

Customer Responsibility (Provide Quality Products and Enhance Customer Satisfaction)

JFE Group Standards of Business Conduct

(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. Also, leverage our superior technologies for the sustainable growth of the Group and society.

Quality Initiatives

The JFE Group manages quality by ensuring compliance with quality standards set by each operating company. All manufacturing sites that require ISO 9001 certification for their quality management have been duly certified.

Strengthening Quality Assurance System

JFE Steel

To serve customers by meeting their quality requirements and delivering products that boast the world's highest quality, JFE Steel has established a quality assurance system with advanced sensors for process monitoring, in addition to its ongoing efforts to develop new products and advanced manufacturing technologies.

The company's quality assurance system is being continually improved based on the Guidelines for Enhancing Quality Assurance Systems, issued by the Japan Iron and Steel Foundation (JISF). Moreover, in an effort to enhance reliability in its product testing, the company has introduced high-precision equipment and is working to thoroughly eliminate human error and data tampering by automating various testing components, including reporting.

JFE Steel has received all quality assurance certifications required for steel products, including the JIS mark and approvals from ship classification bodies, regarding its quality management system based on ISO 9001. In response to customer demand, the company has also received certification under the national standards of relevant foreign countries.

JFE Engineering

Products and services that JFE Engineering designs, procures, manufactures or constructs must comply with all required rules and regulations, and quality must satisfy the needs of our customers. Under this corporate policy, the company continually strives to improve the quality of its products and services.

For example, certified inspectors conduct inspections at each phase of a plant construction project, including the design, construction, and test-run phases. Immediately prior to final delivery to the customer, a witness inspection is conducted so that the customer can be directly assured of its quality with their own eyes.

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In addition, JFE Engineering has published quality-management manuals based on the specific characteristics of each product and obtained ISO 9001 certification for each product category.

To further strengthen its quality assurance system, JFE Engineering is raising employee awareness through training while also seeking to prevent omissions in inspection data and data tampering by introducing an electronic document processing system into quality inspections.

JFE Shoji

JFE Shoji is constantly striving to enhance the level of its quality assurance. Its processing centers in Japan and abroad are systematizing and automating operations to eliminate human errors. Raising employee awareness is essential for preventing human error at every stage, including receiving orders, processing and shipping. The company continues to strengthen quality education for employees by introducing case studies of non-conformance at other companies as well as at Group companies in Japan and abroad. JFE Shoji also conducts a quality audit at all relevant Group companies in and outside of Japan to confirm the quality of each processing center and to provide advice. Moreover, it follows up as necessary by continuously monitoring the progress of improvements to maintain and enhance the level of quality assurance.

Ensuring Stable Supply

JFE Steel

Under its Sixth Medium-term Business Plan, JFE Steel is continuously strengthening its manufacturing base while also seeking to bolster the capabilities of the West Japan Works by maximizing its performance. The company is establishing a system for promoting stable furnace operations and introducing technologies and facilities for detecting abnormalities at an early stage of operation. Through these activities JFE Steel will realize stable facility operations and production to continue providing high-quality products to customers.

Meanwhile, the global spread of COVID-19 has caused a rapid downturn in the world economy and stagnation in the Japanese economy, resulting in dramatically significant declines in demand. We have responded with a thorough commitment to efficiency from the rolling process upward by front-loading renovation work for the No. 4 blast furnace in the Kurashiki district and banking (suspending operations) at the No. 4 blast furnace in the Fukuyama district to shift temporarily from a system of eight furnaces to six.

JFE Engineering

As a licensed contractor undertaking mechanical, civil engineering, and construction work, JFE Engineering is required by the Construction Business Act to assign dedicated managing engineers at construction sites to oversee the technical aspects of construction work. The smooth implementation of plant construction projects depends on licensed specialists. The company is always striving to secure the necessary human resources by encouraging employees to acquire qualifications by granting expenses and through mid-career hiring of licensed personnel.

JFE Shoji

JFE Shoji will maintain and expand its processing and distribution operations to ensure stable supply by strengthening regional marketing channels, making capital investments for the Group and raising efficiency to realize an optimal system for sales and processing.

Improving Customer Satisfaction

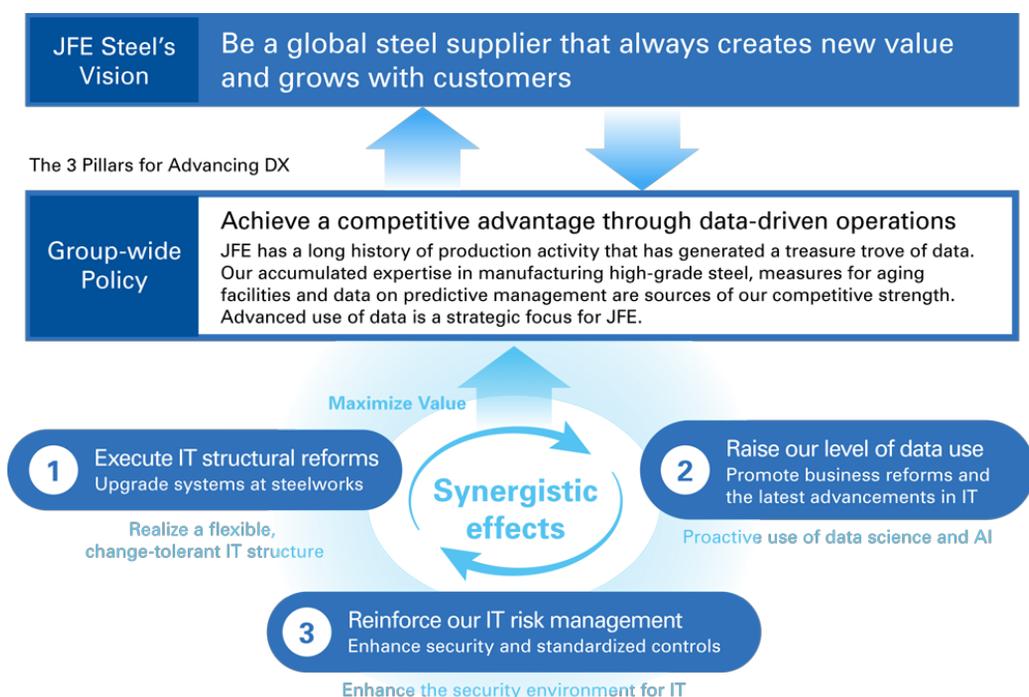


Aggressive Advancement of DX

JFE Steel's Digital Transformation (DX) strategy revolves around technological innovation based on the active introduction of IoT, AI and data science (DS) and the application of data assets. Compared to mills in other countries, we possess an enormous amount of know-how and data accumulated through many years of production operations. Our abundant data assets are the source of our value creation.

We will harness the latest DS and AI technologies to make versatile use of such data in achieving innovative improvements in productivity, enhancing quality and ensuring stable operations to raise our competitiveness.

■ Advancement of Digital Transformation (DX)



Testing and Research Centers for Collaboration with Customers on Product Development

JFE Steel collaborates with customers in research and development. The Customers' Solutions Lab (CSL) for auto industry customers, the Steel Structural Materials Solutions Center (THiNK SMART) for infrastructure-related customers and the JFE Welding Institute - Center for Integrity against Fatigue and Fracture (JWI-CIF²) are located in eastern Japan, while the Customer Center Fukuyama (CCF), which develops materials and conducts applied technology research, is in western Japan. Using these facilities to strengthen early vendor involvement (EVI)* enables the company to quickly identify customer needs and develop products based on cutting-edge evaluation techniques and innovative production processes.

* Customer participation in product development is from an early stage to facilitate innovative new methods, functions, processes and evaluations for new steel materials.

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Customers' Solutions Lab (CSL)

Unified Customer Care

JFE Steel regularly conducts customer questionnaires and interviews to draft strategies for greater customer satisfaction. Business strategies are shared among the sales divisions, business sectors and steelworks to facilitate unified customer care and proposals that leverage the collective strengths of the JFE Group.

Training Sales Personnel to Excel in Customer Relations

To strengthen customer-oriented sales efforts, the Sales Department holds training sessions by position and job, according to their work experience, targeting sales personnel from the headquarters and branch offices (i.e., newly appointed sales employees, mid-rank sales employees, managers and other office heads). The department also provides group training in Japan for regional employees of overseas offices to enhance job performance. Training goals include developing abilities in areas such as engaging in technical conversations, picking up clues from customer relations and using them in product development, offering suggestions to improve logistics and distribution, and analyzing financial indicators and costs.

JFE Engineering

Company Assessments Based on Customer Evaluations

JFE Engineering uses customer surveys, interviews, and contractor performance evaluation forms to collect and assess data on the company's construction management, quality, advanced technologies and innovation. Each division analyzes and applies the data for quality improvement, new product development and the overall strengthening of aftersales service, to ultimately enhance customer satisfaction.



JFE Shoji

Meeting Customer Needs

To respond quickly to diversifying markets and increasingly sophisticated requests from customers, JFE Shoji is strengthening its entire supply chain from materials procurement to processing and distribution.

The company is also aware that equipping employees to respond with information and proposals is a key element in serving customers and provides training to upgrade their abilities. Furthermore, selected regional employees of overseas subsidiaries and offices receive group training in Japan to strengthen the satisfaction of the company's customers in Japan and overseas.

For more details related to customers, please refer to the following information.

▶ [ESG Data: Social Data](#) (P. 187)

Responsible Export Practices

Each JFE operating company promotes international peace and security by working against the spread of weapons of mass destruction and excess accumulation of conventional weapons. Specifically, the company carries out internal inspections to confirm the final destinations, customers and applications of its exported products, and then ensures that export procedures are carried out properly. In addition, the Legal Affairs Department conducts internal briefings to disseminate knowledge of export-related laws and regulations, such as the Foreign Exchange and Foreign Trade Act. Also, JFE provides education on export security controls and related measures for the employees of Group companies involved in trading.

Promotion of Research and Development



JFE Steel

JFE Steel views automobiles, infrastructure materials and energy as the three key areas for research and development. In each area, the company intends to accelerate the pace of introducing new products and solutions. In regard to its manufacturing process, the company will work on developing innovative manufacturing technologies such as eco-friendly raw material pre-processing. These technological developments leverage data science and robotics to closely align with the needs of customers and society at large.

JFE Steel plans to invest 110 billion yen into research and development over the span of three years, starting in 2018.



JFE Engineering

JFE Engineering develops technology as a company that “creates and continues to care for the foundation for life.” In regard to “create,” the company developed its own combustion technology for waste-treatment and power-generation facilities. In the area of “creating” the foundation, the company developed proprietary high-efficiency boilers that realize stable, clean incineration treatment and generate power at the highest level of efficiency in Japan. In the area of “care” JFE Engineering continues to develop technologies that collect and analyze a range of data from the plants it operates in Japan as well as technologies that utilize AI to achieve optimal plant operation and automation.

Internal Awards

The following technical and product developments were awarded in FY2019.

■ Internal Awards (FY2019)

	Prize/Award	Project	Recipient
JFE Steel	Excellence Award, JFE Steel President's Awards	Realization and deployment of surface inspections based on the twin-illumination and subtraction technique	Cyber-Physical System Research & Development Dept., Steel Research Laboratory and others
		Development of a topology optimization technology for reducing automobile weight	Forming Technology Research Dept., Steel Research Laboratory and others
		Establishment of a manufacturing technology based on the endless rolling process for high-quality, hot-rolled high strength steel	Hot Rolling Dept.t, East Japan Works (Chiba district) and others
		Early start of stable operations at JSGT, and expansion in profit and production capacity through concerted improvement activities by local staff	JFE Steel Galvanizing (Thailand) and others
JFE Engineering	Grand Prize, JFE Engineering President's Awards	Advancement of an operation technique for incinerators based on flame image processing	Research Center of Engineering Innovation and Environmental Solutions Sector Innovation Center

For more on external awards, please refer to the following information.

▶ [External Awards](#) (P. 201)