



JFE Group
CSR Report
2013



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Editorial Policy

The JFE Group CSR Report 2013 presents the basic policy, activities and achievements in FY2012 in terms of environmental and responsibility activities related to the businesses conducted by JFE Holdings, Inc., the holding company of the JFE Group, and its operating companies. The report was edited and produced in accordance with the Guidelines for Environmental Reports (2012 edition) issued by Japan's Ministry of the Environment and the Sustainability Reporting Guidelines Version 3.0. of the Global Reporting Initiative (GRI).

Organizations Covered in the Report

• Holding company:

JFE Holdings, Inc.

• Operating companies of JFE Group:

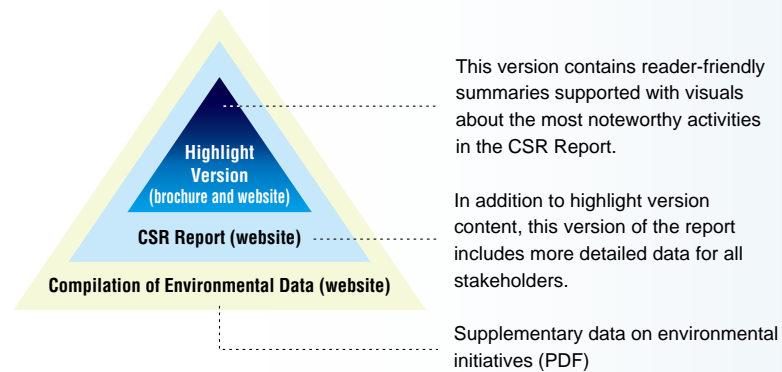
JFE Steel Corporation, JFE Engineering Corporation, JFE Shoji Trade Corporation

*Includes some descriptions pertaining to Group companies organized under each business company.
(359 companies, of which 296 are consolidated subsidiaries and 63 are equity method affiliates)

Reporting Period

The CSR Report 2013 mainly covers activities carried out in FY2012 (April 1, 2012 to March 31, 2013), but also describes selected activities that occurred before or after this period.

CSR Report Composition and Media



Related Reports

Profile (website)

JFE Group outline, corporate vision, corporate governance, etc.

Investor Information (website)

JFE Group management information, financial data, stock and rating information, etc.

JFE GROUP TODAY (brochure and website)

Brochure and website presenting JFE Group business content and activities during the year.

CSR (website)

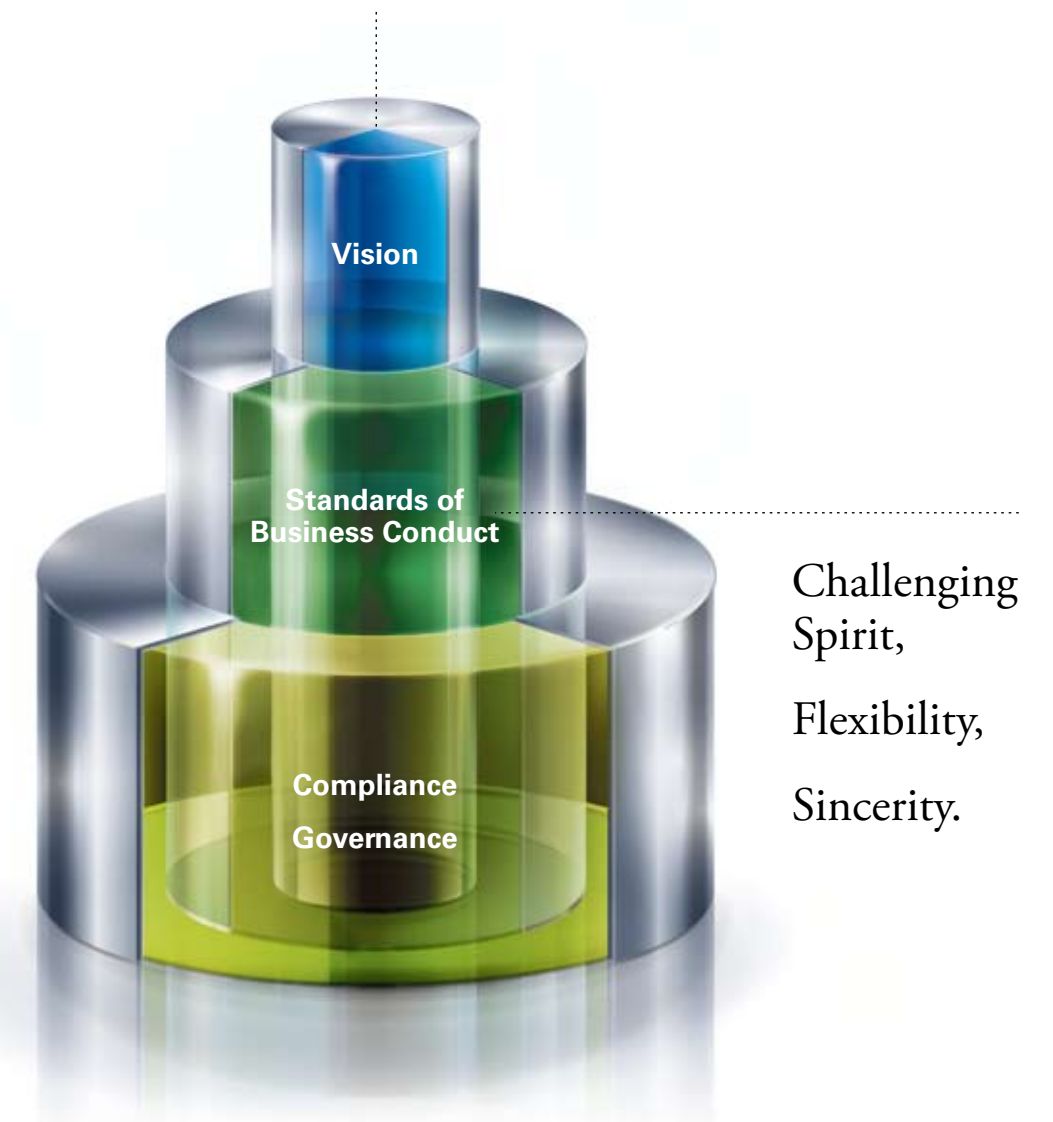
JFE Group's environmental and other responsibility initiatives

Ecobeing (website)

Information about ensuring a healthy planet for future generations.

JFE Group CSR

The JFE Group is continuously contributing to society with the world's most innovative technology.



Putting principles into practice is the heart of CSR.

The JFE Group puts its corporate values and standards of business conduct into practice to fulfill its corporate vision of contributing continuously to society with the world's most innovative technology. The Group diligently implements initiatives targeting key issues, including safety, disaster prevention, product quality and human rights, in addition to compliance and environmental protection.

The JFE Group conducts business from the perspec-

tive of all stakeholders, including customers, clients, shareholders, investors, community residents, and employees, steered by an equitable, fair, and transparent corporate governance system. Following the spirit of our Corporate Values, "Challenging Spirit, Flexibility and Sincerity," the JFE Groups hopes to continue earning the trust of society by undertaking CSR with integrity.

“The JFE Group is always looking to contribute to society with its world-leading technologies.”



Hajime Bada

President and CEO
JFE Holdings, Inc.

Q *What are JFE's main social responsibilities?*

A It has been more than 10 years since the launch of the JFE Group. During this time, we created a robust corporate structure to enhance our corporate value in a time of rapid change in the international environment, including economic developments in China and other Asian countries and the global financial crisis. During our first 10 years, global steel production increased from 900 million tons to 1,500 million tons. Meanwhile, the prevention of global warming and other environmental measures became increasingly critical. **The role and responsibilities of the JFE Group also grew in importance and we responded by building a corporate structure to contribute to sustainable societies.** To this end, we have introduced four key policies.

The first is to **strengthen CSR and corporate governance.** We are striving to ensure rigorous compliance, the cornerstone of our trust-based relationship with society, by conducting business with fairness, objectivity and transparency.

The second is to **maintain greater environmental awareness.** Global warming and other environmental problems are core issues for our business, so we are working aggressively to reduce our environmental impact and help protect the environment. By providing cutting-edge technologies to the whole world, we also are contributing to more sustainable societies.

The third policy is to **promote diversity.** In line with our increased presence in the global market, we are diversifying our workforce and enriching employees' development through work experience overseas.

And finally, the fourth key policy is to **strengthen both the company's financial structure and returns to shareholders.** We aim to earn our stakeholders' trust by

investing in growth and assuring a healthy financial structure while maintaining shareholder returns as a top priority.

Q *What is the role of your business in society?*

A The JFE Group is active in a range of fields centered on the steel business, including engineering and trading. We always look for opportunities to utilize our diverse world-class technologies to address issues that impact society, such as optimizing energy usage and protecting the environment.

Our steel business is combating global warming through its "Three Ecos" initiatives for Eco-Products, Eco-Processes and Eco-Solutions. Eco-Products help to save energy in various ways, such as reduced-weight automobiles and high-efficiency electric cars that produce reduced CO₂ emissions. In FY2012, our 780MPa-class galvanized (GA) high strength steel sheets, which offer superior elongation compared to conventional steel sheets, were used for auto frame components. In terms of Eco-Processes, we conducted long-duration production tests at our pilot plant for innovative Ferro-Coke blast furnace feed and also commissioned tests in actual blast furnaces, establishing core technologies for the production process. Going forward, we will continue to develop these technologies targeted at practical application. Our Eco-Solutions contributed to the global advancement of energy conservation and environmental technologies through the Public and Private Collaborative Meeting between Indian and Japanese iron and steel industry and the World Steel Association.

In engineering, we have been solving energy problems with innovative solutions following Japan's disastrous earthquake in 2011. Last year, we formed a project team to address power shortages and establish a

framework for solutions tailored to regional characteristics and needs. The introduction of a renewable energy feed-in tariff program in Japan has focused attention on photovoltaic and other renewable energies, but the JFE Group is going even further by promoting a range of efficient energies that produce minimum waste, such as distributed energy systems and energy-saving air conditioning systems.

Our trading business is helping to reduce CO₂ emissions through increased sales of reduced-impact, low-consumption products and by promoting optimized distribution. This includes the global recycling of iron and steel scrap metal to help conserve resources. We also launched initiatives focused on biomass fuels, one form of renewable energy.

Q *What about initiatives for safe, secure urban development?*

A **One of the JFE Group's missions is to apply the world's most advanced technologies toward infrastructure for safe, secure urban development.** This is what the JFE Group has been doing through its efforts to assist recovery in areas stricken by the Great East Japan Earthquake.

JFE Steel Group offers stricken areas priority access to materials required for infrastructure reconstruction. We also have responded to electricity shortages by establishing a system that has tripled electricity output at the Chiba District facilities of our East Japan Works, which are licensed to operate as independent power producers. We also developed technology that uses steel slag to fill up the hollowed-out areas between buildings and the ground caused by liquefaction and ground sinking.

Immediately after the earthquake, the JFE Engineering Group dispatched a number of technicians to assist with the

quick restoration of gas lines, water pipes and other lifelines. Also, to help remove debris quickly, the JFE Group was the first corporation to begin incinerating waste in Miyagi Prefecture, where more than 60% of all earthquake debris was located. We expect these efforts to be completed soon. Going forward, we will help to resolve electric power needs associated with the full-fledged restoration of infrastructure and the country's evolving energy supply structure.

For reconstruction in disaster-stricken areas, the JFE Shoji Trade Group has been offering solutions for reinforced earth (*terre armée*), which has been confirmed in post-quake inspections to possess superior seismic resistance.

Q *What are you doing to address issues that are impacting society?*

A The basic philosophy of the JFE Group is expressed in its corporate values and standards, which spell out how the company conducts its business and evolves with society.

We work tirelessly to ensure compliance, environmental management, optimal safety, disaster prevention, product quality and human rights based upon fair, objective and transparent corporate governance. We also make sure that our policies and measures benefit all stakeholders.

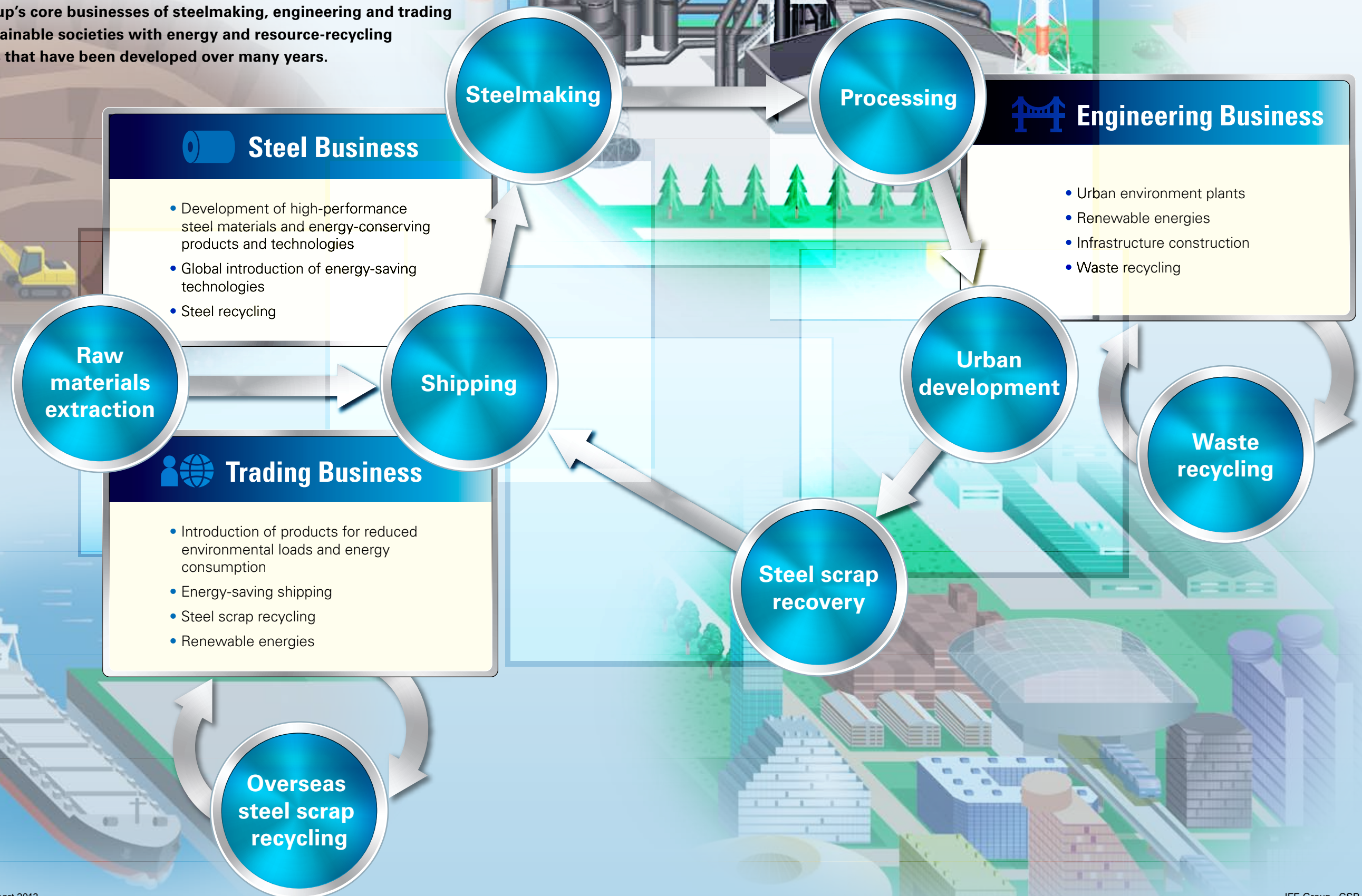
In keeping with our corporate values — **Challenging Spirit, Flexibility and Sincerity** — and with the aim of maintaining society's trust in the JFE Group, we will continue to make every possible effort to contribute to sustainable societies.

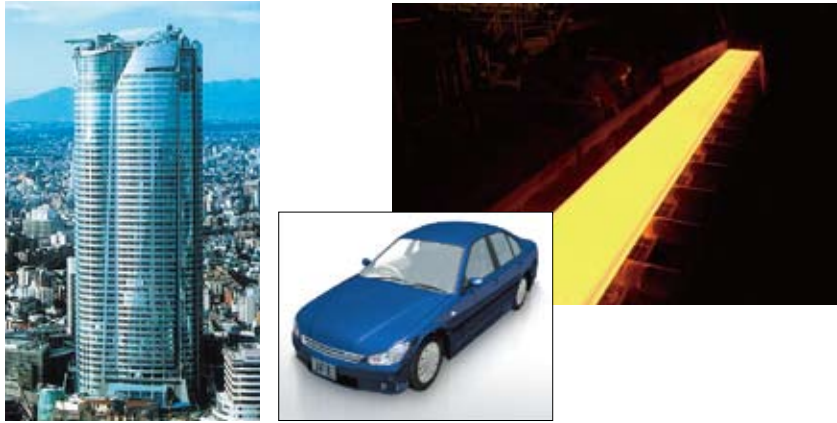

Hajime Bada

President and CEO
JFE Holdings, Inc.

Three Core Businesses Supporting Sustainability

The JFE Group's core businesses of steelmaking, engineering and trading support sustainable societies with energy and resource-recycling technologies that have been developed over many years.



Businesses and Core Products	Opportunities	Solutions
<p>Steel Business “Only One” and “Number One” Products for Global Markets</p> <p>JFE Steel, one of the world’s leading integrated steel producers, operates a highly competitive production system consisting of two major steelworks, one each in eastern and western Japan. The company’s “Only One” and “Number One” branded products and other value-added offerings reflect JFE Steel’s sophisticated technologies and development capabilities.</p> 	 <p>Steel products, titanium products, processed steel products, chemical products, steel slag products, formed material products, containers, mining and mineral products, functional materials, iron alloys, refractories, furnace construction, civil engineering, equipment management and construction, electrical construction, telecommunications construction, thermal power generation, gas, temporary construction materials, property development, insurance sales, steel structures, etc.</p>	<ul style="list-style-type: none"> • CO₂ emissions reduction • Energy conservation • Resource conservation • Biodiversity preservation • Electrical power shortage countermeasures • Post-earthquake reconstruction • Promotion of diverse human resources <ul style="list-style-type: none"> • Commercialization of “eco-processes” Advanced energy-conserving technologies and equipment for reduced CO₂ emissions in production processes • Development of “eco-products” High-performance steel materials for final products that help to conserve energy • Worldwide deployment of “eco-solutions” Deployment and transfer of world-leading technologies for CO₂ emissions reduction • Steel slag technologies for restoring marine environments • IPP and in-house power generation to supplement electric power supply in society • Proactive recruitment of female and foreign employees
<p>Engineering Business Innovative Technologies for Energy and the Environment</p> <p>JFE Engineering technologies enhance the effective use of resources for clean energy in the core businesses of urban-based infrastructure and energy. JFE Engineering boasts specialized expertise in industrial machinery and steel structures such as bridges.</p> 	<p>Energy Power generation plants, energy plants, energy-efficient air conditioning, EV systems, pipelines and control systems</p> <p>Urban environments Urban environment facilities, aqua, biomass, operations and maintenance services</p> <p>Steel structures Bridges, coastal structures and rail welding</p> <p>Industrial machinery Logistics, distribution systems, marine machinery and shield machines</p>	<ul style="list-style-type: none"> • CO₂ emissions reduction • Electrical power shortage countermeasures • Biodiversity preservation • Environmental pollution prevention • Urban development • Post-earthquake reconstruction • Promotion of diverse human resources <ul style="list-style-type: none"> • Development of renewable energy technologies • Construction of geothermal binary power generators • Popularization of ballast-water management systems • Development of sludge-drying system • Construction of earthquake-refuse incinerators • Proactive recruitment of female and foreign employees
<p>Trading Business Creating Value as the Core Trading Company</p> <p>JFE Shoji Trade engages in trading in Japan and the import and export of products centering on steel materials, as well as steel raw materials, non-ferrous metals, chemicals, fuels, materials and machinery, and marine vessels. The company also has business in the foods and electronics fields.</p> 	 <p>Steel products, solvents, iron powder, processed steel products, steelmaking materials/equipment, nonferrous metal products, chemical products, petroleum products, paper products, ships, civil engineering and construction work, <i>terre armée</i> methods, canned foods, agricultural and livestock products, fishery products, semiconductor products and real estate</p>	<ul style="list-style-type: none"> • CO₂ emissions reduction • Energy conservation • Resource conservation • Post-earthquake reconstruction • Promotion of diverse human resources <ul style="list-style-type: none"> • Popularization of products for reduced environmental loads and energy consumption • Promotion of optimized distribution • Promotion of steel scrap recycling • Provision of biomass fuels • Proactive recruitment of female and foreign employees

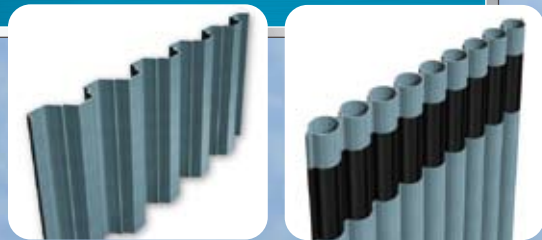
1 Products and Technologies for Coastal Areas

The JFE Group develops technologies and products for safe and secure urban development, including protection from earthquakes and tsunamis.

Seawalls and Quays Strengthened for Earthquakes

Steel Sheet Piling and Steel Pipe Lagging

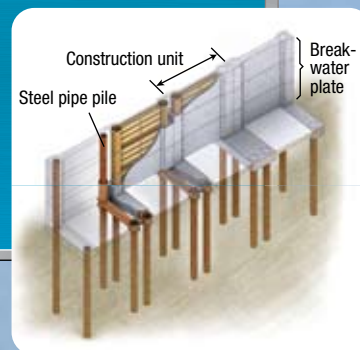
These products are used in seismic retrofitting and restoration construction, including anti-liquefaction construction, seawall reinforcement and storm surge barriers.



New Rapid Deployment Solutions for Tsunamis

Hybrid Tide Embankments

Precast hybrid tide embankments can be rapidly implemented to strengthen protection from tsunamis in coastal communities. This solution significantly shortens the construction period because it does not require large amounts of materials or manpower onsite.



Protecting Vital Facilities from Giant Tsunamis

Breakwater Walls

JFE has applied technologies developed originally to manufacture bridge beams and building frames to create the world's largest breakwater walls, which now provide nuclear power plants and other important facilities with protection from giant tsunamis.



Hamaoka Nuclear Power Plant, Shizuoka Prefecture

Ground Strengthening to Prevent Liquefaction

Steel Slag Compaction Piles

Tightly arranged groups of slag pillars are placed in the ground to prevent liquefaction. The use of slag results in piles that are stronger than those made from natural sand.

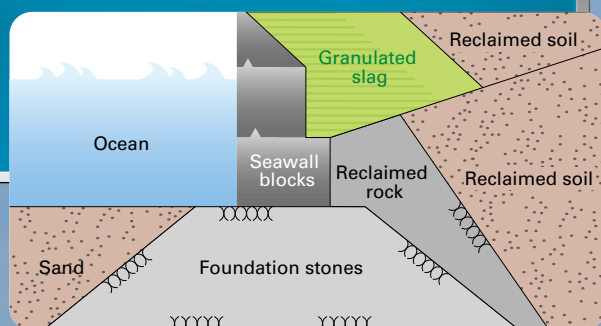


Kitakami River revetment

Seawalls using Lightweight Back-fill Materials

Granulated Slag

This lightweight, standalone back-fill structure is used to increase the stability of seawalls. (Iwaizumi-cho, Iwate Prefecture)



Resource-Conserving Manmade Rocks

Marine Rocks®

Manmade rocks produced with solidified steel slag, called Marine Rocks®, are used as seawall materials for earthquake reconstruction work in areas where natural construction materials are in short supply.



Rikuzentakata, Iwate Prefecture

Powerful Breakwaters

Hybrid Caisson

These hybrid structures combine plant-fabricated box-type steel frames surrounded with concrete. Compared to conventional concrete, this lightweight structure facilitates size increases and field work process reductions. (Kamaishi Port, Iwate Prefecture)



Reduced Cost Restoration of Damaged Piers

Jacket Piers

This restoration method constructs a jacket-like structure around the still functional steel pipe piles of the damaged pier for economical restoration requiring less than half the normal fieldwork of building a new concrete pier. (Ishinomaki Port, Miyagi Prefecture)



2

Anti-Earthquake Technologies and Products

High Ground Cities Safe from Tsunamis

Landslide Prevention Construction

Steel Piles

Steel-pile barriers can be used to effectively prevent landslides on sloped land, helping to save lives in nearby communities.

Catchment well
Anti-landslide piles

Putting Iron Byproducts to Work

Iron-Steel Slag Landfill

Iron-steel slag can be used to raise the ground levels of coastal communities as one countermeasure against tsunamis.

JASDF Matsushima Airbase

World Leading Method of Earth Reinforcement

Terre Armée Civil Engineering Method

This method involves using steel to reinforce earth layers and construct banks with vertical walls, after which earth is heaped on top of each layer and tamped down with rollers or other tools. Attributes include earthquake- and disaster- resistance, flexible configurations and resulting landscapes that are visually attractive.

Roads Suited to Steep Slopes

Metal Construction Roads

The use of steel-pipe piles and H-beams enables roads to be widened on steep slopes in mountain areas. This construction method, which is highly efficient even in places with difficult embankments, provides excellent earthquake resistance in areas susceptible to landslides.

Reliable Water Conveyance in Seismically Active Areas

Steel Water Pipes that Shift with Faults

Steel water pipes designed to prevent cracking or leaking are equipped with bellows that enable bending in the direction of a major slip along an active fault, ensuring that water continues to be conveyed even after an earthquake.

Normal conditions
Earthquake
Fault movement
Fault plane

Ensuring Reliable Power Supply During Emergencies

Engine Power Generators

The JFE Group offers a full lineup of high-performance generators designed to continue supplying electrical power during emergencies, even when electrical, water and other services are interrupted.

Onagawa Nuclear Power Plant

High-Performance, Environmentally Friendly Piles

Tsubasa Piles™

Highly earthquake resistant steel pipe foundation piles are fitted with a toe wing at their tip to screw into the ground for simplified, reduced cost excavation. Environmentally friendly, the piles eliminate the need for earth removal while enabling low-vibration, low-noise construction.

Seismic-Proof Buildings for Strong Earthquakes

High Rises that Withstand Major Earthquakes

Disaster Resistant Foundations for Buildings

Highly earthquake resistant buildings can be designed with vibration dampening systems and special steel materials for high-strength construction. As a result, damage to large structures can be minimized during earthquakes of the most powerful strength or massive tsunamis and their resulting backwash.

High-strength steel materials

Vibration damper

3 Post-Earthquake Reconstruction

Recovery of Basic Services

JFE Engineering dispatched more than 200 employees skilled in gas pipe work to stricken areas following the Great East Japan Earthquake. All gas lines in the region's major city, Sendai, were inspected for the restoration of residential gas services. Support also was provided for the quick repair of water lines in the Sennann and Senen areas, and more than 30 people were dispatched to a destroyed sewage treatment facility in Miyagi Prefecture, aiming to restore service as quickly as possible.



Volunteer Activities

JFE Shoji Trade recruited employees to volunteer for dispatch to stricken areas on nine different occasions beginning in August 2011. The volunteers helped to sort and remove debris from retirement homes, residences, farms and fishing ports in Oshika-cho and Minami-Sanriku-cho, Miyagi Prefecture.

Schedules, transportation and lodging were arranged by the company in support of the volunteer work. Participation totaled more than 110 employees, ranging from new hires to executive officers.



Disaster Waste Disposal

Disposal of the massive amount of earthquake-generated waste covering the damaged areas was essential for quick reconstruction. JFE Engineering, an expert in urban environment plant technologies and operations, led a highly successful effort to resume operations at a badly damaged incinerator in Sendai. The plant was restarted just six months after the disaster, an astonishing speed for such a facility. The company then helped to set up incinerators up in three other locations in Miyagi Prefecture, where approximately one-third of the disaster waste in the prefecture has been incinerated as of the end of FY2012.



Assistance after the Great East Japan Earthquake

Slag for Port Construction in Iwaizumi-cho

To facilitate the quick reconstruction of Omoto Port in Iwaizumi-cho, Iwate Prefecture, where the harbor was effectively destroyed, JFE Steel donated granulated slag as a key construction material. Rebuilding is currently in process.



Omoto Port prior to construction



Granulated slag for harbor construction

Comment from the Mayor of Iwaizumi-cho

The damage to Omoto Port was extensive, completely shutting down its function as a harbor. The quick restoration of Omoto Port is indispensable for our town's reconstruction. I am very thankful for and encouraged by this level of support, which enables us to move forward with reconstruction and restoration. I deeply appreciate these efforts.



Katsumi Date
Mayor, Iwaizumi-cho

Matsushima Bay Seaweed Restoration

To restore the Matsushima Bay seaweed beds destroyed by the tsunami, JFE Steel is collaborating with Tohoku University, fisheries cooperatives and other regional organizations to test the use of Marine Rocks®, Marine Blocks® and Marine Stones® as artificial reefs.



Donations

The JFE Group has contributed ¥100 million in relief money to Miyagi, Iwate, Fukushima, Aomori and Ibaraki prefectures to support rescue and reconstruction activities in disaster-stricken areas.

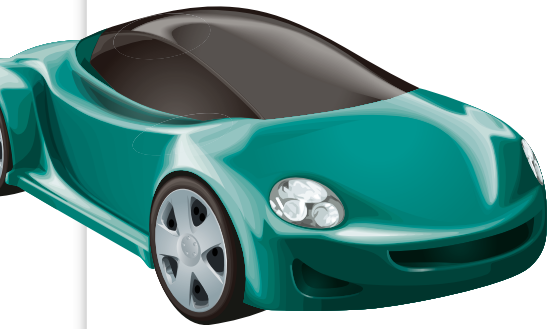
Field mustard, which has a desalinating effect, is being planted to restore the soil quality of fields inundated with seawater.

Using Ecology

JFE Products for Ecological Societies

Making Ecology

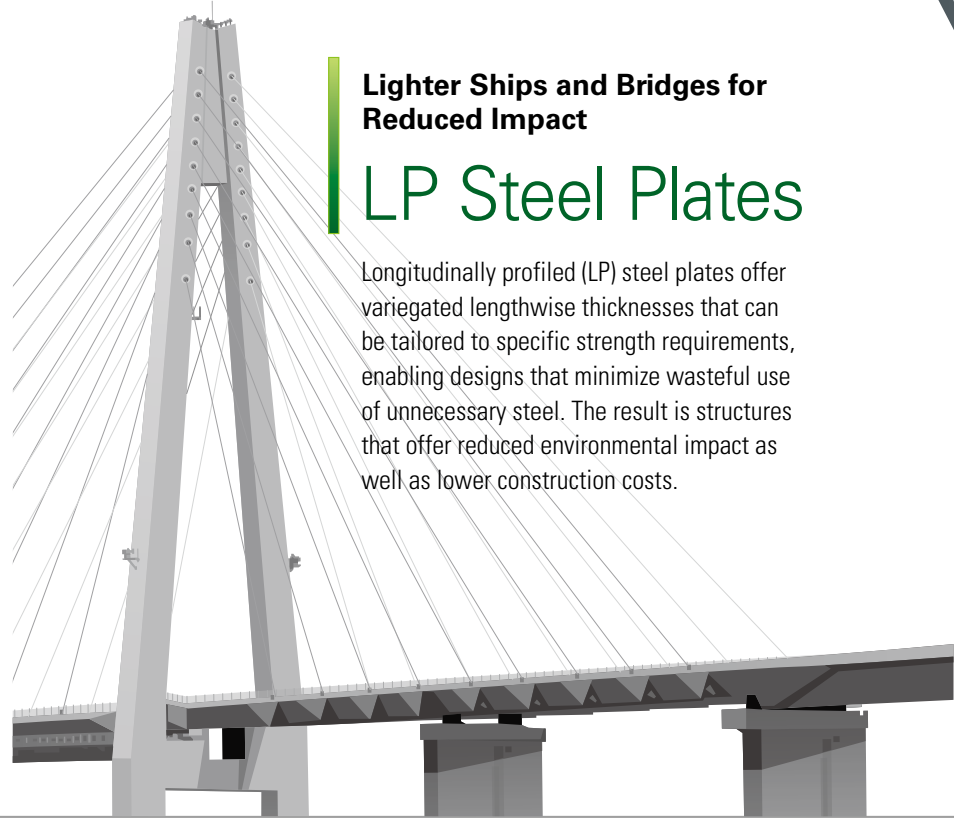
Spreading Ecology



Making a Difference in Lightweight Vehicles

HITEN

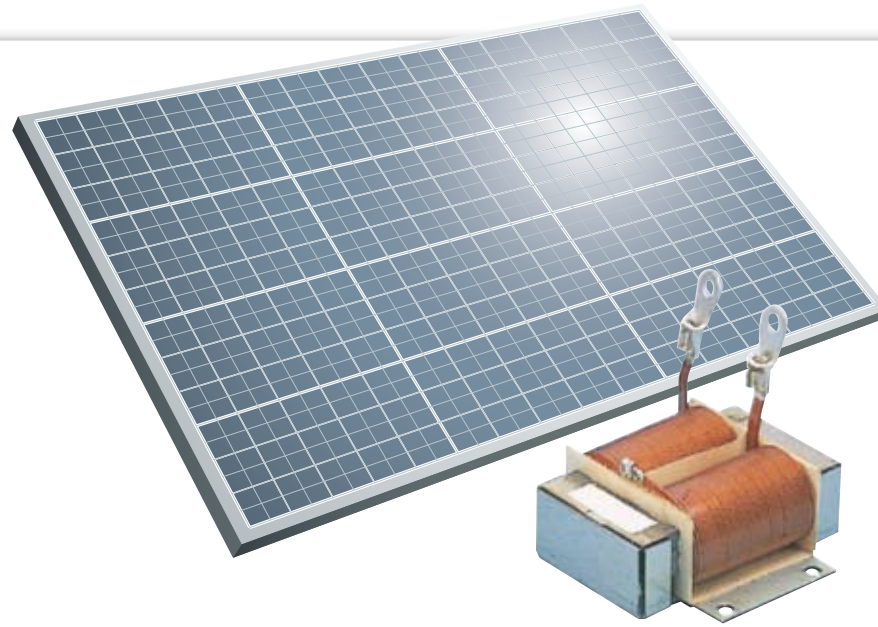
HITEN high-strength steel panels for automobile exterior panels, suspension components and frame parts significantly help to lighten vehicle weights and reduce CO₂ emissions.



Lighter Ships and Bridges for Reduced Impact

LP Steel Plates

Longitudinally profiled (LP) steel plates offer variegated lengthwise thicknesses that can be tailored to specific strength requirements, enabling designs that minimize wasteful use of unnecessary steel. The result is structures that offer reduced environmental impact as well as lower construction costs.



For Energy Conversion Efficiency

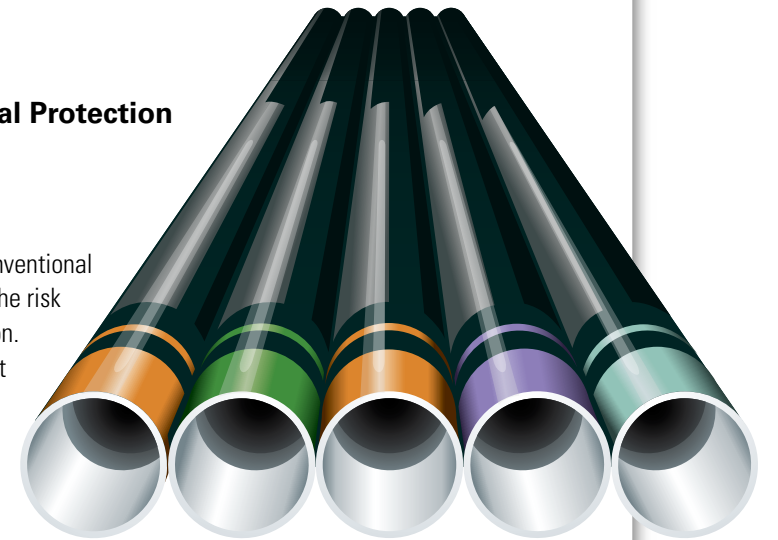
Super Core[®]

JFE Super Core[®] steel sheets containing 6.5% silicon offer superior high-frequency characteristics for use in photovoltaic power generators and hybrid car power-supply components. These sophisticated, one-of-a-kind electromagnetic steel plates contribute to energy efficiency, downsizing and reduced noise in converting direct and alternating current.

Anti-Corrosive OCTG for Environmental Protection

13Cr

In natural gas fields, high levels of CO₂ can corrode conventional carbon steel oil country tubular goods (OCTG), raising the risk of environmental contamination due to well degradation. 13Cr is a stainless high-strength material for OCTG that resists CO₂ corrosion, helping to reduce the environmental impact of natural gas development.



Promoting Greater Use of Bicycles

Cycle Tree

Fully automatic, multilevel parking systems enable space-saving solutions for parking and retrieving bicycles in confined areas, such as next to urban train stations. CYCLE TREE not only eliminates the problem of illegal parking around train stations, it also promotes the use of bicycles for green commuting.

On Board Systems that Help Protect the Oceans

Ballast Water Treatment

Ships take on seawater (ballast water) at landing ports to maintain their balance after cargo has been offloaded. The seawater contains local marine organisms that can disrupt unrelated marine ecosystems when discharged in distant oceans. JFE Ballast Ace is a water treatment system that purifies ballast water for safe discharge by eliminating its organic content.



Reducing Energy Consumption

Efficient Distribution Systems

Steel products for construction stored in warehouses, formerly transported independently by Group companies, are now consolidated in joint deliveries covering overlapping routes. By sharing warehouse information among Group companies, we have raised the efficiency of our transport activities while reducing energy consumption.



Seismic Retrofitting of Buildings

Vibration Dampers

Vibration dampers are components that can be incorporated in the design of existing buildings to strengthen their resistance to earthquakes. The steel pipe brace, a vibration damper developed by JFE, won the 45th Ichimura Industrial Award Contribution Prize in 2012.

Making Ecology

More Effective Production of Energy and Iron

Spreading Ecology

Using Ecology

Low-CO₂ Sintering Technology
Super-SINTER®

Improved sintered ore quality and significant energy conservation can be achieved with Super-SINTER®. In fiscal 2012, JFE Steel successfully reduced CO₂ emissions by introducing this technology at all relevant company facilities.

CO₂ emissions reduced by up to **60,000 tons** annually



Blast Furnace Feed for Reduced CO₂ Emissions

Ferro-Cokes

Ferro-cokes are an innovative new blast furnace feed exhibiting the potential to significantly reduce CO₂ emissions. In fiscal 2012, verification tests were completed at a pilot plant in the Keihin area. Ongoing development efforts are targeting practical application of this promising new feed.



Innovative Steelmaking Process
COURSE50

As a core member of COURSE50*, an industry-wide technological project aimed at reducing CO₂ emissions from blast furnaces, JFE Steel is helping to develop ASCOA-3, which are CO₂-separation technologies derived from the pressure swing adsorption (PSA) process at its Fukuyama facility, and technologies to recover waste heat contained in steel slag at its Chiba facility.

* COURSE50: CO₂ Ultimate Reduction in Steelmaking process by Innovative technology for cool Earth 50



Energy Conversion using Natural Materials

Biomass Boilers

JFE has developed circulating fluidized bed boilers that are able to use a range of fuels, including biomass, waste plastic, scrap tires and old sludge. Biomass boilers use natural biomass fuels, particularly scrap wood, for carbon-neutral combustion that results in a net zero gain in CO₂ emissions.



Power Generated with Carbon-neutral Palm Kernel Shells

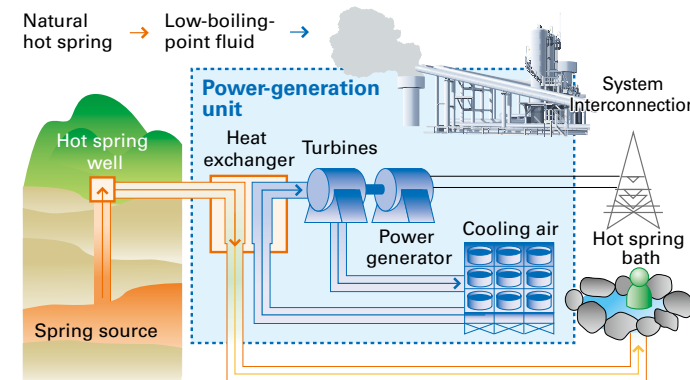
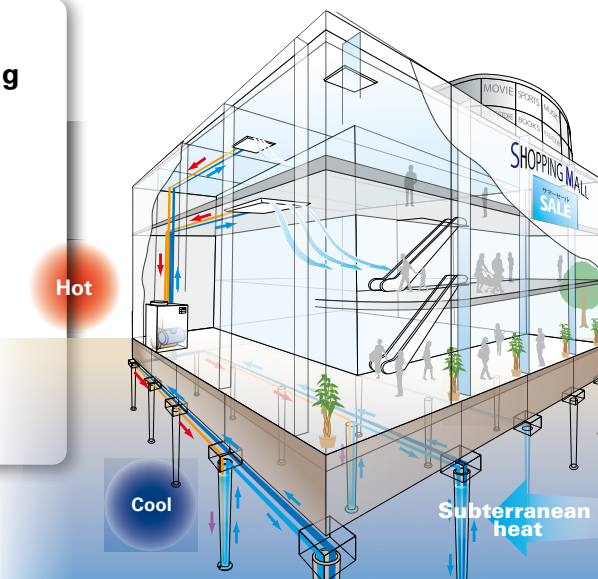
Biomass Fuels

Palm Kernel Shells are a carbon-neutral fuel that show promise as a power-generation fuel of the future. JFE Shoji Trade, anticipating the growing demand for this new fuel, became the first Japanese trading company to establish a cargo yard for Palm Kernel Shells in Malaysia in 2010.

Earth Energy System for Efficient Cooling and Heating

GeoTOPIA®

Based on the principal that underground temperatures in a given location tend to maintain the local area's mean annual atmospheric temperature, the GeoTOPIA® air conditioning system uses moderate subterranean temperatures to cool air in the summer and warm air in the winter. By utilizing this natural phenomenon, the system consumes less energy than conventional air conditioning systems.



Using the Earth's Heat in Low-temperature Regions

Geothermal Binary Power Generation

JFE is developing a system to generate power with turbines driven by the boiling of low-boiling-point fluids using geothermal heat. This highly efficient system wastes neither cold vapor nor hot water, an unprecedented accomplishment for geothermal power generation.

Spreading Ecology

Applying Green Technologies and Products Worldwide

Using Ecology

Making Ecology

Italy

Gasifying and Melting Furnaces

High-temperature gasifying and direct melting, a proprietary technology developed by the JFE Group, leverages core steelmaking processes for the disposal of rubbish. Valued for its high efficiency and stable operation, the technology will be introduced in a rubbish incineration plant in Rome.

India

Indian–Japanese Iron and Steel Industry Collaboration

The public and private collaborative meetings between Indian and Japanese iron and steel industry are bringing together governments and corporations from both countries to work on improving energy efficiencies in the Indian steel industry. JFE also continues to transfer technologies for energy saving to JSW Steel Ltd., India's largest steel corporation, and through its participation in research projects organized by Japan's semi-governmental New Energy and Industrial Technology Development Organization (NEDO).



Vietnam and Myanmar

Global Resource Circulation

JFE began exporting steel scrap to Vietnam for use as a recycled resource. Going forward, steel scrap will be sent to Myanmar and nearby countries via continued exports to Vietnam, helping to support these economies while furthering JFE's recycling initiatives.



United States

Regenerative Burners

JFE installed energy-saving, low-impact regenerative burners for materials heating furnaces at California Steel Industries, the largest steel company on the U.S. west coast.

Romania

Cement Waste Heat Recovery System

This system recovers waste heat generated during cement manufacturing to drive turbines in electric power generators. JFE's delivery of the system to the world's largest cement manufacturer is a successful example of environmental investment by the Group.



Thailand

ECOARC™

This environmentally friendly, high-efficiency arc furnace was installed at UMC Metals Ltd. in Thailand in February 2013 as a model project organized by Japan's New Energy and Industrial Technology Development Organization (NEDO).

Philippines

Sintering Furnace Waste Heat Recovery

JFE organized a clean development mechanism (CDM) project, as defined under the United Nation's Kyoto Protocol, to apply technology for the recovery of waste heat from a sinter cooler at Philippine Sinter Corporation, a wholly owned subsidiary.

Thailand

Neo White® Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System

Neo White® is an energy-saving thermal-energy storage system for air conditioners that utilizes cool energy generated and stored in the nighttime for cooling in the daytime. This system is expected to reduce greenhouse gases in Thailand, where air conditioning is required year round.



Vietnam

Joint Crediting Mechanism Feasibility Study

The construction of large-scale blast furnace integrated steelworks is expected in Vietnam, where steel demand is growing rapidly. To ensure high-level energy conservation and environmental performance, JFE is examining the feasibility of introducing leading Japanese technologies.

Singapore

SkyPark

The SkyPark is an aerial garden that JFE helped to construct 200 meters off the ground atop three hotel towers in Singapore's integrated resort, Marina Bay Sands. The country's newest landmark not only offers spectacular views, it has become a unique space in the sky for urban relaxation.



Indonesia

Steam Supply Equipment for Geothermal Power Plants

In Indonesia, which has the world's largest supply of geothermal resources, geothermal power generation is expected to expand tenfold. The JFE Group, in recognition of its superior design and construction technologies, is providing equipment that supplies steam from wellheads to power-generation plants.



Climate Action Program of worldsteel

JFE Steel is supporting global initiatives to reduce CO2 emissions through the Climate Action Program of the World Steel Association, which represents some 85% of global steel production. The program measures and calculates CO2 emissions from steelworks based on a common global method (ISO 14404).



Corporate Governance

Corporate Governance Policy

The JFE Group is a holding company comprising three operating companies — JFE Steel, JFE Engineering and JFE Shoji Trade.

JFE Holdings, the core of the Group's integrated governance system, is responsible for Group-wide strategy, risk management and public accountability.

Each operating company has developed its own system suited to its respective industry, ensuring the best course of action for competitiveness and profitability.

The holding company and operating companies separately and collectively strive to maximize corporate value for shareholders and other stakeholders.

Managers

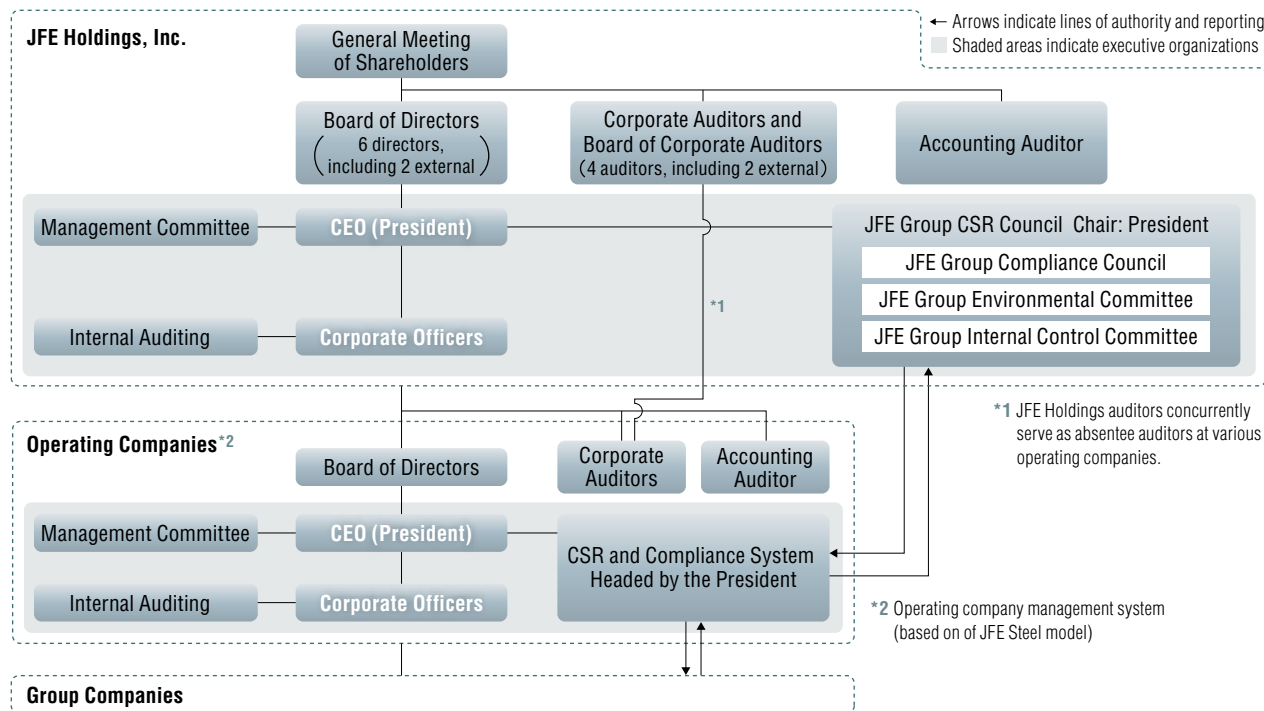
JFE Holdings added two external directors in 2007 to strengthen governance and enhance the fairness, objectivity and transparency of its management system. In addition, the term of directors was shortened from two years to one to strengthen responsibility. The Company's Board of Directors, which comprises six directors including two external directors, supervises operational performance and efficiency. The Board of Auditors, which includes two external auditors, monitors operations to ensure financial soundness.

JFE Holdings and the operating companies use the corporate officer system to separate decision making and execution for clarified authority and responsibility, as well as accelerated execution.

JFE Holdings External Directors and Auditors (July 1, 2013)

Position at JFE Holdings	Name	Major Concurrent Position	Reasons for Selection
Member of the Board	Akimitsu Ashida	Representative and Chairman of the Board, Mitsui O.S.K. Lines Ltd.	Mr. Ashida has made outstanding achievements as president of Mitsui O.S.K. Lines and has abundant experience in global corporate management. He has become well versed in societal and economic matters through wide-ranging activities, including serving as vice chairman of the Japan Association of Corporate Executives. He brings a wealth of experience and insight to the board.
Member of the Board	Masafumi Maeda	Executive Vice President, University of Tokyo	Mr. Maeda has acquired great knowledge of metals through his many years of research into sustainable materials and material thermodynamics. He possesses considerable experience in running large organizations, including a major university as a director of the University of Tokyo. He is expected to contribute deep knowledge and technical understanding to the board.
Corporate Auditor	Hiroyuki Itami	Director of the School of Innovation Studies, Tokyo University of Science	Mr. Itami for many years has been actively involved in research into corporate governance, giving him broad knowledge of management techniques and strategies. He has acquired a deep understanding of industrial sectors through his research of technology management.
Corporate Auditor	Seiji Sugiyama	Honorary Advisor, Mizuho Financial Group	Mr. Sugiyama has been involved for many years in the management of financial institutions, affording him extensive knowledge of management and deep insight into financing and accounting. His broad, independent perspective is well suited to the role of auditor.

More information about our managers www.jfe-holdings.co.jp/en/company/h-gaiyo



Key Decision Making

Group companies make business decisions in accordance with their respective rules and procedures, whereas JFE Holdings makes decisions about Group-wide matters. Each operating company decides matters concerning the company and its affiliates through a deliberative process of meetings, etc., after which the board of directors renders its decisions. JFE Holdings employs this same procedure for matters important to its own company as well as operating companies and other Group businesses.

Optimized Business Systems

Businesses within the JFE Group utilize the best systems to optimize their products and operations, working to achieve unity between strategies and earnings.

JFE Steel	Product-sector system
JFE Engineering	Business-division system
JFE Shoji Trade	Sales-division system

Other

Technology development involving multiple Group businesses and IT initiatives is deliberated by Group-wide management bodies.

JFE Group Technology Development Committee
JFE Group IT Committee

Structure of Management Committee

Company	Chairman	Attendees
JFE Holdings	President	Corporate officers, president of JFE Steel, president of JFE Engineering and corporate auditors
JFE Steel, JFE Engineering & JFE Shoji Trade	President	JFE Steel, JFE Engineering & JFE Shoji Trade

Corporate Governance

Internal Controls

The JFE Group's internal control system, which includes risk management, is governed by the Basic Policy for Building Internal Control Systems. Rules based on this policy govern organizational and operational matters, information storage and management, countermeasures against criminal groups, and meetings of bodies such as the Board of Directors, Management Committee and JFE Group CSR Council. A Corporate Ethics Hotline has also been established. To enhance corporate value, the internal control system's implementation and performance are reviewed regularly to consider improvements wherever necessary.

Basic Policy for Building Internal Control Systems
www.jfe-holdings.co.jp/en/company/h-gaiyo

Strengthening Internal Controls

Internal Audits

JFE Holdings, its principal operating companies and key Group companies had internal audit organizations comprising 164 people as of April 1, 2013. The organizations share information to enhance overall auditing within the Group.

Internal audit managers of principal operating companies serve concurrently as internal audit managers of JFE Holdings for stronger ties within the Group.

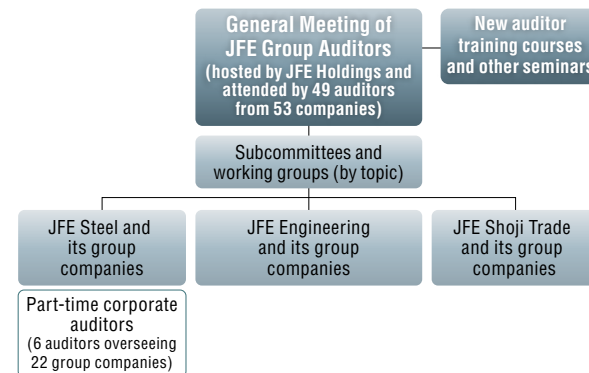
Audits by Corporate Auditors

JFE Holdings, operating companies and Group companies, in addition to undergoing statutory audits by elected officials acting alongside the board, implement various measures to enhance internal auditing by corporate auditors.

- A total of 43 full-time auditors have been appointed to 33 companies, including JFE Holdings. Operating company personnel are dispatched to Group companies as part-time external corporate auditors. Each absentee auditor serves three or four subsidiaries, meaning that six absentee auditors served 22 companies in total.
- The JFE Group Board of Auditors includes both full-time auditors of each Group company and absentee auditors. Subcommittees and working groups created to address specific issues meet autonomously throughout the year to share information, research issues and enhance understanding (see diagram). The

results of their activities are presented at the General Meeting of JFE Group Auditors and are reflected in the activities of individual corporate auditors.

Structure of JFE Group Board of Auditors



Cooperation between Corporate and Accounting Auditors

The corporate auditors hold scheduled and unscheduled meetings (six in FY2012) with the external accounting auditor (Ernst & Young ShinNihon) in which the latter presents its audit plan, actual work and detailed results. The corporate auditors also receive detailed explanations regarding the accounting auditor's quality management system, explain their own audit plans and other matters, and share opinions on related matters with the accounting auditor.

Cooperation between Corporate Auditors and Internal Auditing Department

The corporate auditors hold scheduled and unscheduled meetings (four in FY2012) with the internal auditing department in which the latter presents its internal audit plan, work status and detailed results. During the meetings the corporate auditors also share opinions with the department.

Operating Company Governance

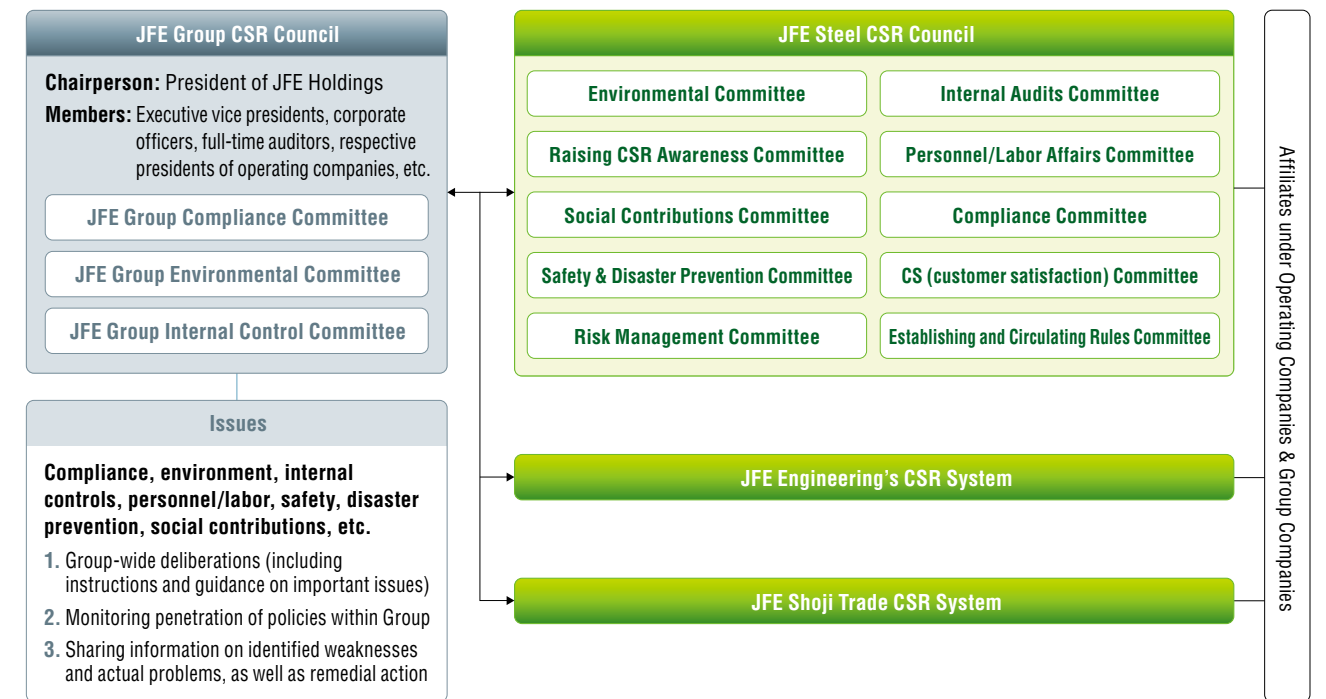
To strengthen governance, JFE Holdings managers attend each operating company's General Meeting of Shareholders and Management Planning Briefing, receive reports on their business activities, discuss managerial policies and engage in other forms of shareholder oversight as representatives of the holding company.

CSR System

The JFE Group, aiming to contribute to the betterment of society as a responsible member, has made the implementation and ongoing strengthening of corporate social responsibility (CSR) central to its business. The JFE Group CSR Council, which was established by JFE Holdings in 2005 and convenes quarterly, chaired

by the company president, supervises Group CSR activities and related issues such as compliance, the environment, human resources, safety, disaster prevention, social contributions, and countermeasures against criminal groups. Related Group-wide bodies, including the JFE Group Compliance Committee, JFE Group Environmental Committee and JFE Group Internal Control Committee, report to the Council.

CSR Structure



Corporate Governance

Major CSR Activities in FY2012

JFE Steel

JFE Steel, which views CSR as strengthening corporate value by increasing stakeholder satisfaction, places top priority on environmental protection, safety, disaster prevention, compliance and other matters that fundamentally impact the business. Great importance assigned to the PDCA (Plan-Do-Check-Action) cycle and company-wide CSR awareness.

The CSR Council, which is chaired by the president, discusses CSR matters and policies as well as monitors the implementation of CSR measures. During FY2012, CSR Council meetings were held on nine occasions to facilitate discussions among 10 committees.

The Customer Satisfaction Committee, which strives to deepen product knowledge among sales personnel, strengthened training in basic steel technology for administrative employees. Also, the committee invited overseas personnel to participate in training sessions on dealing with customers. At the suggestion of the Social Contributions Committee, the company expanded its hosting of activities targeting local communities, such as plant tours, JFE festivals and sporting events. New initiatives for children included educational programs at elementary schools and the ECO Kids' Tour program for elementary and middle school students at the Eco-Products Exhibition.

JFE Engineering

JFE Engineering, which has its business rooted in the principles of CSR, has designated compliance, safety, disaster prevention and environmental protection as key areas of the company's social responsibility. The company promotes compliance awareness among employees through direct training and printed materials, and continuously monitors work processes to confirm compliance with all laws and regulations.

JFE Shoji Trade

JFE Shoji Trade has positioned CSR as one of its key challenges and is steadily strengthening activities in this field to fulfill its responsibilities as a member of society. In FY2012, further upgrades were implemented in structures and systems related to internal controls, compliance, environmental management, safety and health.

Going forward, JFE Shoji Trade aims to further crystallize its contributions to society and markets, live up to the trust and expectations of stakeholders through its business practices and further enhance the corporate value of the JFE Shoji Trade Group.

CSR Audit

To ensure that CSR activities are conducted properly, the JFE Group conducts internal audits of environmental management, Antimonopoly Law compliance, expense management, overseas office management, tax law compliance and safety management.

If an audit reveals a problem, the internal audit departments of JFE Holdings and its related operating companies share information to support the implementation of correct measures in CSR activities throughout the JFE Group.

Protecting the Environment

The JFE Group, operating in accordance to its environmental philosophy and policy, strives to curb global warming, protect the environment, strengthen recycling and develop technologies that reduce environmental loads. This Environmental Sustainability Report reviews such initiatives carried out by the Group and its operating companies in FY2012.

Environmental Philosophy

The JFE Group puts a top priority on protecting and enhancing the global environment to maintain its business in harmony with the environment, ultimately for the prosperity of society as a whole

Environmental Policy

1. Reduce the environmental impact of all Group businesses
2. Contribute through technologies and products
3. Conserve resources and energy
4. Communicate with society
5. Facilitate international cooperation



LED lighting (Tsurumi Works)
JFE Engineering P. 37



Thread sail filefish (*Stephanolepis*) in front of a Marine Rock®
JFE Steel P. 44



Palm kernel shell depot
JFE Shoji Trade P. 46






Eco-Products 2012
JFE Group P. 50

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Priority Environmental Targets and Results

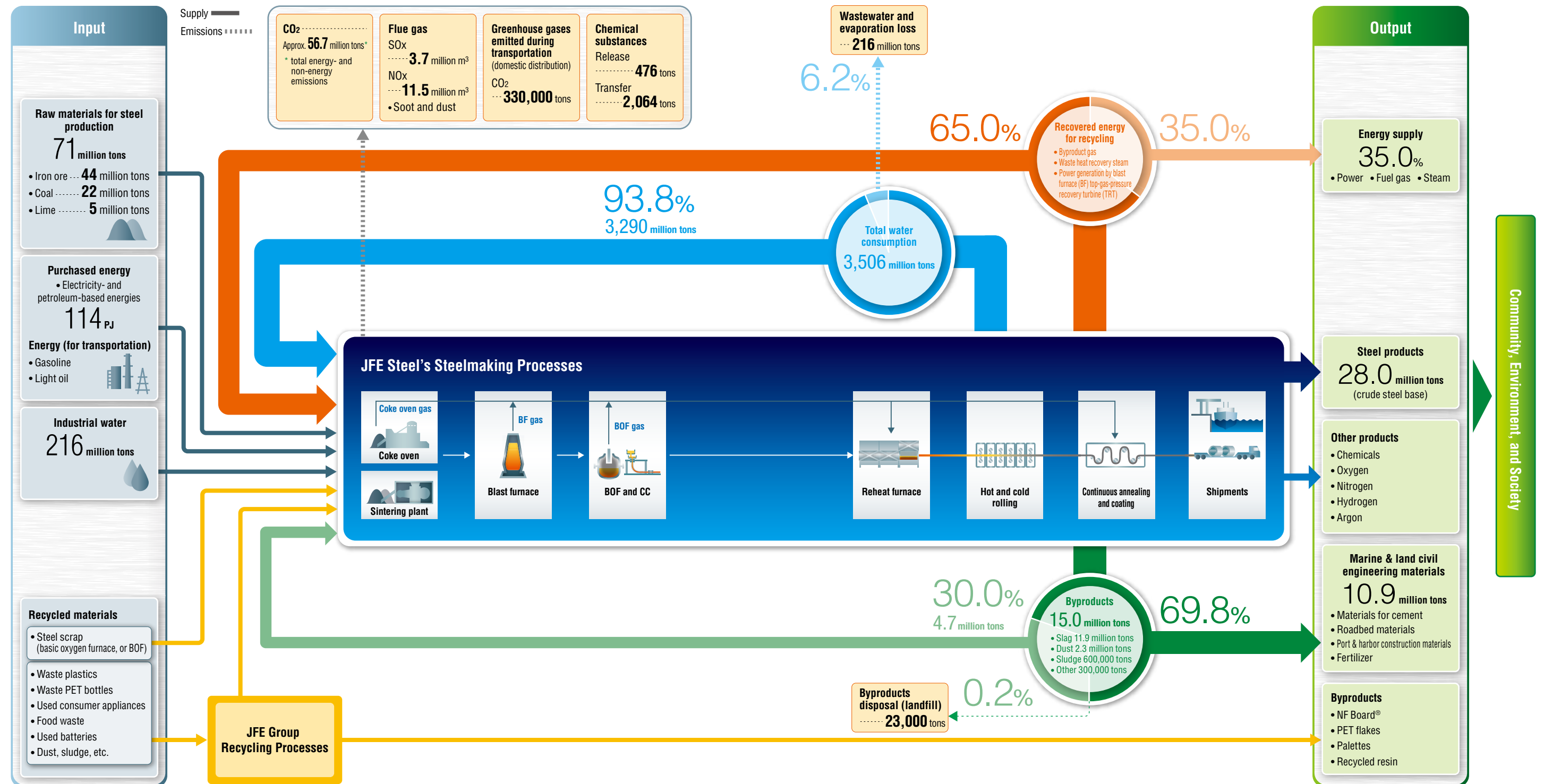
Key
 ✓✓: Target exceeded
 ✓: Target achieved
 X: Target not achieved

Group Company	Category	Priority Environmental Targets in FY2012	FY2012 Results	Evaluation	FY2013 Priority Environmental Targets	Pages	
JFE Steel 	Global warming prevention	<ul style="list-style-type: none"> Global warming countermeasures under Voluntary Action Program of Japan Iron and Steel Federation <p style="text-align: center;">Targets based on JISF Voluntary Action Plans Reduce energy consumption by average 10% per annum in FY2008 – FY2012 period compared to FY1990 Reduce CO2 emissions by average 9% per annum in FY2008 – FY2012 period compared to FY1990</p>	<ul style="list-style-type: none"> Concluded installation of Super-SINTER® in all JFE furnaces with final installations in Fukuyama District (No. 4 unit in July and No. 5 unit in December). All furnaces now operating smoothly. <p style="text-align: center;">(Status of JISF Voluntary Action Plans (vs. FY1990) Reduced energy consumption by approx. 11% and CO2 emissions by approx. 11% in FY2008 – FY2011)</p>	✓	<ul style="list-style-type: none"> After the Japan Iron and Steel Federation's Voluntary Action Program, continue global-warming measures under the Low-Carbon Society Action Plan <p style="text-align: center;">(Low-Carbon Society Action Plan targets (according to Japan Iron and Steel Federation) Reduce CO2 emissions by five million tons in 2020 compared to business as usual)</p>	31-34	
	Ongoing environmental risk reduction	<ul style="list-style-type: none"> Enhancement of Group-wide compliance 		<ul style="list-style-type: none"> Group Liaison Committee met twice to discuss environmental laws Uniformly confirmed and followed-up on status of legal compliance 	✓	<ul style="list-style-type: none"> Continue to improve environmental management systems, including in Group companies 	35-36
		<ul style="list-style-type: none"> Voluntary activities for environmental preservation 1) Environmental manager training 2) Environmental auditing 		<ul style="list-style-type: none"> Conducted environmental management training for new managers (three times for 65 participants) Conducted environmental auditing at 21 workplaces 	✓	<ul style="list-style-type: none"> Conduct voluntary eco-preservation activities 1) Continue environmental manager training 2) Environmental auditing for confirmation and follow-up 	
		<ul style="list-style-type: none"> Cut dioxin emissions to less than 5.5 g-TEQ per annum on average in FY2012 – 2016 under new national reduction plan 		<ul style="list-style-type: none"> FY2012 7.5 g-TEQ per year <p>Note: Five-year average</p>	–	<ul style="list-style-type: none"> Cut dioxin emissions to less than 5.5g-TEQ per year on average in FY2012 – FY2016 under new national reduction plan 	
	Byproduct recycling	<ul style="list-style-type: none"> Reduce dust and sludge and implement recycling initiatives 		<ul style="list-style-type: none"> Reduced Kurashiki coating sludge volume by 2,000 tons Developed recycling technology for sludge-containing oil 	✓	<ul style="list-style-type: none"> Reduce dust and sludge and promote recycling efforts 	36 43-44
Waste control	<ul style="list-style-type: none"> Comprehensively implement waste-related education at all Group companies 		<ul style="list-style-type: none"> Conducted waste-related education at all Group companies 	✓	<ul style="list-style-type: none"> Conduct waste-related education in response to revised data sheet on waste 	29-30 35-36	
JFE Engineering 	Environmentally Friendly Planning, Design and R&D	<ul style="list-style-type: none"> Establish targets and implement environmentally friendly aware initiatives in planning and design sections at each division 	<ul style="list-style-type: none"> Achieved 65 targets established company-wide 	✓	<ul style="list-style-type: none"> Set targets in new R&D divisions and plan/develop products and technologies that contribute to environmental protection 	45-46	
	Global warming prevention	<ul style="list-style-type: none"> In accordance with the voluntary action plans of the Japan Society of Industrial Machinery Manufacturers, implement measures to reduce CO2 emissions released during production processes at Tsurumi, Tsu and Shimizu works by an average of 12.2% per annum in the FY2008 – 2012 period compared to FY1997. 	<ul style="list-style-type: none"> 12.8% reduction compared to FY1997 Achieved average decrease of 14.9% in FY2008 – FY2012 compared to FY1997 	✓✓	<ul style="list-style-type: none"> Continue, at the same or higher level, initiatives of the Voluntary Action Plan of the Japan Society of Industrial Machinery Manufacturers 	37-38	
	Waste reduction at construction sites	<ul style="list-style-type: none"> Recycle at least 99.5% of rubble Recycle at least 95.0% of sludge Recycle at least 85.0% of industrial wastes (excluding rubble and sludge) 	<ul style="list-style-type: none"> Recycled 100.0% of rubble Recycled 97.4% of sludge Recycled 87.1% of industrial wastes (excluding rubble and sludge) 	✓✓	<ul style="list-style-type: none"> Recycle at least 99.5% of rubble Recycle at least 95.0% of sludge Recycle at least 85.0% of industrial wastes (excluding rubble and sludge) 	37	
JFE Shoji Trade 	Global warming prevention	<ul style="list-style-type: none"> Reduce electricity consumption Reduce copy paper usage 	<ul style="list-style-type: none"> Reduced electric power consumption 35% compared to FY2001 Reduced copy paper usage 3.2% compared to FY2001 	✓	<ul style="list-style-type: none"> Continue measures to reduce electricity consumption Continue measures to reduce copy paper usage 	39-40	
	Ongoing environmental risk reduction	<ul style="list-style-type: none"> Enhance Group-wide compliance system 	<ul style="list-style-type: none"> Reviewed legal compliance 	✓	<ul style="list-style-type: none"> Continue to confirm legal compliance 	39	

JFE Steel Initiatives to Lower Environmental Loads

Energy and Materials Flow in Steelmaking

JFE Steel's efforts to reduce its consumption of energy and materials in steelmaking processes have resulted in extensive recycling of energy, water and materials. Also, plastics and other waste materials are recycled in greater volumes than final wastes.



JFE Steel Initiatives to Lower Environmental Loads

Steel Industry Initiatives

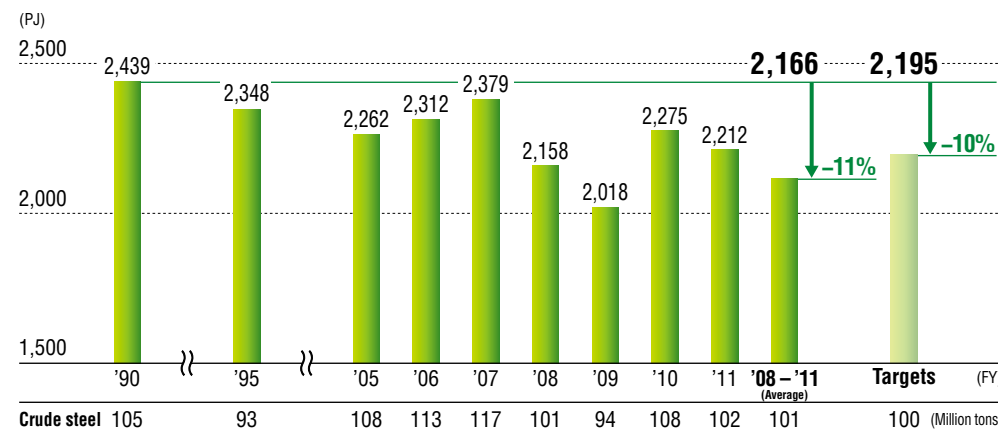
Results of JISF Voluntary Action Plan

JFE Steel and other members of the Japan Iron and Steel Foundation (JISF) implemented a voluntary action plan to improve the energy efficiency of steelmaking. The plan aimed to cut annual average energy consumption between FY2008 and FY2012 by 10% compared to FY1990 levels, which would be equivalent to a 9% reduction in CO₂ emissions. Data for FY2012 will be released in December 2013.

Achievements and Results

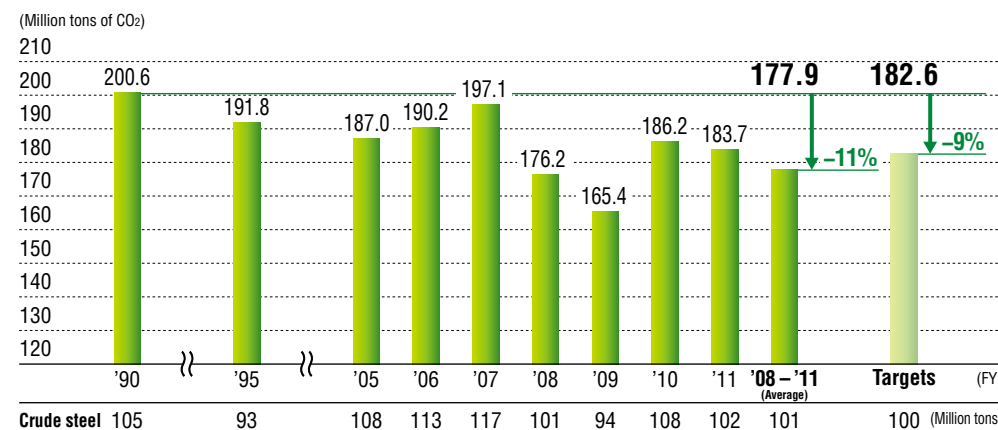
The 90 companies participating in the voluntary action plan produced a combined 102,377,000 tons of crude steel in FY2011, down 2.2% from FY1990. They cut CO₂ emissions by 8.5% compared to FY1990.

Energy Consumption of 90 Participating Companies



Note: PJ = petajoule (one quadrillion, or 10¹⁵, joules). 1J = 0.23889 cal. 1PJ = approximately 25,800 kL of crude oil.

Energy-Derived CO₂ Emissions of 90 Participating Companies



JISF Action Plan for 2020

Low-Carbon Society Implementation Plan

Following the completion of the Voluntary Action Plan (2008–2012), JISF formulated the Low-Carbon Society Implementation Plan (2013–2020) based on the same four activities: Eco-Processes, Eco-Solutions and Eco-Products (“Three Ecos” program*) and the COURSE 50 program for developing innovative steelmaking processes. The JFE Group is now implementing initiatives aimed at achieving the new plan’s targets.

* Eco-Processes: Energy conservation in manufacturing; Eco-Solutions: CO₂ reduction through global transfer/application of energy-saving technologies; and Eco-Products: High-performance steel sheet materials that enable CO₂ reduction.

Eco-Processes

Japanese steelmakers’ production processes achieve the world’s highest levels of energy efficiency. Aiming to improve these efficiencies even further through Eco-Processes, JFE is working to cut its CO₂ emissions by 5 million tons in 2020 compared with a business as usual (BAU) benchmark.

Eco-Solutions

Japan is contributing to CO₂ reduction around the world, particularly in developing countries, through the transfer and application of Eco-Solutions that incorporate world-leading energy-saving technologies developed by the Japanese steel industry. These Eco-Solutions are forecast to contribute to the reduction of about 70 million tons of CO₂ by 2020.

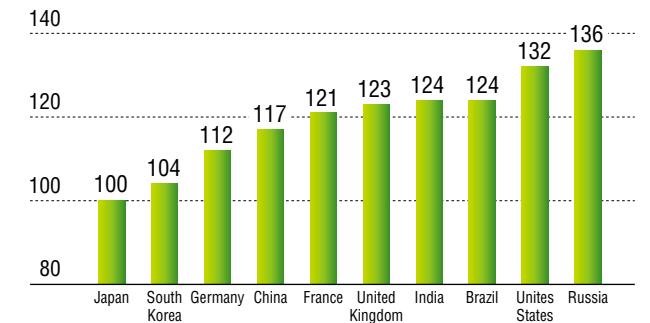
Eco-Products

The Japanese steel industry also is helping to reduce CO₂ emissions by providing high-performance sheet materials for use in lower-carbon products. By FY2020, the use of these sheets in final products in Japan and overseas is forecast to cut CO₂ emissions by approximately 33.45 million tons. (FY2010 calculations by Institute of Energy Economics, Japan)

Innovative Steelmaking Process Development—2050

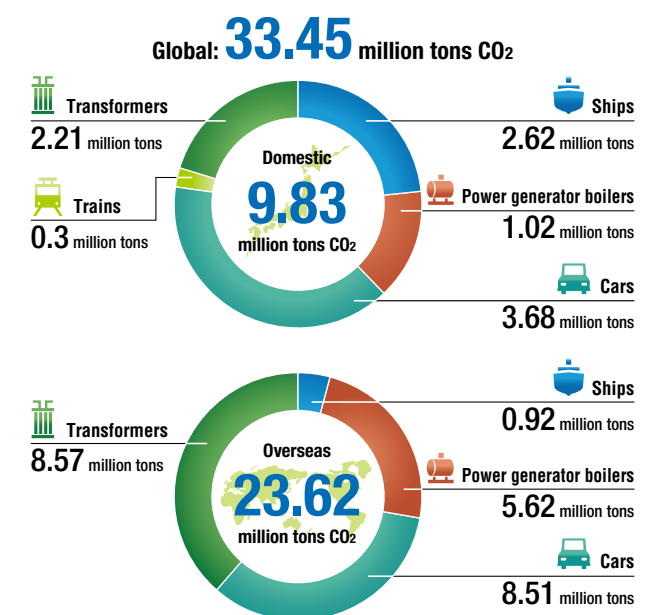
JFE Steel is hoping to achieve a further 30% reduction in CO₂ emissions with steelmaking technologies that will use hydrogen to conserve iron ore and will separate and collect CO₂ from blast furnace gases. The first manufacturing facility to deploy these technologies is expected to come online by 2030 (assuming the availability of suitable CO₂ storage infrastructure), followed by other plants by 2050 when furnace equipment is to be renewed.

Steel Industry Energy Efficiencies (as of 2010)



Source: “2010 Energy Consumption Rate Estimates,” RITE (indexed by Japan Iron and Steel Federation)

FY2020 Cross Section of CO₂ Emissions Reductions (Projections)



Source: The Institute of Energy Economics, Japan.

JFE Steel Initiatives to Lower Environmental Loads

Energy Savings and CO2 Reduction in Steelmaking

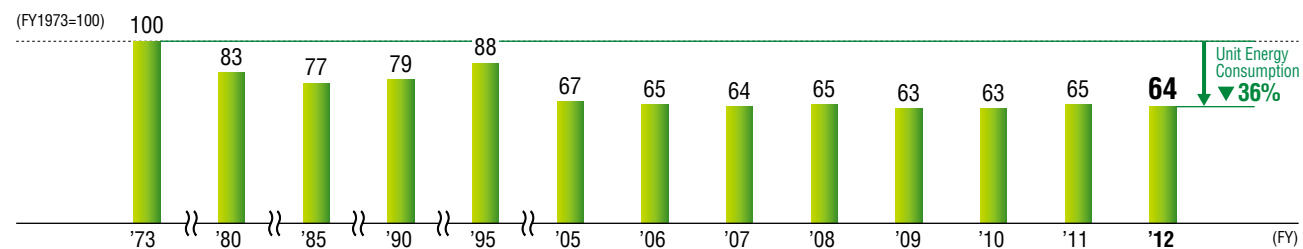
JFE Steel strives to save energy and reduce CO2 in its steelmaking processes, aiming to achieve the voluntary action plan targets set forth by the Japan Iron and Steel Federation.

Initiatives to Save Energy and Reduce CO2



JFE Steel had been proactively promoting CO2 reduction and energy-savings, including the introduction of energy-saving equipment, before the Japan Iron and Steel Federation introduced its voluntary action plan.

Unit Energy Consumption at JFE Steel



Category	Measures
Energy-saving Initiatives	<ul style="list-style-type: none"> Reheat furnace fuel reduction Large-scale waste heat recovery equipment Power generation (BF top pressure recovery turbine) Sintering waste heat recovery, etc. Process linkage Continuous cast equipment Continuous annealing, etc.
Further Energy Savings	<ul style="list-style-type: none"> Waste plastic blast furnace blowing Regenerative burners Endless rolling Urban gas blast furnace blowing technologies High-efficiency enzymes plant
Energy-Saving Measures for Global Warming	<ul style="list-style-type: none"> Development of Super-SINTER® in all districts (2012) APR of all Keihin blast furnace waste plastic (2012) Construction of shaft furnaces (began operations in August 2008) Strengthened CDQ (began operations in March 2009) Expanded introduction of regenerative burners Expanded introduction of high-efficiency enzymes plant Basic oxygen furnace gas sensible heat recovery

Energy-savings and CO2 Emissions in FY2012



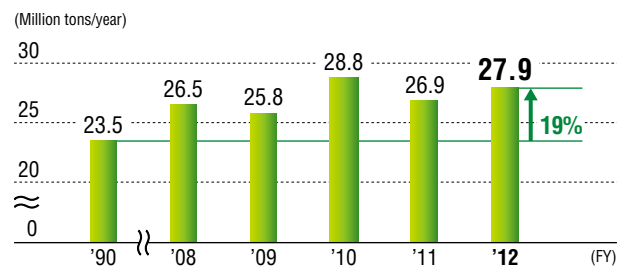
Energy consumption and CO2 emissions in steelmaking are greatly influenced by production volume. To accurately assess the effects of improvements due to operational technologies and capital investments, JFE Steel is working to reduce its basic units (energy consumption and CO2 emissions per unit of production) and related energy-conservation activities.

JFE Steel's FY2012 crude steel production was 27.97 million tons, up 4% from FY2011 and 19% since FY1990. Ongoing energy-saving activities, however, achieved a 4% decrease in energy consumption and a 6% decline in CO2 emissions compared to FY1990.

The company's annual average energy consumption per unit between 2008 and 2012 was

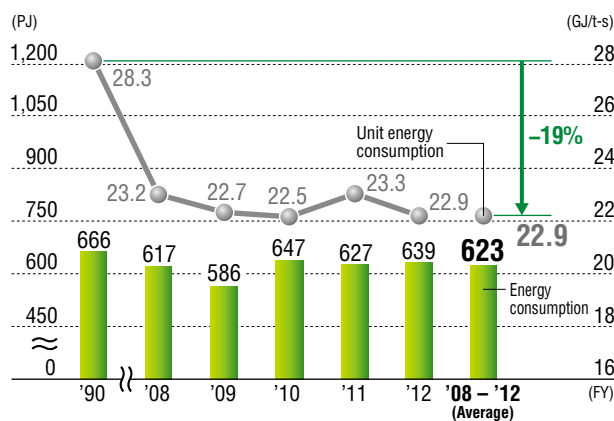
19% below the FY1990 level and annual average CO2 emissions per unit was down 21%, proving the success of JFE Steel's energy-conservation activities.

Production of Crude Steel



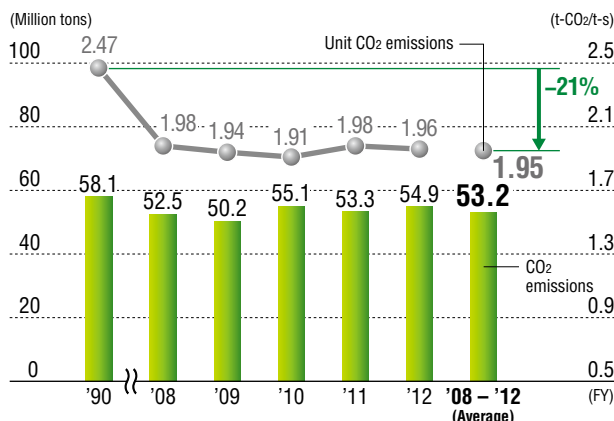
Unit energy consumption (FY2008 – FY2012 average) **Reduced by 19%**

Energy Consumption and Unit Energy Consumption



Unit CO2 emissions (FY2008 – FY2012 average) **Reduced by 21%**

CO2 Emissions and Unit CO2 Emissions



Note: The CO2 coefficient for purchased electricity uses values from The Federation of Electric Power Companies of Japan voluntary action targets (20% reduction in basic units compared to 1990).

Comprehensive Measures to Reduce CO2



JFE Steel initiatives to reduce CO2 emissions also include lowering the environmental impact of distribution, providing high-performance steel materials that save energy in final products and worldwide cooperation in energy conservation and environmental technologies.

► For examples, see "Reducing Environmental Loads through Products and Technologies" on pages 41–44 and "Special Feature 2: JFE Group Environmental Technologies" on pages 15–20.

Energy Saving in Transportation

Modal shift rate FY2012 **95%**

To reduce the environmental load of transporting steel, JFE Steel is actively promoting shifting its transport modes to ships and rail. The modal shift* rate for FY2012 was 95%.

* Volume shipped (minimum 500 km) by rail or ship

Non-energy CO2 Emissions

Non-energy CO2 emissions **1.83 million tons**

Lime and dolomite, which are used as auxiliary materials in blast furnaces and converters, emit CO2 when broken down. Non-energy-derived CO2 emissions in FY2012 totaled 1.83 million tons.

JFE Steel Initiatives to Lower Environmental Loads

Environmentally Friendly Initiatives

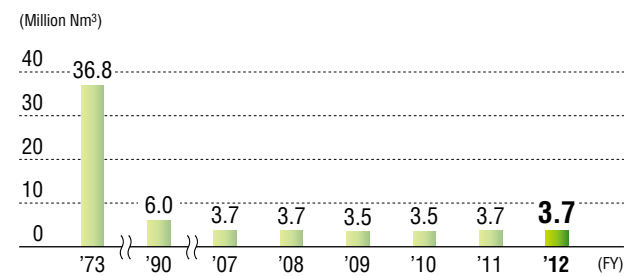
Air Quality



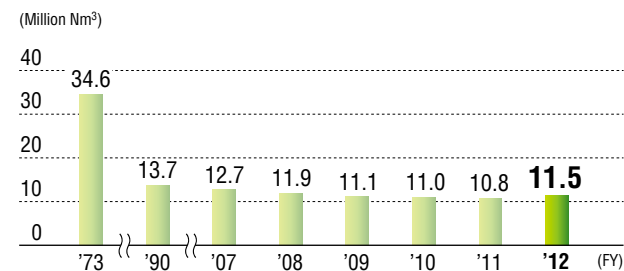
Reducing Sulfur Oxide and Nitrogen Oxide Emissions

JFE Steel is increasingly controlling emissions by installing low-NOx burners in reheat furnaces, switching to low-sulfur fuels and deploying desulfurization and denitration devices in sintering plants, all major sources of SOx or NOx emissions.

SOx Emissions



NOx Emissions



Suppressing Dust Dispersion

JFE Steel suppresses dust dispersion through measures including the installation of sprinklers and windbreak fences in raw material yards and enhancement of on-premise cleaning, dust collectors and other dust-collection methods.



Spraying water on a raw materials yard

Cyclic Use of Water

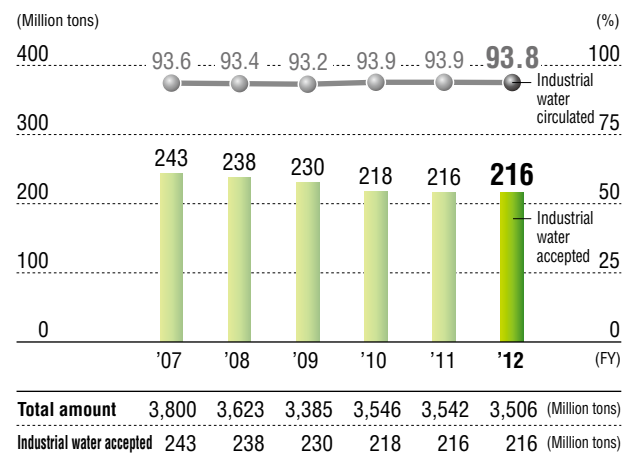


Recycling of industrial water
About 3.5 billion tons per year
93.8%

JFE Steel actively recycles large amounts of water used in its steelmaking processes.

Industrial water recycling by the company in FY2012 stood at the high rate of 93.8%.

Amount of Industrial Water Accepted/Circulated



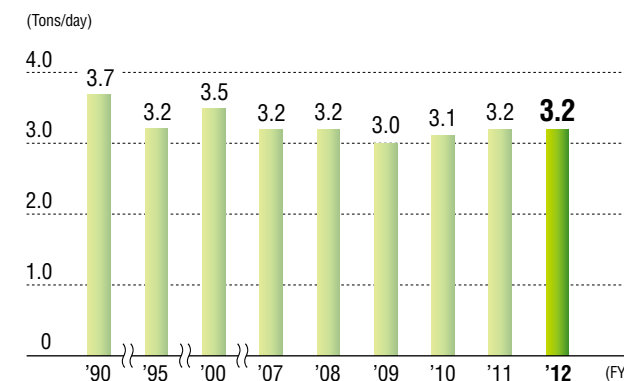
Note: Industrial water circulated (%) = (Total amount - industrial water accepted)/total amount x 100

Preventing Water Pollution



JFE Steel strives to reduce its environmental impact on waterways by thoroughly purifying water used in steelmaking processes for release into public waters. Chemical oxygen demand (COD), the water-quality index for waste water, was 3.2 tons per day, the same level as in the previous year.

Changes in Chemical Oxygen Demand (COD)

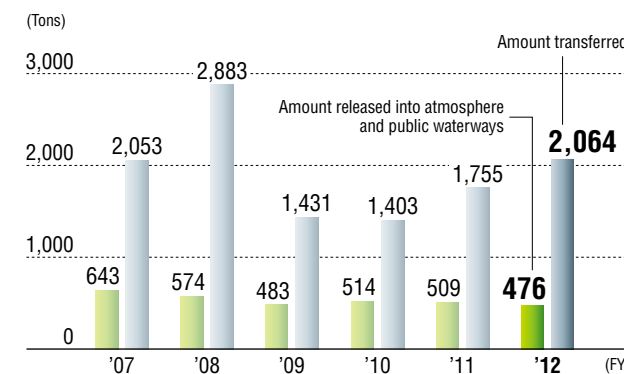


Management of Chemical Substances



JFE Steel also lowers environmental loads by voluntarily reducing chemical substances it releases. In FY2012, chemical substances released into the atmosphere and public waterways totaled 476 tons, a 6% decrease compared to the previous fiscal year.

Chemical Substance Release or Transfer



Reducing and Reusing Byproducts

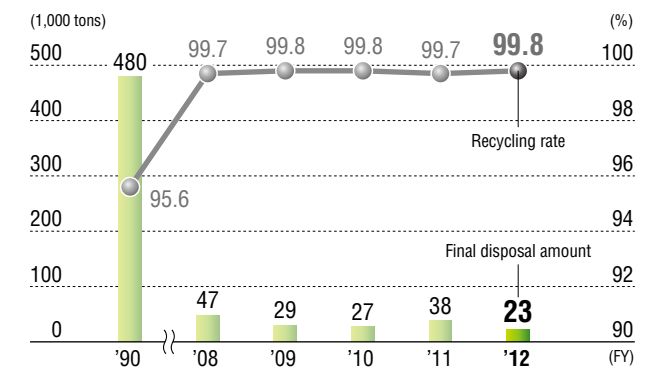


Recycling of slag, dust and sludge
99.8%

JFE Steel controls the occurrence and emission of iron-steel slag (steelmaking byproduct), iron dust from blast furnaces and converters, sludge from water treatment facilities and other byproducts. Dust and sludge with high iron content are recycled as raw materials for steelmaking, helping to reduce the final amount that must be disposed.

The FY2012 rate for recycling slag, dust and sludge was 99.8%.

Generation of Byproducts and Recycling Rates



Environmental Monitoring



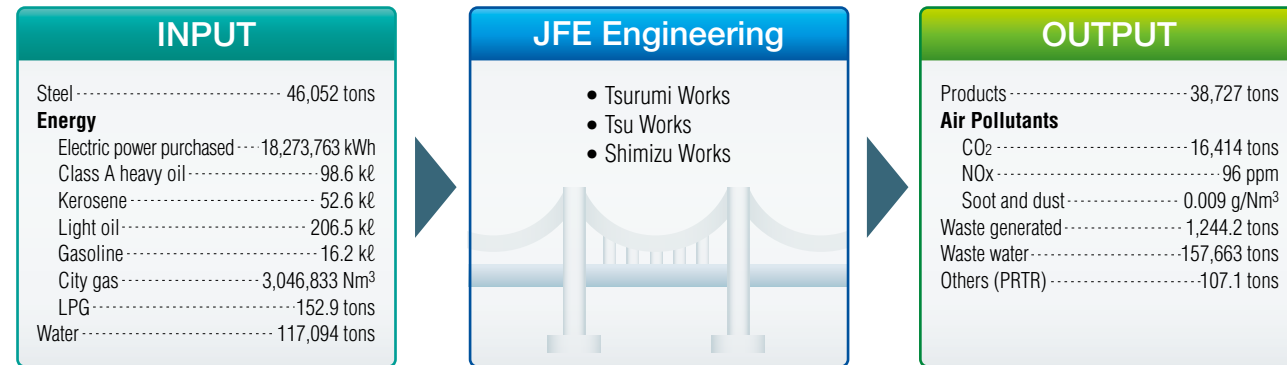
JFE Steel prevents environmental abnormalities by monitoring a variety of conditions using a range of methods, such as continuous analyses with automated equipment, periodic batch analyses, remote monitoring by industrial-use television, and other means of monitoring atmospheric and water quality. The resulting information is made widely available.



System for public release of eco-information

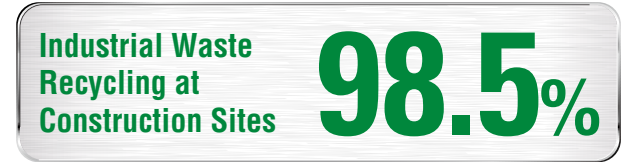
Reducing Environmental Loads at JFE Engineering

FY2012 Material Balances



Relationship with the Environment

Recycling



JFE Engineering establishes recycling rate targets for waste in each department and encourages recycling as one of its environmental management activities.

At construction sites, JFE Engineering separates waste generated during construction and employs disposal companies with high recycling rates. In FY2012, the recycling rate for waste at company construction sites was 98.5%.

The company also recycles waste in offices through clear rules for waste separation and related activities, such as recycling patrols in each department (conducted three times in FY2012). In FY2012, the Tsurumi Works was recognized as a "Workplace with Excellent 3R Activities" by the city of Yokohama.



Workplace with Excellent 3R Activities award ceremony

CO₂ Reduction Initiatives

In 1997, the Japan Society of Industrial Machinery Manufacturers, of which JFE Engineering is a member, introduced a voluntary action plan on the environment to cut CO₂ emissions by 12.2% relative to FY1997 levels by the end of FY2010 (to be achieved as an annual average in FY2008 – FY2012).

To achieve these goals, JFE Engineering has been reducing its use of electricity and gas in operations for cutting and welding, and making more efficient use of compressed air at plants. It also has been trying to lower energy use in offices by switching to LED illumination and using heat-storage air conditioning systems that incorporate clathrate hydrate slurry (CHS).

In FY2012, office and plant CO₂ emissions totaled 16,400 tons, bringing average annual CO₂ emissions from FY2008–FY2012 to 16,000 tons, achieving the established target at 14.9% below FY1997 levels.



Neo White® Clathrate hydrate slurry (CHS) heat-storage air conditioning system at Tsurumi Works

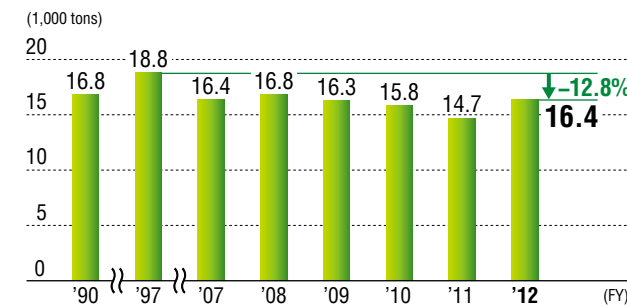


Offices at Tsurumi Works converted to LED lighting

JFE Engineering also provides a wide range of products and technologies that effectively help to reduce CO₂ emissions. For example, the construction of large photovoltaic power generator facilities in seven districts across Japan by FY2014 is expected to reduce CO₂ emissions by 18,500 tons per year.

In addition, geothermal binary power generators and other renewable energy initiatives will make further contributions to CO₂ reduction.

CO₂ Emissions



Environmental Preservation

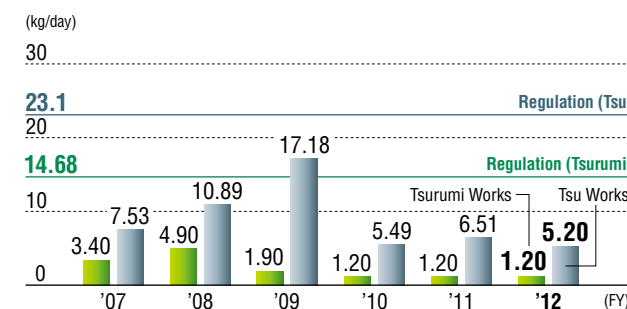


Water Quality

To comply with regulations controlling the discharge of water pollutants, each plant sets voluntary standards and regularly measures and manages water quality.

In FY2012, plant wastewater at the Tsurumi Works that had been discharged into the public water area after physical-chemical treatment (PCT) was switched over for discharge into the sewer to reduce environmental burdens.

Chemical Oxygen Demand



Air Quality

The Tsurumi and Tsu works, which have soot- and smoke-emitting facilities that are regulated by the Air Pollution Control Law, comply with this law and local regulations by setting voluntary emission standards and regularly measuring and managing nitrogen oxide emissions, etc.

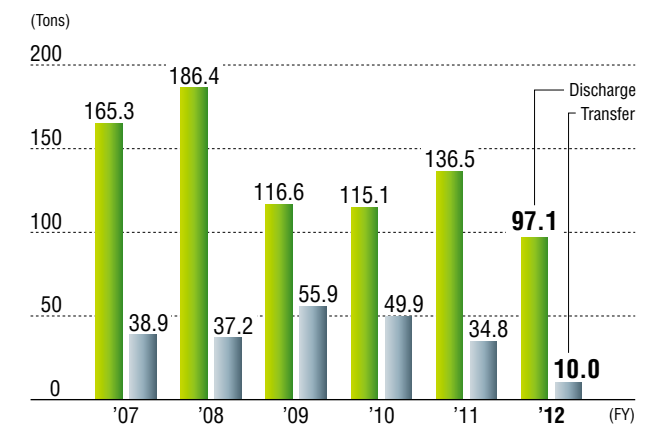
The company does not own any facility that discharges general particulates subject to the Air Pollution Control Law, such as benzene, trichloroethylene or tetrachloroethylene.

Chemical Substances

In compliance with the Pollutant Release and Transfer Register (PRTR) Law, JFE Engineering controls its release and transfer of designated chemical substances and reports the figures to the national government through local bodies.

The company not only complies with all laws and regulations, it continues to take steps toward further reduction of PRTR-restricted chemical discharges.

Discharge and Transfer of Substances Reported under PRTR



Proper Management of PCB Waste

For the management and storage of polychlorinated biphenyl (PCB) waste at each plant, status reports are submitted annually to local authorities in accordance with the PCB Special Measures Law.

Treatment of PCB waste is carried out in accordance with the schedule laid down by Japan Environment Safety Corporation (JESCO).

Reducing Environmental Loads at JFE Shoji Trade

Our Business and the Environment

CO2 Reduction Initiatives



In-Office Environmental Activities

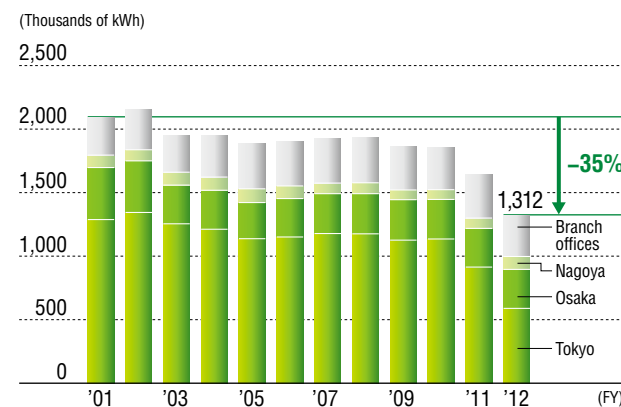
In domestic offices, all of which have acquired ISO 14001 certification as of 2000, JFE Shoji Trade promotes the reduction of energy consumption and paper usage, and strict management of waste separation.

Energy consumption has been lowered significantly through the implementation of no-overtime days, the installation of pinpoint lighting, turning off lights during lunchtime and a comprehensive transfer project. In FY2012, 1,312 million kWh of energy was consumed, a 35% reduction compared to FY2001.

To reduce paper usage, in addition to using the blank backside of printed materials and two-sided printing, JFE Shoji Trade is moving toward paperless workplaces by digitizing records and using tablets in place of printed handouts at meetings.

In addition, the company has reduced the need for domestic and overseas business trips with the introduction of video conferencing systems in nearly 50 offices worldwide. Also, CO2 reductions have been achieved with more strategic employee transfers.

Power Consumption



Environmental Conservation Initiatives

Legal Compliance

JFE Shoji Trade ensures thorough legal compliance at JFE Shoji Trade and all Group companies by conducting annual checks related to environmental regulations.

Recycling

At each office, JFE Shoji Trade makes an effort to reduce waste and recycle by strictly separating and recycling waste paper.

PCB Waste Management

The JFE Shoji Trade Group properly stores and manages polychlorinated biphenyl (PCB) waste in accordance with the Law Concerning Special Measures Against PCB Waste. A report on the status of PCB management is submitted annually by each office to their respective local governments.

Other Initiatives

J-SLIM Activities

Since 2008, JFE Shoji Trade has been implementing its JFE Shoji Trade Group Strategic Lean Innovation Movement (J-SLIM), a companywide program of operational reforms aimed at enhancing efficiency.

Ongoing reviews and improvements have reduced business hours, business trips and paper usage while also saving space. These activities are also reducing environmental loads.



J-SLIM activity presentations held

TOPICS

Comprehensive Transfer Project

In November 2012, the JFE Shoji Trade Tokyo head office and its Group companies were consolidated in the Otemachi district of Tokyo to achieve greater unification, visualization and sharing.

This project involved the transfer of the JFE Shoji Trade Tokyo head office to a newly constructed energy-saving building and the consolidation of workspaces spread over 13 floors in the former Tokyo head office building to just three floors. This consolidation resulted in better communication between departments and improved operational efficiency. Significantly reduced office space, as well as the building's energy-conserving design, reduced the amount of energy consumed.

In addition, newly installed equipment and machinery have also had a positive eco-effect. Permanent displays in meeting rooms facilitate

paperless meetings. The introduction of multifunctional office equipment in workspaces has reduced equipment needs and the new equipment uses less energy. Document reduction efforts prior to the transfer have halved the amount of documents stored. Overall, the transfer has enabled JFE Shoji Trade to reduce monthly power consumption by over 20%.

At the same time, the company consolidated 16 Group companies scattered around the Tokyo area into the former Tokyo head office building, a five-minute walk from the new JFE Shoji Trade office. This has led to enhanced operations, increased energy conservation through reduced travel time and more effective use of working hours. Office space has been reduced by sharing meeting rooms among Group companies and Group companies have significantly reduced their own document storage needs.



Tokyo head office workspace



Moving to the new Tokyo head office has led to significant energy savings.



Former Tokyo head office, now home to consolidated Group companies



Multifunctional machines have consolidated office equipment needs.



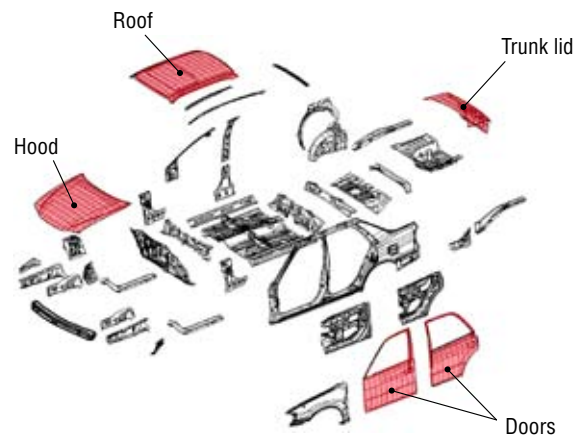
Permanent displays for paperless meetings

Environmental Load-cutting Products and Technologies

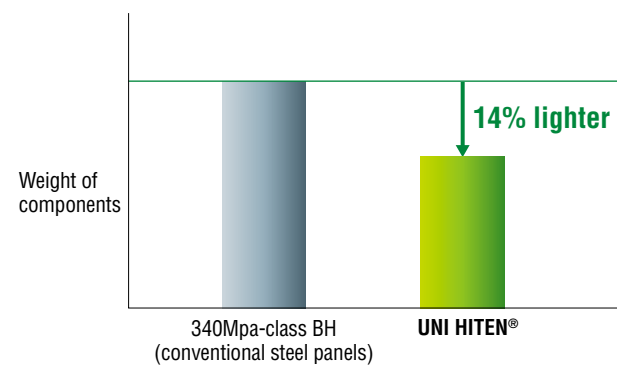
UNI HITEN®: CO2 Reduction through Lighter Vehicles

UNI HITEN® steel plates are made of 440MPa-class high-strength GA (galvannealed) steel developed for automobile exterior panels. By raising the temperature of the processes for press forming and paint baking, the strength of UNI HITEN® is increased by more than 50MPa above the strength of conventional 340MPa-class BH (bake-hardening) steel plates. Not only does this considerably improve dent resistance, it leads to lighter vehicles made with thinner exterior plates and less components for reinforcement. The commercial use of UNI HITEN® in automobile exterior panels is contributing significantly to CO2 reduction.

UNI HITEN® in Automobiles



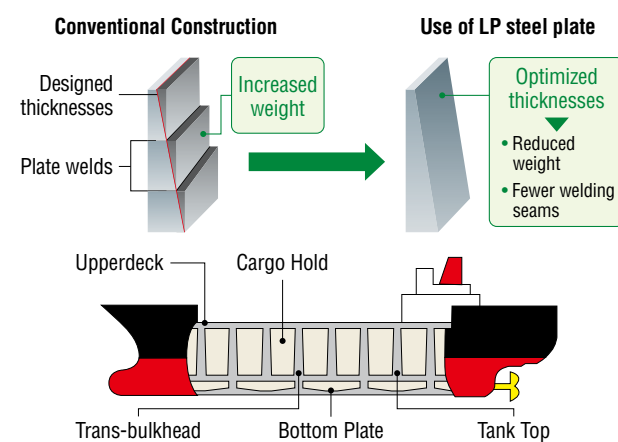
Weight reduction with UNI HITEN®



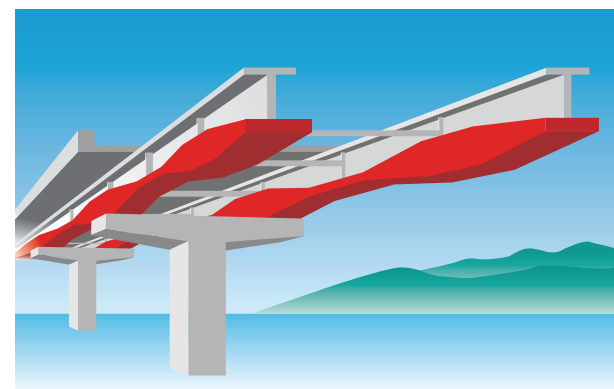
Longitudinally Profiled Steel Plates: CO2 Reduction through Lighter Ships and Reduced-mass Bridges

Longitudinally profiled (LP) steel plates have varied thicknesses in their lengthwise direction. Forces acting on ship bulkheads decrease toward the top of the bulkheads, so fixed-thickness steel plates add unnecessary thickness in the upper portions of bulkheads. LP plates with varied thickness matched to different levels of force help to reduce ship weight as well as the wasteful use of steel. JFE Steel has established the technology to efficiently manufacture LP steel plates in a variety of forms, contributing to CO2 reduction through lighter ships and reduced use of materials in bridge construction.

LP steel plates in ships



LP steel plates in bridges



Stainless OCTG for Greener Natural Gas Development

JFE Steel's upgraded lineup of HP-1, HP-2, UHP®15CR and UHP®17CR steel tubes is contributing to more sustainable eco-societies and more eco-friendly natural gas development. The original product, 13CR martensitic stainless steel for OCTG, is highly resistant to CO2 corrosion in natural gas fields and functions very well in extreme environments. The new products also are resistant to hydrogen sulfide or high temperatures.

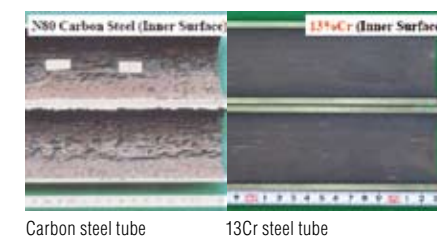


UHP®15CR and UHP®17CR

UHP®15CR and UHP®17CR high-strength steel tubes withstand the especially severe environments of deep oil and gas wells. They also are suited to environments containing CO2 and small amounts of hydrogen sulfide in high temperatures ranging from 200°C (UHP®15CR) to 230°C (UHP®17CR).

In addition, compared to conventional materials, JFE Steel's advanced products conserve resources by cutting back on alloys and eliminating cold extraction. They also help to shorten delivery times.

1 Corrosion inside OCTG after one year

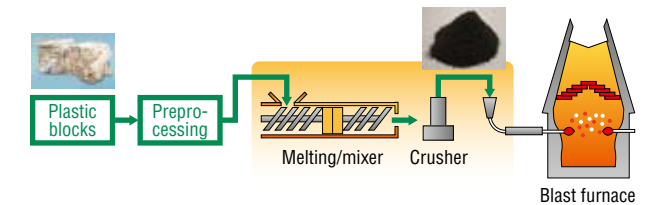


Carbon steel tube 13Cr steel tube

Used Plastic Pulverization Technologies for Blast Furnaces

JFE Steel's pulverization plant was the world's first facility to commercialize used-plastic pulverization technology—a proprietary advanced plastic recycling process—for used containers and package plastic when it launched in the East Japan Works' Keihin District in March 2007. Compared to conventional technologies, this process more efficiently reduces iron ore in furnaces that use waste plastic, thereby conserving resources and reducing CO2 emissions. The technology won the Nikkei Global Environmental Technology Award for Excellence in 2012.

Plastic Pulverization Plant (APR)



2012 Nikkei Global Environmental Technology Awards Ceremony

Environmental Load-cutting Products and Technologies

COURSE50 Project to Cut CO₂ Emissions in Blast Furnaces

JFE Steel is a leading member of a project known as CO₂ Ultimate Reduction in Steelmaking Process by Innovative Technology for Cool Earth 50 (COURSE50), which is developing innovative technologies to reduce CO₂ emissions from blast furnaces.

The company is working on CO₂ separation with a pressure swing adsorption process and recovery technology to capture unused waste heat contained in steel slag. One method uses a special adsorbent for efficient, low-cost separation and collection of large amounts of CO₂ contained in furnace byproduct gases. A demonstration experiment is being carried out at a pilot plant in the company's Fukuyama District. Methods to collect waste heat emitted from steelmaking slag as hot as 1,600°C are being developed in a separate experimental project at a pilot plant in the company's Chiba Works.



Experimental equipment for separating CO₂ using PSA (Fukuyama District)

Iron-steel Slag Products for Marine Restoration

JFE Steel makes effective use of all company-produced iron-steel slag, which up to now has been used predominantly for construction and the production of cement. In recent years, the company has been advancing the use of iron-steel slag as a material for environmental protection initiatives, including the restoration of marine environments.

Marine Stone[®] for Seaweed Bed Cultivation

JFE Steel began constructing an undersea reef for seaweed beds along the Iwakuni coast of Yamaguchi Prefecture in January 2013. Some 13,000 m³ of Marine Stone[®] from the West Japan Works (Fukuyama) is being used to build a reef covering 6,432 m².

The reef will be used by the Kojiro Fisheries Cooperative and the Ube National College of Technology to reestablish seaweed resources lost to the tsunami in March 2011, which has adversely impacted the local fishery. Marine Stone[®] was selected as an alternative material to natural rock that once formed the seaweed bed's foundation. Going forward, a local research committee comprised of academic experts will monitor regrowth and evaluate the efficacy of this innovative method.



Marine Stone[®]



Marine Stone[®] covered with seaweed

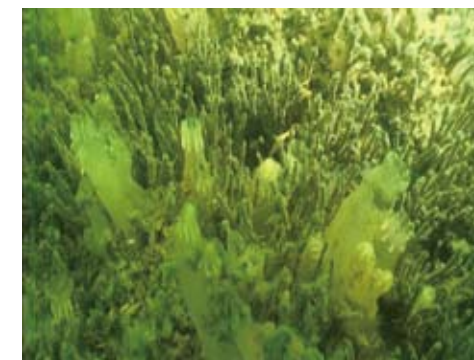
Sulfide Suppression Using Iron-Steel Slag

Aiming to solve the problem of hydrogen sulfide odors emanating from bottom sludge in inner ports and harbors of Fukuyama Prefecture, JFE Steel is collaborating with Hiroshima University to conduct field verification tests using Marine Stone[®]. There is hope that this JFE Steel material will support inhabitation by a rich variety of organisms that would help to naturally purify the marine environments.

At a seminar held in February 2013, reports were presented on iron-steel slag's usefulness in suppressing sulfide, as well as attracting inhabitation of benthic organisms, crustaceans and young fish. This seminar is part of a comprehensive research partnership focusing on the use of iron-steel slag to improve marine environments, which Hiroshima University and JFE Steel inaugurated in September 2011.



Sea squirts and crabs that inhabit Marine Stone[®]



Sea squirts and sandworms attached to Marine Stone[®]

Slag Products to Build UMI Farm at Yokohama Hakkeijima Sea Paradise

JFE Steel's iron-steel slag products—Marine Blocks[®], Marine Rocks[®] and Marine Stone[®]—were used in the construction of UMI Farm: Natural Ocean Aquarium, a new attraction that opened at Yokohama Hakkeijima Sea Paradise in March 2013.

JFE Steel also entered into a research partnership with Yokohama Hakkeijima Inc., the marine park's management company, to explore the use of iron-steel slag products for restoring ocean environments.

UMI Farm's Ocean Laboratory is using Marine Blocks[®] in its research into ecological enhancement, including attracting ocean organisms that function as natural purifiers. The aim is to restore ecosystems that traditionally existed in Tokyo Bay by increasing biodiversity. JFE Steel's iron-steel slag products can be observed from the Ocean Laboratory's glass-bottom boat.



Seaweed (*Ecklonia cava*) on Marine Blocks[®]



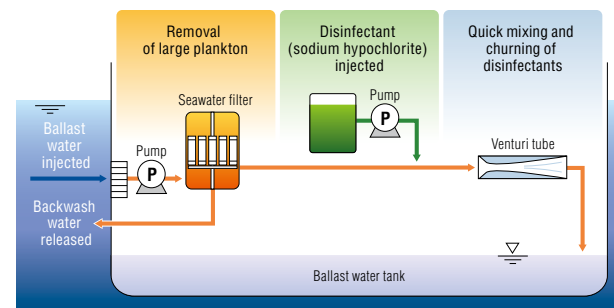
Threadtail filefish (*Stephanolepis*) in front of a Marine Rocks[®]

Environmental Load-cutting Products and Technologies

JFE Ballast Ace Protecting Marine Ecosystems

To maintain a ship's balance after cargo has been offloaded at a port, seawater is injected into its ballast water tank to maintain stability. As ballast water contains alien species, it may pose ecological problems when it is released at the next port. To solve this problem, JFE Engineering developed the JFE Ballast Ace system to remove marine organisms and purify seawater in ballast tanks.

At present, a steadily increasing number of countries have ratified the International Ballast Water Control Convention, which calls for the installation of ballast-water treatment devices in ships. Implementation of this convention is expected soon. JFE Ballast Ace not only is simple, sure and safe, it is the world's most cost-effective system of its kind. Acclaimed around the world, JFE Ballast Ace had attracted orders for a cumulative 293 ships as of June 2013.



Ballast Water Management System



JFE Ballast Ace (filter and control panel)

CYCLE TREE Bicycle Parking System for Low-carbon Societies

While increased use of bicycles in urban areas is promoting green transportation, the illegal parking of bicycles near train stations has become a problem. To help resolve this problem, JFE Engineering developed CYCLE TREE, a fully automatic multilevel system that quickly parks bicycles in confined areas, such as around urban train stations.

Since launching CYCLE TREE in 2001, JFE Engineering has steadily innovated a variety of



CYCLE TREE entrance



Auto-parking structure built with CYCLE TREE system

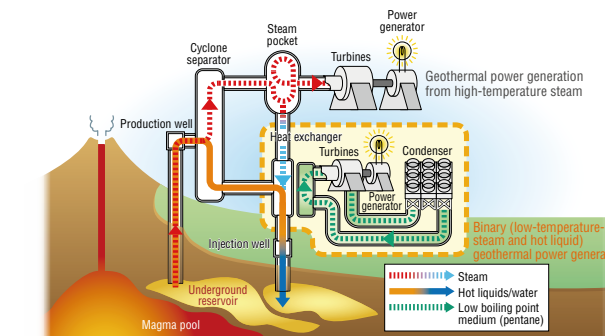
products for special conditions, such as locations requiring horizontal or in-building structures. As of January 2013, the company has installed 14 systems across Japan, representing a total storage capacity of well over 17,000 bicycles, making CYCLE TREE the top automated parking structure in Japan.

Geothermal Binary Power from Steam and Hot Fluids

In 2013, JFE Engineering received an order for a geothermal binary power generation facility under a project conducted by Shin Nippon Biomedical Laboratories in Ibusuki, Kagoshima Prefecture. Binary power generation, which effectively uses low-temperature steam and hot liquids, is both highly efficient and eco-friendly as it uses and fully returns liquid from inside the Earth.

The new facility, Japan's first megawatt-class geothermal power plant in 14 years, is also the country's only binary power-generation facility to utilize a newly dug well rather than one from an existing power plant or hot springs.

Since designing and constructing the transportation system for Japan's first geothermal power plant in 1966, JFE Engineering has been involved in fully half of the 18 geothermal power plants currently operating in Japan, as well as overseas geothermal power plants in Indonesia and Kenya. From high-performance cyclone separators incorporating original technologies to binary power plants, JFE Engineering is an integrated developer and promoter of solutions using geothermal power-generation as a stable, purely domestic and renewable source of power.



Binary power generation systems

Biomass Power Generation with Renewable Palm Kernel Shells

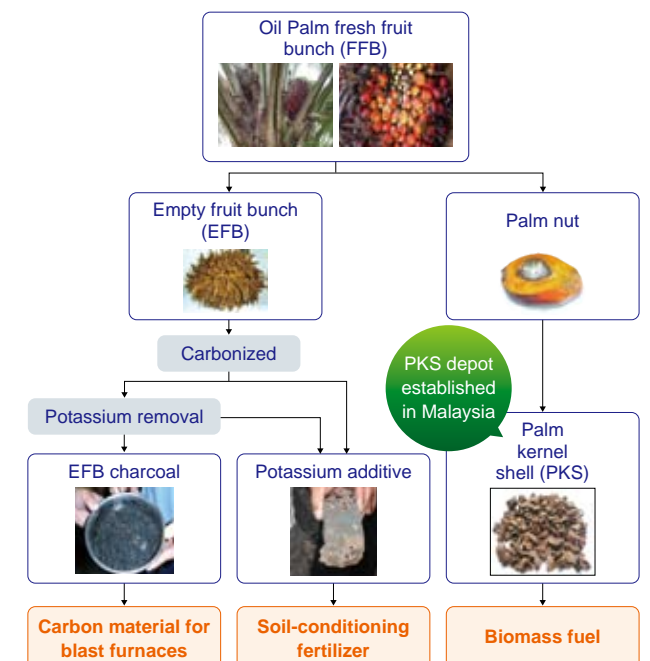
Expectations are rising for biomass power generation using palm kernel shells (PKSs), the crushed shells of palm nuts, which contain approximately 70% of the caloric value (4,000–4,500 kcal) of fuel coal. In 2010, JFE Shoji Trade established a PKS depot in Malaysia, the first of its kind by a Japanese company, as part of a feasibility study. Further impetus was realized in 2012 when Japan enacted a renewable energy law that is expected to apply to PKS as biomass fuel for power generation. JFE Shoji Trade is now receiving inquiries regarding its provision of PKS to operators of biomass power generators.

Also, empty fruit bunches (EFBs) left over after removing the kernels when producing palm oil are five times greater in volume than PKS. EFB now is being carbonized and provided to blast furnace manufacturers as a carbon material, and potassium removed in the manufacturing process is being developed as a recycled soil-conditioning fertilizer.



Palm kernel shell (PKS) depot

Palm Biomass Project Scheme

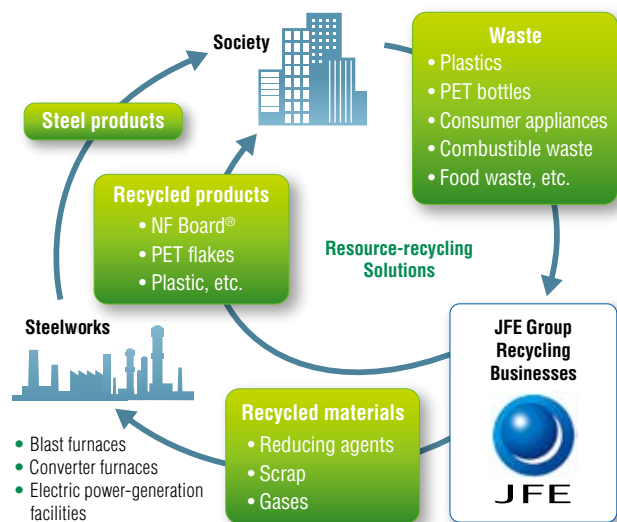


JFE Group Recycling

Resource-recycling Solutions

The JFE Group engages in recycling businesses as an offshoot of its steelworks recycling technologies, such as the use of plastics in blast furnaces. In the engineering field, its recycling businesses are related closely to local communities, such as the sorting and storage of waste plastics and the conversion of refuse into solid fuel.

JFE also contributes to sustainable societies by offering disposal solutions for various types of waste, including materials, chemicals and thermal recycling, aiming to minimize the amount of final disposal.



JFE Group Recycling Businesses

Toyama

- Rare metal recovery plant for spent catalysts

Kurashiki (Mizushima)

- Waste gasifying and melting furnace
- Waste wood carbonization plant
- Electric-furnace recycling plant

Fukuyama

- Waste plastic recycling plant
- RPF manufacturing plant
- Fluorescent tube recycling plant
- Kiln incinerator
- Leachate-controlled landfill
- Refuse-derived fuel (RDF) gasifying power generation plant (commissioned operation)
- Fukuyama plastic material recycling plant

Sendai

- Plastic packaging waste sorting and baling plant
- Plastic material recycling plant
- Fluorescent tube recycling plant
- Recycled pallet manufacturing plant

Yokohama

- Kiln-stoker incinerator
- Kiln-ash melting furnace
- Liquid/sludge waste intermediate treatment plant
- Solid waste recycling plant
- Fluorescent tube recycling plant
- Plastic packaging waste sorting and baling plant
- Dry cell and battery recycling plant

Kawasaki

- Waste plastic recycling plant (Ogishima & Mizue)
- Waste PET bottle recycling plant
- Can and PET bottle sorting and baling plant
- Kiln-stoker incinerator
- Solid waste recycling plant
- NF Board® manufacturing plant
- Consumer/office appliance recycling plant

Chiba

- Waste gasifying and melting furnace
- Food waste recycling plant

Used fluorescent tubes processed in FY2012: 20 million tubes

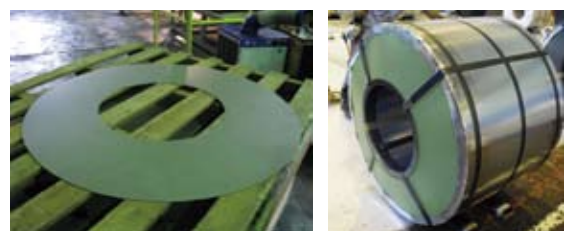
Used consumer appliances processed in FY2012: 560,000 units

Containers and packaging (or other) plastic successfully bid in FY2013: 100,000 tons

Recycled Product Example

Recycled Plastic Boards

JFE Steel recycles containers, packaging and other plastic collected from household garbage for reuse in new products. At present, recycled plastic is used for outdoor poster boards (used to display candidate information during elections) and coil guard plates inside steelworks.



Coil guard plates

Environmental Management

JFE Group Framework for Environmental Management

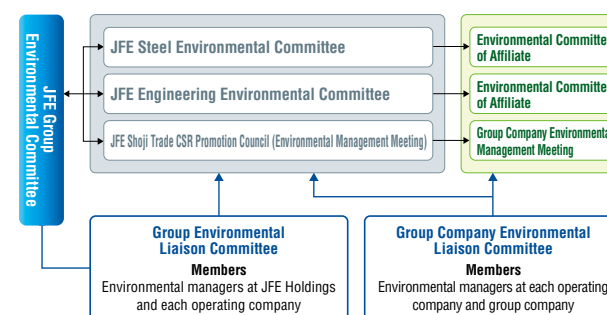
The JFE Group Environmental Committee chaired by the president of JFE Holdings, operating under the JFE Group CSR Council, manages environment issues by setting objectives for environmental protection, monitoring progress and working to improve environmental performance.

JFE Steel has an Environment Management Department at its head office and in each business office, as well as an Environmental Committee chaired by the president and an Environment Management Committee in each local office.

JFE Engineering carries out environmental protection activities with clearly defined objectives under the leadership of the president. The Environmental Committee, with the help of its subordinate Environmental Expert Committee and Environmental Liaison Committee, is responsible for overall management and guiding subordinate companies, and both planning and implementing environmental policies.

At JFE Shoji Trade, environmental management supervisors oversee improvements in environmental management systems based on ISO 14001 standards. The supervisors also help devise Group-wide policies for achieving environmental targets under regulatory compliance.

Environmental Management System



Environmental Management System

Acquisition of ISO 14001 certification is an important part of each JFE Group company's voluntary environmental program. All JFE Steel and JFE Engineering production sites and JFE Shoji Trade domestic business offices have received certification. Together with their affiliates, they maintain their certification status through regular inspections and reviews.

Environmental Auditing

In addition to auditing by ISO 14001 certification organizations, certified operating companies are also audited internally by specialized auditors trained by external organizations. The Audit and Environment Management departments of JFE Steel's head office conduct environmental audits of offices and subordinate companies. From FY2011, self-evaluations have been carried out using a check sheet, based on which detailed audits have been performed annually.

Environmental Education

JFE Steel pollution-control manager **1,074** persons certified

The JFE Group actively provides education to enhance its corporate culture of environmental protection in which all employees participate. Education at operating companies includes training for new recruits and newly promoted employees, and for environmental preservation activities by position and job.

In addition to education concerning compliance with environmental laws and regulations, JFE Steel encourages employees to obtain qualifications as pollution control managers. In FY2012, 74 persons were qualified, bringing the total since 2005 to 1,074 people. In FY2011, a new training program was launched for environmental managers in Group companies. This program was conducted three times in FY2012.

In FY2012, JFE Engineering conducted education on general environmental issues six times, environmental laws and regulations four times and training for internal environmental auditors.

In addition to environmental education, JFE Shoji Trade distributes company-specific environmental compliance check sheets to all Group companies to strengthen the identification and reduction of environmental risks. Legal compliance is verified through self-checks at each company.

A study group to deepen environmental managers' understanding of the Waste Disposal and Public Cleansing Act was organized in March 2013.

Environmental Management

Supply Chain Management

Under with the concept of life cycle assessment, the JFE Group strives to reduce environmental loads throughout its supply chains. Also, operating companies work with business partners to reduce their use of materials that have environmental loads. Group procurement policies help to conserve resources and protect the environment by adhering to all laws and regulations, and to the procurement principles prescribed under the Charter of Corporate Behavior developed by the Japan Business Federation. Going forward, the JFE Group intends to further accelerate efforts related to its supply chains.

Environmental Accounting

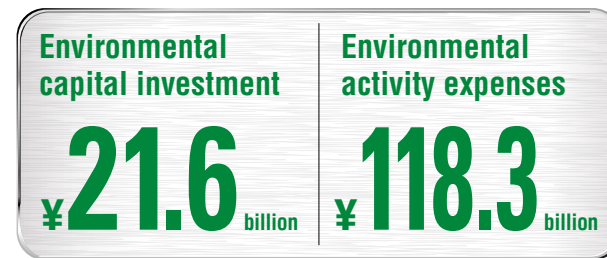
Environmental Accounting Approach

The JFE Group has successfully saved energy and reduced environmental loads by making its production facilities more efficient and introducing more environmentally friendly equipment. These investments, which are booked as environmental costs, cover energy-saving and environmentally friendly equipment and facilities, and expenses required for environmental protection and load reduction.

Capital Investment

To save energy and reduce environmental loads stemming from production, the JFE Group actively invests in plant and equipment incorporating environmental technologies. Cumulative investment in energy saving, totaling ¥435.2 billion since 1990, has enabled the Group to achieve energy efficiencies that are among the highest in the world. In total, the Group has invested ¥588.7 billion in environmental protection measures since 1973.

Environmental Capital Investment and Activity Expenses



Environment-related capital investment totaled ¥21.6 billion and expenses amounted to ¥118.3 billion in FY2012. In terms of capital expenditure, the majority was invested in energy-saving and other global warming countermeasures that amounted to ¥7.6 billion, followed by ¥6.4 billion for air pollution countermeasures and ¥5.8 billion for environmental research and development.

Environmental activity expenses included ¥37.5 billion targeting global warming, ¥29.6 billion for air pollution countermeasures, and ¥17.3 billion for recycled industrial water. Environment-related R&D expenses came to ¥13.8 billion.

Environment-related capital investment as a percentage of overall capital investment was roughly 28%.

Results of Environmental Activities



Environmental protection costs include Group efforts to lower unit-based CO₂ emissions to prevent global warming and measures to reduce final disposal waste through active recycling to conserve natural resources. Other aims include reducing discharges of airborne and waterborne substances that have pollution loads, and also complying with all statutory regulations concerning exhaust gas emissions and discharged water.

The monetary value of energy savings realized through environmental capital investments and expenses in FY2012 was estimated at about ¥1.6 billion.

Environment-related Communication with Society

The JFE Group gives utmost priority to communication with all stakeholders, including in matters relating to the environment.

Forum: JFE Tombo Michi –How Far Does a Dragonfly Fly?

The How Far Does a Dragonfly Fly? Forum, launched in 2003, is part of an initiative to promote ecology and expand greenery in the Keihin coastal area. This forum brings together corporations, citizens and local governments to conduct research on the movement and habitats (species and numbers) of dragonflies in the public biotope and green spaces surrounding regional factories. Participating in the forum from its inception, JFE Engineering provides research facilities and staffers.

Through research conducted by the forum over a 10-year period, it was discovered that improvements in natural environments could be estimated from changes in dominant species. It was also observed that parks in urban areas make people feel more at home, and that coastal dragonflies have unique characteristics not exhibited by dragonflies in inland areas. The expanded distribution of certain species is thought to indicate a close link to flora and fauna in surrounding environments (dragonfly network) in Keihin coastal area green spaces. In recognition of these activities in 2012, the forum was presented with the Yokohama Environmental Activity Award Grand Prize and Special Prize for Biodiversity. The forum also won the Ministry of the Environment FY2013 Minister's Prize.

Going forward, this forum will continue to promote environmental protection activities in the Keihin coastal area and other regions.



Activity Report "Documenting 10 Years of Keihin Forests Linked by Dragonflies"

Environmental Exhibition Eco-Products 2012

The JFE Group participates in exhibitions to provide stakeholders with information about its environmental activities.

At Eco-Products 2012, held at Tokyo Big Site in December 2012, JFE environmental activities in the steel and engineering areas were introduced under the theme "JFE Group Activities Aiming to Develop Sustainable Societies with the World's Highest Technologies." Steel-related presentations focused on global warming initiatives based on the "Three Ecos" (using/making/spreading), while engineering presentations under the theme "Creating Future Eco-Friendly Cities" introduced eco-friendly cities of the future through ideas such as environmentally friendly biomass and geothermal power generation technologies, rooftop parks and commuter-bicycle parking facilities. In another activity, eco-tours taught children how their futures are linked to ecology.



Eco-Products 2012

Ecobeing Environmental Website

The JFE Group cooperates with the "ecobeing" environmental website, which contains a diverse array of content aimed at spreading awareness about eco-activities.

In FY2012, the content included ecologically minded influential individuals, such as then Tokyo Deputy-Governor (now Governor) Naoki Inose, and explored diverse ideas on the future of energy.

 www.ecobeing.net

Contributing to Society's Development

The JFE Group corporate governance policy is a fair, objective and transparent blueprint for initiatives that are beneficial to customers, business partners, stockholders and investors, communities and other stakeholders. This report presents compliance and stakeholder initiatives implemented by the JFE Group and its operating companies in FY2012.

Standards of Business Conduct

All JFE Group executives and employees are expected to adhere to the below-listed Standards of Business Conduct in all facets of corporate activities. The standards embody the corporate vision of the JFE Group and go hand-in-hand with JFE's corporate values. Senior executives take the lead in communicating the standards to employees throughout the Group and in creating effective systems and mechanisms to ensure adherence. Suppliers are also asked to observe these standards. Senior executives are directly involved both in planning and implementation, as well as the prevention of violations. They are obliged to disclose information about any violation in a timely and accurate manner both inside and outside the Group, clarify the persons with related authority and accountability, and deal rigorously with any offense.

- 1. Provide quality products and services**
Earn the trust and regard of customers by endeavoring to provide safe, high-quality products and services based on superior technology, and by fully respecting and protecting the privacy of personal and customer information.
- 2. Be transparent to society**
Endeavor to communicate with shareholders and society, and actively disclose corporate information.
- 3. Work cooperatively with communities**
Actively contribute to communities as a good corporate citizen by working together in the spirit of cooperation.
- 4. Globalize**
Endeavor to achieve understanding with people around the world, working from a global perspective and respecting international norms and local cultures and customs.
- 5. Exist in harmony with the global environment**
Proactively contribute to the achievement of better living standards and the creation of societies that exist in harmony with the global environment.
- 6. Maintain proper relationships with government and related authorities**
Build and maintain sound and proper relationships with government and related authorities.
- 7. Disassociate from criminal groups**
Refuse to associate with any person or organization that threatens social order or stability, and reject any illegal or improper demand.
- 8. Respect human rights**
Respect all employees and members of the general public as individuals and refrain from any discrimination in corporate activities.
- 9. Provide rewarding work environments**
Provide employees with attractive, safe, and rewarding work environments.
- 10. Comply with laws and ordinances**
Comply with all laws and ordinances, endeavor to compete fairly and freely, refrain from illegal business activities, promote sound business practices, and be faithful and sincere in all activities and dealings.



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Compliance

About Compliance

Every aspect of a business is scrutinized with regard to corporate social responsibility (CSR) because society demands high levels of fairness and transparency. The JFE Group makes compliance — the foundation of CSR — a key priority and takes steps to ensure that all employees embrace the importance of compliance and work to promote it.

Raising Compliance Awareness

Cases handled by corporate ethics hotline in FY2012

34

The JFE Group's Corporate Ethics Hotline helps to ensure that important information regarding compliance is communicated from the front lines to top management rapidly and accurately. The hotline is operated under rules and regulations that protect people who report information or seek advice. After the facts of a case are reviewed, the outcome is communicated to the caller. Access has been expanded to Group companies, enabling the hotline to serve as a pillar of compliance-enhancement in the JFE Group.

During FY2012, the hotline received 34 calls regarding matters at JFE Holdings or its operating companies.



Hotline poster

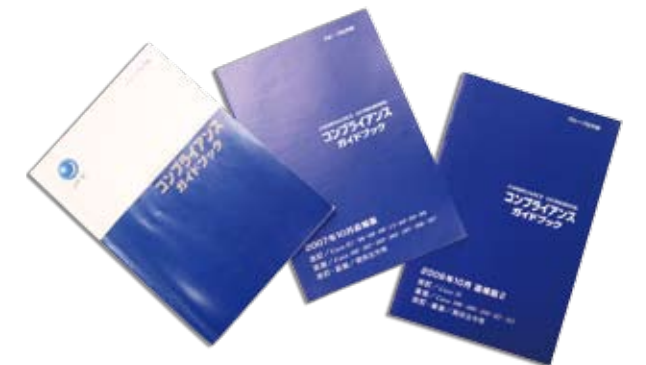
Compliance Guidebook

Compliance guidebook

Approx. 68,000 copies distributed

All employees and executives are provided a copy of the JFE Group Compliance Guidebook, which was first issued in 2006 and then updated in 2007 and 2009.

The guidebook presents over 100 case studies written in plain language to help employees understand JFE's standards for complying with laws and regulations, as well as internal rules based on social norms. Situations occurring in daily operations that can be unclear or confusing are provided, with each case accompanied by an explanation prepared by the relevant department and reviewed by an attorney for legal compliance. The publication also is used at worksites as a textbook for company training.



Compliance Guidebook

Compliance

Awareness Survey

The JFE Group conducts its Corporate Ethics Awareness Survey to quantitatively assess employees' awareness of ethics, identify possible risks and help employees stay informed about JFE's corporate vision. Recent surveys indicate that many employees believe compliance awareness and behavior have strengthened at JFE. In particular, awareness of corporate policies and values is thought to have improved greatly, and compliance systems and activities are said to have steadily taken hold among employees.

The results of these awareness surveys are reflected in practical measures aimed at creating a better company.

Compliance Training

To ensure thorough compliance, the JFE Group conducts compliance training on topics such as antimonopoly law, insider trading, security export controls, the Construction Business Act, and the Foreign Corrupt Practices Act. Compliance education includes training for everyone from managers to new hires.

In addition, JFE Shoji Trade conducts training for trading companies based on its compliance handbook.

Primary Training at Group Companies (FY2012)

Company	Training	Participants
JFE Steel	Antimonopoly Law	1,087 (24 sessions)
	Other law-related training	2,175 (48 sessions)
JFE Engineering	Antimonopoly Law	1,657 (84 sessions)
	Construction Business Act and other regulations	3,299 (142 sessions)

Compliance Pledge

When JFE Group employees set their annual job goals, they also take a pledge to comply with all laws and regulations, both internal and external. JFE believes that the pledge helps to foster compliance awareness.

Compliance Rules Awareness Activities

Compliance Month at JFE Steel is observed every October, when individual worksites conduct compliance-awareness activities to encourage employees to strengthen their awareness, mindfulness and understanding of the rules.

Each department holds sessions in which participants read legal texts, internal regulations and other materials and information placed in the Compliance Guidebook or posted on the company intranet by the Legal Affairs Department. Such efforts foster greater awareness of compliance and encourage employees to consider if their work practices are in compliance. After Compliance Month, work practices and company rules are revised as required.

Antimonopoly Law Compliance Initiatives

JFE Steel and JFE Engineering, both regretting past violations of the Antimonopoly Law, continue to implement thorough measures aimed at eliminating the possibility of future infringements.

The internal audit departments of both companies constantly monitor contact with other companies to avoid Antimonopoly Law violations. They also check to see that initiatives aimed at promoting legal compliance are functioning properly. Audits are regularly conducted at all business locations, including branch offices. Other group companies also implement related compliance initiatives.

Key Initiatives of Both Companies

- Commitments by top management
- Antimonopoly Law training based on specific cases of how violations can seriously impact companies and individuals
- Upgraded regulations to better clarify how violations could lead to disciplinary action
- Strengthened rules on contact with other companies in the same industry

In addition, JFE Steel monitors the activities of external organizations to which its sales department belongs, and JFE Engineering works to ensure that its order-acceptance process is transparent and conforms with antimonopoly requirements.

Countermeasures Against Organized Crime

The JFE Group Policies for Addressing Antisocial Forces works to ensure sound company management through uniform organization-wide measures in response to antisocial (organized crime) activities.

Initiatives

The JFE Group takes precautions to avoid any relationship with organized crime. The General Administration and Legal Affairs divisions of each group company are responsible for reporting any related incident, establishing relevant rules and working with police and other authorities to address any matter resolutely.

Rejection of Organized Crime

Clarification of JFE Group Standards of Business Conduct

The JFE Group Standards of Business Conduct clearly state that the group refuses to associate with any element or organization that threatens social order and stability, and rejects all illegal or improper demands.

Regulations Concerning Violence Directed at Companies

The Group has its own Regulations for Addressing Violence Directed at Companies and related standards for addressing organized crime, including a manual on the initial steps that should be taken in responding to violence targeting companies.

Training

Thorough understanding of the JFE Group Policies for Addressing Antisocial Forces and specific response standards among all executives and employees is ensured through training and other steps such as distribution of the Compliance Guidebook.

Database and Terms for Fighting Organized Crime

A database of antisocial activities is being created and terms of conduct aimed at fighting organized crime are being included in agreements signed by JFE Group companies.

Information Security Management

The JFE Group's information management system supports the smooth and appropriate conduct of business.

Prevention of Improper Use of Information

1. Authentication measures of JFE's integrated security system
2. Personal computer startup authentication using passwords and additional factors (IC cards, etc.)

Prevention of Information Leaks

Loss or Theft

1. Biometric authentication for server room access
2. Office-access control
3. Use of security wires to protect hardware
4. Hard disk encryption for mobile computers
5. Encryption of removable media

Measures against Information Leaks

1. Limits on use of removable media and maintenance of logs
2. Checking e-mail sent to external parties
3. Retention of all e-mail sent to external parties
4. Limits on use of Web-based e-mail
5. Limits on use of Web-based bulletin boards, etc.
6. Preventing access to the Group network via non-authorized computers

Measures against External Threats

1. Measures to prevent malware
2. Firewall restrictions on outside access
3. Detecting and protecting against suspicious communications

Privacy Protection

The JFE Group has formulated the following policies on the handling of personal information to facilitate smooth and appropriate operations.

Basic Policies for Protection of Personal Information

1. The JFE Group, mindful of the growing use of personal information, endeavors to protect the rights and interests of individuals while also considering the value of information from a business perspective.
2. The JFE Group observes the Law Concerning the Protection of Personal Information and all other relevant laws and ordinances, and endeavors to adhere to the spirit and letter of such laws in the protection of personal information.
3. The JFE Group protects personal information based on internal rules concerning information management, and by informing, educating and training employees on these rules and other applicable laws and ordinances. The JFE Group reviews and enhances its privacy-protection measures and internal rules on an ongoing basis.

Customers and Clients

Quality Assurance System

JFE Steel

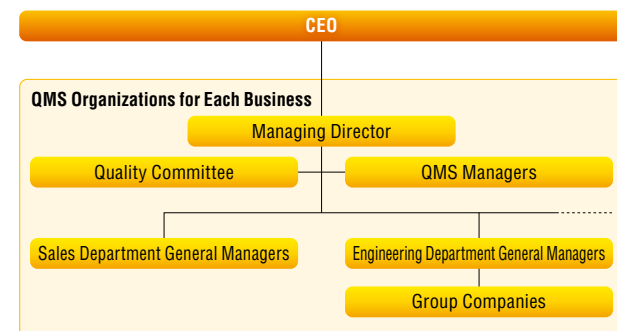
JFE Steel has acquired ISO 9001 and various other quality assurance (QA) certifications, including the JIS mark and approvals from ship classification bodies. In response to globalization needs and customer demands, the company has been certified for standards specific to countries where the company has business. Also, to meet demands for more advanced and functional quality, JFE Steel is deploying cutting-edge sensors and materials testing facilities as part of investing in quality assurance. The company will continue strengthening its quality assurance structure to provide products that all customers can use with confidence, and thereby enhance trust in the JFE brand.



Corrosion testing facilities

JFE Engineering

JFE Engineering has developed a company-wide quality management system, including quality-assurance systems spanning all work processes. Also, FAQ manuals covering product features are provided to customers to help meet their rigorous demands for quality.



JFE Shoji Trade

JFE Shoji Trade prioritizes product quality in its corporate activities and its Group-wide proactive quality assurance system enables customers to transact business with peace of mind. In FY2012, manager meetings were held at Group steel plate processing centers in Japan and overseas to support the creation of a Group-wide product quality assurance system and to facilitate the exchange of related technologies.

Fair Competition and Trade

Compliance in purchasing and procurement activities is critical to becoming a good business partner and developing mutual understanding and trust with suppliers. Each JFE operating company clearly defines its purchase/procurement policy and discloses it to suppliers to help them maintain the same high standards.

WEB **Purchase/Procurement Policies (Examples)**
JFE Steel
www.jfe-steel.co.jp/company/purchase_policy/index.html (Japanese only)

Appropriate Export Procedures

JFE Steel is taking steps to promote international peace and security by working against the spread of weapons of mass destruction and excess accumulation of conventional weapons. The company carries out inspections to confirm the final destinations, customers and applications of its exported products, and follows all related export procedures. In addition, the Company's Legal Affairs Department conducts internal briefings to spread knowledge of export-related laws and regulations, such as the Foreign Exchange and Foreign Trade Act.

JFE Shoji Trade also ensures compliance in its export activities through security-related education and other measures targeting sections and Group companies involved in trading.

Improving Customer Satisfaction

JFE Steel

Working with Customers to Establish Testing and Research Facilities for Product Development

JFE Steel has its own facilities for conducting joint research and development with customers. These include the Customers' Solutions Lab for auto-industry customers and the Steel Structural Materials Solutions Center for customers involved with infrastructure. The facilities are equipped with equipment for widely varying research and experimentation, plus conference rooms and space for exhibiting research results. They have achieved a number of successes in resolving customers' technological issues through testing and discussion.

In August 2010, the Steel Structural Materials Solutions Center's exhibition area for civil-engineering steel materials underwent a major renewal for improved customer satisfaction.



Customers' Solutions Lab

Operational System

JFE Steel's 2006 migration to the current (J-Smile) system has enabled the company to create a strong management information infrastructure and operational system to better leverage management resources and increase customer satisfaction. J-Smile has enabled JFE Steel to strengthen its response to customer needs in areas such as lead-time, delivery date, quality assurance, and product development. At the same time, existing systems at steelworks have been upgraded for effective consolidated operational control and management.

For its success in realizing operational processes and systems that facilitate innovation, J-Smile received the FY2006 Minister of Economy, Trade and Industry Award for Companies, 2nd Prize at the IT Japan Awards 2007, and the World Information Technology and Services Alliance IT Prize 2008.

Customer Strategies

JFE Steel regularly conducts customer questionnaires and interviews and then uses the information to draft strategies for greater customer satisfaction. The company also develops business strategies that are shared among the sales departments, business planning department, steelworks, and research

laboratories, thereby facilitating unified customer care, as well as accelerating operations.

Nurturing Capabilities of Sales Department

The Sales Department holds training sessions by gathering sales managers from headquarters, branch offices, and foreign offices to discuss how best to work with customers and create better relationships with them. The meetings focus on learning from reports on topics such as how to overcome challenges and reach resolutions to enhance customer relationships, and what is being done to further enhance customer relationships. The above two points are considered by the participants, who then take new ideas back to their respective sales offices to strengthen local capabilities. Reflecting the accelerating globalization of JFE's operations, Q&A and information-exchange sessions are increasingly being conducted in English.

Sales Personnel Who Excel in Customer Relations

The Sales Department of JFE Steel conducts basic courses for newly appointed sales personnel on the fundamentals of steel materials, to foster their capabilities for technical discussions with customers, quick evaluation and handling of complaints, and ensure internal communication of hints that lead to product development. The effort is backed by handbooks on the components and end uses of products in specific sectors and fields.

JFE Engineering

Application of Customer Evaluations

Through customer surveys and interviews and construction evaluation forms aimed at customers of our products and services, we collect and accumulate evaluations on our construction management, product quality, advanced technologies, and innovation. Our divisions analyze this information and use it for purposes such as quality improvements and enhancement of new product development and after-sales service, with the aim of maximizing customer satisfaction.

JFE Shoji Trade

Diverse Customer Data for Better Service

JFE Shoji Trade is expanding its databases of information covering evaluations from the customer's perspective, business histories and successes/failures. Departments use the data to strengthen the presentation and negotiation skills of employees for enhanced customer satisfaction.

Shareholders and Investors

Returns to Shareholders

JFE Holdings considers returns to its shareholders to be one of its top management priorities. The company strives to ensure a sustainable financial position to aggressively provide dividends while also proceeding with investments designed to achieve new growth and improved financial health of the Group.

The goal is to maintain a basic payout ratio of around 25% and proactively invest in areas such as securing interests for resource acquisition and expansion of operations in Asia.

WEB Disclosure Policy
www.jfe-holdings.co.jp/investor/disclosure-policy.html
 (Japanese only)

Communication with Shareholders and Investors

Shareholders

General meeting of shareholders in June 2013 **841** participants

Plant tours for shareholders (FY2006 - FY2012) **15,996** participants

JFE Holdings, viewing its general meetings of shareholders as a chance for dialogue with shareholders, sends invitations at the earliest possible date in an effort to maximize attendance and avoid days on which other shareholder meetings are concentrated. For shareholders who cannot attend, the company allows voting online in addition to providing the normal proxy form.

To improve shareholders understanding, the company has been holding plant tours and briefing sessions. In FY2012, workplaces at JFE Steel, JFE Engineering and Japan Marine United (formerly Universal Shipbuilding Corporation) held 32 such events for 2,369 shareholders.

Investors

Individual interviews with institutional investors and securities analysts in FY2012

600 people

Briefings for private investors at securities firms in FY2012 **31** sessions

Approx. **2,300** people

The JFE communicates actively with investors, including by receiving and visiting institutional investors and securities analysts. Individual investors are provided with briefings, videos of investor meetings and e-mails concerning IR information. Important information is provided to overseas investors via press releases in English.

An IR Section in the Finance and IR Department performs the important task of keeping all workplaces and Group companies informed about market and institutional investing trends and third-party evaluations of the JFE Group.



Information also is provided to investors via the company's website.
WEB Japanese: www.jfe-holdings.co.jp/investor
 English: www.jfe-holdings.co.jp/en/investor

Local Communities

Philanthropic Activities of JFE 21st Century Foundation

The JFE 21st Century Foundation, which was founded as the Kawasaki Steel 21st Century Foundation in 1990, took its current name in 2003 and then was converted into a nonprofit foundation of the JFE Group on April 1, 2012. The Foundation continues to fulfill its original mission of being open to society and promoting the common good.

WEB JFE 21st Century Foundation
www.jfe-21st-cf.or.jp/index_eng.html

Support for Technology Research

The foundation has supported technology research at universities since FY1991.

In FY2012, when the foundation fielded 141 grant requests, a total of 40 million yen was provided in the form of two-million-yen grants each provided to 10 projects involving iron and steel technologies and another 10 projects concerning environmental technologies, including global warming prevention.

Total grants for technology research **455** projects
917.8 million yen



Presentation ceremony

Asian History Studies

Total grants for Asian history studies **60** projects
90.0 million yen

The foundation began awarding grants to support Asian history studies at Japanese universities in FY2005. During FY2012, 57 applications were received and seven grants, worth 1.5 million yen each and 10.5 million yen in total, were ultimately awarded.

Support for Education in Steel-related Communities

Since FY1991, the foundation has been sponsoring JFE 21st Century Foundation prizes for contests in the writing of essays and poems, including tanka and haiku poetry. The contests are conducted by the Japan Overseas Educational Services for Japanese elementary and middle school students studying overseas. Copies of Chikyu ni Manabu (Learn from the Earth), a collection of the winning entries in FY2012, were presented to 470 elementary schools, 215 middle schools, 87 public libraries and 11 education committees.

Events in FY2012

- Jo Chihun Cup Go Competition (Chiba)
- Chiba Prefectural Youth Go Competition (Funabashi)
- International Music Day Concert
 Chiba Citizens' Music Festival
 Special Performance of Beethoven's Ninth Symphony by the Citizens of Chiba Prefecture (Chiba)
- NHK Symphony Orchestra Subscription Concert
- MUZA Lunch & Night Concert (Kawasaki)
- Community Festival (Kawasaki)
- Handa Community Industrial Festival (Handa)
- Handa Float Festival (Handa)
- Mie Prefecture High Schools' Robot Tournament (Tsu)
- Kurashiki Music Festival (Kurashiki)
- Kurashiki Shogi Tournament (Kurashiki)
- Fukuyama Rose Festival (Fukuyama)
- The World of Matsuri (Fukuyama)



Handa Float Festival

Local Communities

Local Contribution Activities

Education at Elementary Schools

The East Japan Works of JFE Steel conducts plant tours and outbound classes for students at nearby elementary schools. Before children are taken on plant tours, company employees visit schools to explain steelmaking processes, steelworks features, environmental initiatives and other topics. From this fiscal year, plants are reaching out to more elementary schools with programs matched to specific interests.



Course at elementary school

Manufacturing Classroom

Since FY2003, JFE Steel has been working with elementary school children in the Chita area of Aichi Prefecture to help them appreciate that making things is interesting and fun. Retired employees teach and assist children to make accessories out of cast parts and then accompany them on plant tours. In FY2012, the company held 11 tours for 778 students. Classrooms on a similar scale are planned in FY2013.



Manufacturing classroom

Activities for Host Communities

The JFE Group annually opens up its manufacturing facilities to local residents for demonstrations, tours, and other events. In addition, recreational facilities are made available for community sports activities, and the Group also sponsors soccer, baseball, volleyball, basketball, and other sporting events. Such activities help to promote and expand sporting activities in the communities.

Visitors to JFE Group festivals in FY2012
Approx. 418,000

Event schedule (2012)

Name	Date held	Region
JFE 2012 Chiba Festival	October 28	East Japan Works, Chiba
Eighth Community Festival	May 27	East Japan Works, Keihin
JFE West Japan Festival in Kurashiki	November 3	West Japan Works, Kurashiki
JFE West Japan Festival in Fukuyama	May 13	West Japan Works, Fukuyama
Handa Community Industrial Festival	November 17	Chita Works
Tsu Autumn Festival	October 27	Tsu Works (cosponsored with Japan Marine United Tsu Works)



JFE West Japan Festival in Fukuyama

Support for External Organizations

UN World Food Programme

The Japan Association for the UN World Food Programme is an NPO-accredited supporter of the UN World Food Programme (WFP), a United Nations organization with the mission of eliminating hunger and poverty. The association conducts promotional activities to help expand the circle of WFP support in Japan, including collecting donations to assist WFP activities, conducting public relations activities, and promoting cooperation with companies and organizations. The JFE Group supports these activities.

Training for Foreign Doctors

Assisted by private corporations, Toranomon Hospital has been managing the Japanese Council for Medical Training (JCMT) to provide training opportunities for foreign doctors. This program invites doctors from developing countries primarily in Asia to Japan, allowing them to go through advanced medical training and then return to their home countries to promote enhanced medical standards. It also aims to foster friendship between Japan and the countries that dispatch the doctors. The JFE Group provides assistance to this undertaking.

Japanese Foundation for Cancer Research

The Japanese Foundation for Cancer Research is helping to overcome cancer by playing a leading role in research and treatment, as well as human resources development in Japan, since its establishment in 1908. The JFE Group supports the foundation's activities.

Support for Youth Development

Japanese Language Speech Contest

The China Education Association for International Exchange, The Society of Chinese Professors in Japan and Nikkei Inc. have been sponsoring the All China Japanese Speech Contest since 2006. The JFE Group supports the contest as a way to promote international exchange and contribute to society.

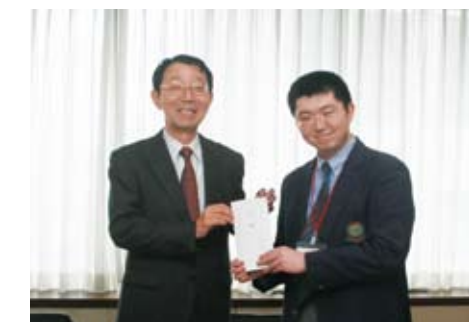


All China Japanese Speech Contest

High School Essay Contest

The Japan Science & Engineering Challenge (JSEC) is a national science paper contest for high school and technical college students. JFE Steel began supporting the JSEC in 2006 out of its desire to foster the development of future scientists and engineers.

In 2012, the JSEC JFE Steel Prize was awarded to the Shibuya Kyouiku Gakuen Makuhari Junior and Senior High School.



JFE Steel Award

Supporting Elementary Schools in Ghana and Nigeria

Since 2011, JFE Shoji Trade and its subsidiary Kawasho Foods Corporation have donated desks, chairs, T-shirts and canned products handled by the company to elementary schools in the West African countries of Ghana and Nigeria.

In FY2012, 800 sets of desks and chairs, 1,000 T-shirts and 25,000 cans of food were donated. Going forward, these support activities are expected to be continued to further West Africa's economic development.

FY2012 Internship Achievements

JFE hosted 130 students from around Japan as interns in FY2012.

Employees

Deployment of Human Resources

Recruitment

With Japan on the verge of a massive generational change due to baby-boomer retirements, securing outstanding human resources is a key issue for the JFE Group. Both new university graduates and midcareer personnel, as well as foreigners and women, are being recruited from increasingly broader channels, in view of labor supply and demand conditions going forward.

	JFE Steel	JFE Engineering	JFE Shoji Trade
Employees (Individuals) ¹	13,917	3,065	1,290
Recruits (Individuals) ²	380	138	53
Average Years Employed (Years) ¹	20.2	17.5	14.5
Job Turnover Rate (%) ³	0.9	0.75	1.4

¹ As of March 31, 2013

² Total new graduates and mid-career recruits

³ Job turnover rate = Voluntary resignations/Total employees

Human Resource Development

In parallel with its expanded exports and overseas businesses, JFE Steel has been investing in the development of global human resources. To foster professionals well-informed in their various fields of specialty, the company educates people on-site in management and language skills. Increasingly comprehensive study and training also includes more opportunities for younger employees to go abroad. In FY2012, JFE Steel provided about 50 opportunities for overseas study and training, mostly for younger employees.

JFE Engineering, in addition to its personnel training, has adopted an internal recruiting system by employees' appealing to optimize its allocation of personnel and make the most of their capabilities. In FY2012, the JFE Group introduced a system that allows employees not only to propose business opportunities but also to take charge of execution.

At JFE Shoji Trade, human resource development is regarded as a critical measure for the strengthening of organizational capabilities. Based on related principles adopted in April 2011, every year the company creates a training planning sheet for each employee to clearly define overall goals and individual training points. Also, the company fundamentally reviews its education and training systems as well as conducts both on- and off-job training.

Work-Life Balance

JFE Steel introduced the following work policies to support the nurture of young people.

1. Extended Child Care Leave

Employees can take extended child care leave until their child reaches 18 months of age. In the event there are difficulties finding vacancies at child care centers, an additional extension may be allowed until the child is three years old.

2. Shortened Working Hours

An employee can shorten their working hours by two hours per day until their child finishes the sixth grade of elementary school.

3. Leaves for Work/Life Balance Support (WLBS)

An employee who must provide nursing care or take part in school events may take up to five days of leave per year until their child finishes elementary school. Employees with more than one child may take up to 10 days of leave per year.

Also, WLBS leave may be applied toward working hours that had to be shortened for care purposes.

4. Special Leave when Spouses Give Birth

Employees are allowed a five-day leave when children are born.

Child-care and Nursing Leave

(People)

	2010	2011	2012
Child-care leave	34 (2)	37 (2)	20 (1)
Nursing leave	4 (3)	4 (3)	5 (2)

Note: Figures in parentheses are males.

In September 2012, JFE Engineering opened a company-operated childcare facility near its Yokohama head office in Tsurumi Ward. The preschool, called Children's Forest, is located inside the JR Tsurumi Station building, which is used by many employees during their daily commutes. Hours of operation correspond to company hours.

Helping Women to Thrive

As of April 2013, JFE Holdings and its operating companies had approximately 5,800 career-track employees (about 4,300 in management positions), including 519 women (58 in management positions). New recruits in FY2013 included 62 out of 301 women in positions with prospects for promotion, of which 47 out of 112 were in

white-collar positions with prospects for promotion.

The JFE Group places a top priority on creating working environments in which women can thrive. The company is not only working to increase its hiring of women, but also improve their working conditions. Consideration is being given to a wider breadth of areas to which women are assigned, along with other steps toward a greater range of roles women can play in the Group.

JFE Steel established the Diversity Promotion Section to empower new female hires.

Employment of People with Disabilities

To provide opportunities for people with various disabilities to fully exercise their capabilities, the JFE Group operates three special subsidiaries: JFE Apple East Corporation, JFE Apple West Corporation and Mie Data Craft Co., Ltd. The JFE Group will continue to promote the employment of people with disabilities with a focus on these special subsidiaries.

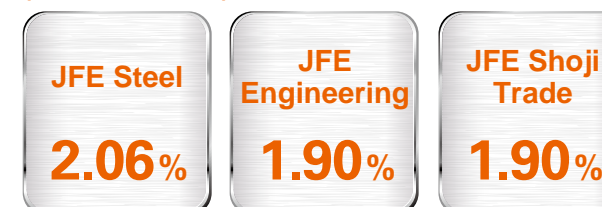
Although JFE Engineering and JFE Shoji Trade fell short of the legal employment ratio, they are promoting the employment of people with disabilities to ensure future compliance.

Employment of Persons with Disabilities (June 2011–2013)

	2011	2012	2013
JFE Steel	1.95	2.02	2.06
JFE Engineering	1.86	1.88	1.90
JFE Shoji Trade	1.69	1.86	1.90

Note: Regulation for ratio of employees with disabilities raised from 1.8% to 2.0% in April 2013

Employees with disabilities (as of June 2013)



Passing on Skills and Reemploying Retirees

With individual steelworks all expressing the desire to continue applying the valuable know-how of veteran employees, JFE Steel created a Senior Expert Program for rehiring employees who reach the mandatory retirement age of 60. As of April 2013, JFE Steel had rehired approximately 1,170 retirees under this program. Furthermore, the company is devoting significant time and effort to establish a program to help junior and midlevel employees improve their techniques and skills. Rehires support the program as instructors and pass on their knowledge.

Engineering also has a reemployment system to transfer the skills and project experience of veteran employees to younger generations. The company has established a wholly owned subsidiary, JFE Career Navi, to aid in the continued careers of such retirees.

To promote work sharing at JFE Shoji Trade, a reemployment system was introduced to enable retired employees to be rehired and work until the age of 65. In consideration of work-life balance, employees may choose from a variety of working arrangements, including full-time, shortened work weeks or shortened working hours.



Providing instruction in hydraulic equipment operation

Employees

Positive, Productive Working Environments

Human rights course trainees in FY2012

JFE Steel: **3,316**

Respecting Human Rights

The JFE Group, viewing respect for human rights as both a corporate social responsibility and a foundation of management, works to raise awareness of human rights among all employees. Specific examples include appointment of employees to oversee human rights education, implementation of human rights training courses, and guaranteed employment opportunities and promotion of fair human resource management.

Sexual and other harassment is prevented through measures including the establishment relevant work regulations, holding training, displaying posters, and setting up hotlines staffed by multiple men and women at each business location. Training also covers the prevention of power and other harassment. During Human Rights Week, leaflets with messages from senior management are distributed and employees are encouraged to submit related slogans.



Poster about preventing sexual and other harassment

Employee Health and Safety

Providing for the safety and health of employees is a basic requirement of manufacturers and fundamental to the continued existence of any company.

Based on its fundamental belief in the philosophy of "safety first" as declared by the company president himself, JFE Steel strives to enhance its safety measures through three key management pillars: promoting the autonomous resolution of issues in districts and workplaces, strengthening health and safety at Group companies and promoting mental and physical health.

JFE Engineering works to achieve safety through risk assessment and the promotion of mental and physical health at approximately 2,000 construction and other work sites of the group in Japan. The overall aims are to eliminate accidents and improve safety and health.

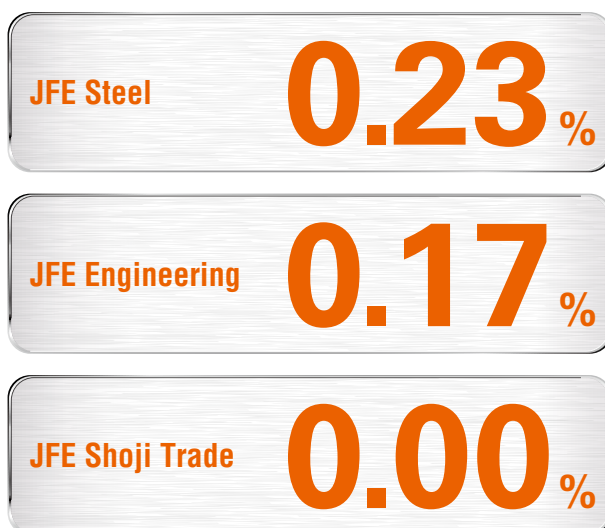
At JFE Shoji Trade, all employees participate in health and safety activities aimed at eliminating potential dangers under the slogan "creating an accident-free workplace through resolve."



Occupational Safety and Health Forum

Health and safety poster

Rate of lost-work time injuries for FY2012



Disaster-prevention Measures

Drawing on the experiences of the 2011 Great East Japan Earthquake, JFE Steel is further strengthening its disaster preparedness. Measures include new evacuation procedures in the event of a tsunami, stockpiling emergency supplies of food, water and so on, strengthening company-wide command and control functions, and enhancing the backup of important data. Preparations are reviewed in line with national and local government studies, and capabilities are being enhanced through drills and other activities.

All employees at JFE Engineering have been issued a portable Earthquake Disaster Manual that specifies what employees should do during a major disaster.

JFE Shoji Trade has also developed manuals on damage prevention and initial responses to disasters, as well as related procedures for workplace managers. Also, a system has been established for confirming the safety of employees and their families during natural disasters. Going forward, the company will promote awareness and education to heighten daily awareness of disaster prevention and ensure that employees conduct themselves calmly in the event of unforeseen circumstances.

Health Management

The JFE Group carries out health management initiatives to ensure that all employees can fully exercise their capabilities while maintaining healthy minds and bodies.

JFE Group Initiatives

- Preventive measures for workplace-related illness, including improved working environments, appropriate work demands, and occupational health education
- Regular physical examinations
- Physical examination follow-up (counseling and adjustments in assignments, as required)
- Treatment and follow-up by partner hospitals and their networks
- Mental health care (counseling services, enhanced education of managers, care for those in need, etc.)

JFE Steel initiatives (besides above)

- Review of health-management measures at industrial physician meetings
- Hosting of case-study reviews by industrial physicians
- Operation of health management systems
- Achievement of an occupational health management system (expansion to occupational health management)
- Specialized healthcare advice
- Preventive measures against new influenza
- Measures regarding passive smoke (monitoring changes in legal requirements)

Development of Dynamic Work Environments

Building Sound Labor-management Relations

The JFE Group works to build sound, constructive labor management relations.

Believing that honest communication is the foundation for sound labor-management relations, JFE Steel convenes the Labor-Management Business Discussion Committee four times a year to bring the company's president and other executives together with labor representatives.

JFE Engineering, along with their Central Labor-Management Committees, creates additional opportunities for their presidents and other executives to share opinions with labor representatives.

JFE Shoji Trade management and labor regularly exchange opinions and share information based on joint declarations signed by the two sides to form bonds of deeper trust.

Dynamic Workplaces through Small-group Activities

Throughout JFE Steel, approximately 1,500 small groups carry out J1 Activities* for quality and work improvement. In addition, the JFE Family Result Reporting Conference, which includes participation from domestic and overseas group companies, is organized twice a year and groups selected through competition are given opportunities to go overseas as an incentive.

Similarly, about 200 small groups participate in JE1 Activities* at JFE Engineering, bringing work units together to tackle key issues in the workplace.

Since October 2008, JFE Shoji Trade has implemented company-wide activities (J-SLIM) to improve work conditions. Efforts include system examinations and measures to improve management, work environments and line work.

In 2012, during the fourth J-SLIM presentation held at the Tokyo head office, 50 employees from three domestic companies, including JFE Shoji Trade, and two overseas Group companies, presented activities at the companies where they work.

* Activities to propel JFE Steel and JFE Engineering to the tops of their respective industries

Awards and Accolades

Employee Recognition Awards

The JFE Group has an awards program for recognizing the outstanding accomplishments of employees, companies and organizational units with regard to activities and operations.



JFE Steel President's Award ceremony

Internal Awards

Name of Prizes/Awards	Reasons for Award Selection	Award-winning Departments
JFE Steel: JFE Steel President's Award	Five awards for excellence in restructuring distribution backbone systems (J-LOAD®), others	Distribution Supervisory Department and others
JFE Steel: New Product Development Award	Mighty Seam® advanced electric-resistance welding line pipe BN Leaf Powder™ boron nitride for cosmetics	East Japan Works (Keihin District) Welded Tube Department & others Mizushima Ferroalloy Co., Ltd.
JFE Engineering: Award for Best Invention	Rapid-installation hybrid seawalls	Coastal Steel Structure Department, JFE Engineering Steel Structure Headquarters

External Awards

Prizes/Awards	Sponsors	Projects
Minister of Education, Culture, Sports, Science and Technology Award Commendation for Science and Technology, Development category	Ministry of Education, Culture, Sports, Science and Technology	Spray transfer carbonic acid gas arc welding technologies for superior construction (JFE Steel & others)
45th Annual Ichimura Industrial Awards — Contribution Prize	The New Technology Development Foundation	Steel tube braces with superior designing for seismic resistance and safety in buildings (JFE Steel & others)
59th Okochi Memorial Manufacturing Prize	Okochi Memorial Foundation	Energy-saving coke manufacturing technologies for more efficient use of coal resources (JFE Steel & others)
Nikkei Global Environmental Technology Award for Excellence	Nikkei Inc.	Used plastic pulverization technology for steelmaking (JFE Steel)
National Technological Development Award	Japan Institute of Country-ology and Engineering	Multi-story container storage (JFE Engineering)
Achievement Award	Japanese Society of Steel Construction	Singapore Sky Park construction project using large hanging block construction method (JFE Engineering)
32nd Engineering Award	Engineering Advancement Association of Japan	Earthquake Disaster Reconstruction Team (JFE Engineering & others)
Minister of Land, Infrastructure, Transport and Tourism Award for Distinguished Maritime-Related Service	Ministry of Land, Infrastructure, Transport and Tourism	Development and application of groundbreaking ship rudder that significantly improves ocean vessel propulsion efficiency (JFE Engineering)



Third Party Comments



Yoshinao Kozuma
Professor
Faculty of Economics
Sophia University

1. Selecting Better Reporting Media

The JFE Group has been improving its sustainability reporting since 2002, when the first environmental report was released, by the effective application of different reporting media. This slow but steady progress has been achieved through a continuous process of trial and error, which is symbolic of the JFE Group approach.

The environmental report was integrated into the Business Report in 2006, whereas detailed environmental information was compiled in the Environmental Sustainability Report published on the corporate website. From 2008, the Social Performance Report was added, establishing a social and environmental reporting structure, and the Business Report became an integrated report that included only material social and environmental information. After that, sustainability reporting was separated from the Business Report in 2011 to prepare the CSR report. Last fiscal year, the CSR report was divided into three publications—a highlights version, a detailed version and a booklet of environmental data. This fiscal year, the JFE Group has attempted to create a PR magazine-style report without compromising the function of sustainability reporting, clarifying the roles shared by two different reporting vehicles: the CSR report evolved from the detailed report and a highlights version designed for a wider range of readers.

Sustainability reporting changes in response to social needs. The JFE Group's report has also gone through many permutations in light of current needs, pursuing various possibilities from unique perspectives. I hope the JFE Group will steadily continue to realize further improvements going forward.

2. Expanding Reporting Scope

As steelmaking is the Group's core business, the JFE Group is responsible for large amounts of greenhouse gas emissions. However, given that steel is an indispensable material for modern industrialized societies, it

should be noted that the Group's emissions in terms of environmental efficiency are low enough to make it one of most efficient companies in the world.

Furthermore, the Group's highly promising range of environmentally focused technologies and ongoing related R&D activities are particularly noteworthy. In past reports, these technologies have been regularly introduced and their richness and variety always makes me surprised. These technologies are expected to make a great contribution to the establishment of a sustainable society demanding increased energy and resource efficiency. Moreover, it is also worth mentioning that these technologies have the potential to be drivers of further corporate growth.

However, reporting that provides an overview of the entire value chain is also important. The report should provide details on CSR activities within the supply chain and not focus only on contributions to downstream emissions.

3. Some Challenges in Reporting

As the JFE Group improves its reporting methods, challenges in reporting become apparent. The most critical of these are reporting boundaries. Though the scope includes only three parent companies under the holding company, the report refers to other Group companies and an industrial association in addition to these three companies. This potential confusion should be rectified by refocusing the reporting scope on a financial consolidation basis. Another significant challenge involves progress management, which covers only environmental material issues. The scope of management should be expanded to include social issues so that stakeholders can easily understand the overall function of CSR management. Also, transparency could be improved by further developing reporting skills. For example, proper positioning of the Standards of Business Conduct would clarify the relationship between environmental and CSR management.

We received many responses to our CSR Report 2012 (environmental and social report). In this section we introduce some of the valuable opinions and thoughts received from readers.

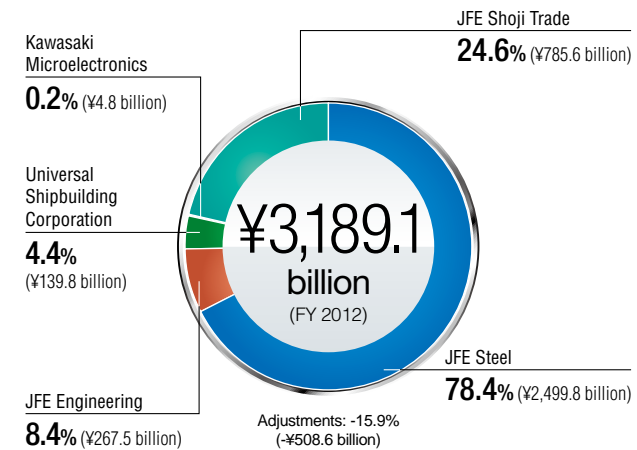
Opinions	Editing Department Comment
I have even greater hopes for initiatives targeting post-earthquake reconstruction and environmental issues. The pictures and graphics in the Highlights Version made it easy to visualize concepts.	In response to last fiscal year's three-part report, which consisted of the Highlights Version, Detailed Version and Compilation of Environmental Data, many readers found the content easy to read and understand. For this reason, we decided to present the information in separate versions again this year. Furthermore, this year's CSR Report provides additional detail and a special features section focused on the JFE Group's post-earthquake reconstruction efforts and environmental technologies.
I was left with a favorable impression of the JFE Group's environmental protection initiatives. I can see that you have concern for the Earth's environment and that you have been able to significantly reduce air pollutants and CO ₂ emissions from the past. Please continue implementing these kinds of environmental protection initiatives.	As one of its most important environmental activities, JFE Steel continues to implement initiatives targeting global warming in line with the Low-Carbon Societies Implementation Project (2013-2020), an action plan lasting until 2020 that was formulated by the Japan Iron and Steel Federation. JFE Engineering also is engaged in activities such as demonstration testing of an innovative CO ₂ reduction method to store CO ₂ deep underground.
I am very interested in the potential of geothermal and other types of power generation.	JFE Engineering has a wealth of experience with geothermal power generation, both in Japan and overseas. Please see page 18 of the Highlights Version and page 46 of the CSR Report for detailed information regarding binary geothermal power generation, a cutting-edge technology that is also eco-friendly.
I felt that I wanted to know more about your involvement in regional communities.	We are engaged in various regional support activities. Six JFE Steel and JFE Engineering business bases hold events and sports classes for regional communities across Japan. Also, the JFE Shoji Trade Group donates desks and chairs to elementary schools in South Africa and cooperative support is provided to communities involved in steel through the JFE 21st Century Foundation.

Company Overview

Company Name: JFE Holdings, Inc.
Head office: 2-2-3 Uchisaiwaicho, Chiyoda-ku, Tokyo 100-0011
Tel: +81-3-3597-4321
Established: September 27, 2002
Capital: 147.1 billion yen
Shareholders: 304,266
URL: www.jfe-holdings.co.jp/en

JFE Holdings performs the key roles of strategic planning, risk management and external accountability as the holding company of the JFE Group, enabling Group companies to devote their full attention to the enhancement of competitiveness and profitability.

Consolidated Sales Breakdown As of March 31, 2013



On July 1, 2012, MegaChips Corporation acquired a 100% stake in Kawasaki Microelectronics, Inc., resulting in the termination of the LSI business reporting segment from the second quarter of the fiscal year. On October 1, 2012, JFE Shoji Trade Corporation was made a wholly owned subsidiary through a share exchange and became a trading business reporting segment from the third quarter. On January 1, 2013, the JFE Group's Universal Shipbuilding Corporation and IHI Marine United Inc. merged to create the equity-method affiliate Japan Marine United Corporation, resulting in the termination of the shipbuilding business reporting segment from the fourth quarter.

Steel Business

JFE Steel Corporation
 Head Office: Chiyoda-ku, Tokyo
Sales: ¥2,499.8 billion
Employees: 42,519

Engineering Business

JFE Engineering Corporation
 Head Offices: Chiyoda-ku, Tokyo/
 Yokohama, Kanagawa
Sales: ¥267.5 billion
Employees: 7,379

Trading Business

JFE Shoji Trade Corporation
 Head Offices: Chiyoda-ku, Tokyo/
 Kita-ku, Osaka
Sales: ¥785.6 billion (semiannual)
Employees: 5,980

Comparison with Environmental Sustainability Report Guidelines 2012

□ Page in data compilation

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(7) Eco-Friendly Waste Disposal and Recycling	29-30 36 37 47 1-2 17-18	Energy and Material Flows in Steelmaking (JFE Steel) Reducing and Reusing Byproducts (JFE Steel) Recycling (JFE Engineering) Recycled Product Case Studies Materials Balance (JFE Steel) Disposed Substances (JFE Engineering)
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□ Page in data compilation

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Note: Comparison with CSR Report and Compilation of Environmental Data.



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