352	320	3,137
Trading.....	1,533	1,783	13,664
Total	13,261	13,236	118,201
Adjustments	(647)	(957)	(5,767)
Consolidated	¥ 12,613	¥ 12,279	\$ 112,425

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Equity in earnings and loss of affiliates:			
Steel	¥ 13,539	¥ (10,923)	\$ 120,679
Engineering	970	295	8,646
Trading.....	1,225	890	10,918
Total	15,735	(9,737)	140,253
Adjustments	(3,729)	915	(33,238)
Consolidated	¥ 12,006	¥ (8,821)	\$ 107,014

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Investment in affiliates accounted for using equity method:			
Steel	¥ 268,161	¥ 272,123	\$ 2,390,239
Engineering	8,351	7,028	74,436
Trading.....	10,454	11,874	93,181
Total	286,968	291,027	2,557,875
Adjustments	56,661	60,765	505,045
Consolidated	¥ 343,630	¥ 351,792	\$ 3,062,928

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Increase in property, plant and equipment and intangible assets:			
Steel	¥ 217,443	¥ 197,786	\$ 1,938,167
Engineering	10,820	9,001	96,443
Trading.....	6,502	5,727	57,955
Total	234,766	212,514	2,092,575
Adjustments	1	0	8
Consolidated	¥ 234,768	¥ 212,515	\$ 2,092,592

(d) Information about products and services

Information about products and services has not been disclosed since the classification by products and services is the same as the reportable segment.

(e) Information by geographical area

(1) Sales	Millions of yen						Thousands of U.S. dollars		
	FY2016			FY2015			FY2016		
	Japan	Others	Total	Japan	Others	Total	Japan	Others	Total
Sales	¥ 2,251,636	¥ 1,057,356	¥ 3,308,992	¥ 2,252,169	¥ 1,179,570	¥ 3,431,740	\$ 20,069,845	\$ 9,424,690	\$ 29,494,536

(2) Property, plant and equipment

Information about property, plant and equipment has not been disclosed since property, plant, and equipment in Japan constituted more than 90% of property, plant and equipment on the consolidated balance sheets.

(f) Information about major customers

Information about major customer has not been disclosed since there were no external customers who constituted more than 10% of net sales on the consolidated statements of income.

(g) Information about impairment loss by reportable segment

	Millions of yen			
	FY2016			
	Steel	Engineering	Trading	Total
Impairment loss	¥ 726	¥ 8,009	¥ 673	¥ 9,408

	Millions of yen			
	FY2015			
	Steel	Engineering	Trading	Total
Impairment loss	¥ 3,115	¥ 197	¥ 1,680	¥ 4,993

	Thousands of U.S. dollars			
	FY2016			
	Steel	Engineering	Trading	Total
Impairment loss	\$ 6,471	\$ 71,387	\$ 5,998	\$ 83,857

(h) Information on unamortized balance of goodwill by reportable segment

	Millions of yen			
	FY2016			
	Steel	Engineering	Trading	Total
Unamortized balance	¥ 0	¥ 565	¥ 4,570	¥ 5,137

	Millions of yen			
	FY2015			
	Steel	Engineering	Trading	Total
Unamortized balance	¥ 1	¥ 7,139	¥ 6,374	¥ 13,515

	Thousands of U.S. dollars			
	FY2016			
	Steel	Engineering	Trading	Total
Unamortized balance	\$ 0	\$ 5,036	\$ 40,734	\$ 45,788

(i) Information about gain on negative goodwill by reportable segmen

No gain on negative goodwill was recognized for the years ended March 31, 2017 and 2016.

19. Impairment Loss

The Company classified long-lived assets as idle assets, leased assets, project-oriented assets and business-oriented assets and grouped each of those classified assets into the minimum unit which will generate cash flows independent of other assets or group of assets.

For the year ended March 31, 2017, primarily the book value of the goodwill and intangible assets recorded in accordance with acquisition of plant engineering company in Germany were totally written down because the originally planned income is not expected any longer. The Company recognized

loss on impairments of ¥9,408 million (\$83,857 thousand), including ¥4,236 million (\$37,757 thousand) for goodwill, ¥2,619 million (\$23,344 thousand) for other intangible assets and ¥2,553 million (\$22,756 thousand) for buildings and structures.

For the year ended March 31, 2016, primarily the book value of the interest in natural resources in Australia and the business assets, etc. in China were reduced to the recoverable amount because of the deteriorated business environment. The Company recognized loss on impairments of long-lived assets totaling ¥4,993 million, including ¥1,638 million for investments and other assets, ¥1,195 million for land, ¥1,034 million for machinery and equipment and ¥1,125 million for buildings and structures. The recoverable amounts for the interest in natural resources and the business assets, etc. are principally measured at their values in use, which were calculated by discounting the future cash flows at discount rates of 6.4% and 6.0%, respectively.

20. Extraordinary Income

For the years ended March 31, 2017 and 2016, extraordinary income consisted of the following:

	Millions of yen		Thousands of U.S. dollars
	FY2016	FY2015	FY2016
Gain on sales of investments in securities	¥ 30,145	¥ 15,090	\$ 268,695
Loss on impairment of property, plant and equipment	(9,408)	(4,993)	(83,857)

21. Net Income per Share

Diluted net income per share is not shown due to no dilutive stocks for the years ended March 31, 2017 and 2016.

(Year ended March 31, 2017)	Millions of yen	Thousands of shares	Yen	U.S. Dollars
	Net Income attributable to shareholders of the parent	Weighted average shares	Net income per share	
Net income attributable to shareholders of the parent available to common shareholders	¥ 67,939	576,686	¥ 117.81	\$ 1.05

(Year ended March 31, 2016)	Millions of yen	Thousands of shares	Yen	
	Net Income attributable to shareholders of the parent	Weighted average shares	Net income per share	
Net income attributable to shareholders of the parent available to common shareholders	¥ 33,657	576,740	¥ 58.36	



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Independent Auditor’s Report

The Board of Directors
JFE Holdings, Inc.

We have audited the accompanying consolidated financial statements of JFE Holdings, Inc. and its consolidated subsidiaries, which comprise the consolidated balance sheet as at March 31, 2017, and the consolidated statements of income, comprehensive income, changes in net assets, and cash flows for the year then ended and a summary of significant accounting policies and other explanatory information, all expressed in Japanese yen.

Management’s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for designing and operating such internal control as management determines is necessary to enable the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor’s Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. The purpose of an audit of the consolidated financial statements is not to express an opinion on the effectiveness of the entity’s internal control, but in making these risk assessments the auditor considers internal controls relevant to the entity’s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of JFE Holdings, Inc. and its consolidated subsidiaries as at March 31, 2017, and their consolidated financial performance and cash flows for the year then ended in conformity with accounting principles generally accepted in Japan.

Convenience Translation

We have reviewed the translation of these consolidated financial statements into U.S. dollars, presented for the convenience of readers, and, in our opinion, the accompanying consolidated financial statements have been properly translated on the basis described in Note 1.

Ernst & Young Shinnihon LLC

June 23, 2017



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