

# FOREWORD



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As our environmental philosophy, “the JFE Group considers the improvement of the global environment to be of the utmost importance for management, and promotes business activities in harmony with the environment to create a prosperous society.” Based on this policy, the member companies of the JFE Group are working to reduce environmental loads and achieve energy conservation through reduction of discharges accompanying business activities, utilization of used plastics in iron- and steelmaking processes by plastic recycling, high efficiency replacement of power generating equipment and expanded use of waste heat recovery equipment.

To respond to the challenge of climate change, which is the most important issue for management, we formulated the “JFE Group Environmental Vision for 2050,” and are accelerating efforts toward CN (carbon neutrality) and efforts for CO<sub>2</sub> reduction in production processes. In the environmental and energy field, in addition to our efforts to date, we are now promoting various types of technology development such as gasification of plastics, new waste heat recovery technologies and CO<sub>2</sub> utilization among others, from the perspective of effective utilization of new energy sources.

In recent years, the aim of achieving a transition from consumption-driven socioeconomic activity to a circular economy that utilizes resources in a sustainable way has become a global trend. To address these needs, the JFE Group is working to develop recycling technologies that recover valuable resources from dust and waste as technologies that can contribute to the future. In addition of resource-saving, technologies of this type are also expected to lead to process omission in the manufacturing processes of valuable products, making it possible to reduce energy consumption in those manufacturing processes.

In its Seventh Medium-Term Management Plan (FY2021-FY2024), the JFE Group is grappling with the largest reforms since its establishment. We are also promoting the development and deployment of DX (digital transformation) technology, which is a critical strategy

that will be the key to accomplishing those reforms, in the environment and energy field. Because a steel works has a large number of manufacturing processes spread across an enormous site, we are working to develop and introduce technologies that employ drone technology and ICT (information and communication technology) to monitor this scattered equipment, as well as technologies for monitoring the advance signs of equipment anomalies and environmental monitoring technologies using a combination of advanced sensing technologies with AI. To collect the large volumes of data and minimize energy loss in the steel works, we have developed and adopted operation guidance systems that utilize model-based predictive control technologies. The adoption of these technologies has already produced substantial results in the form of stabilization of production equipment, cost reduction, and alternatives to experienced technical personnel.

Based on the JFE Group's Corporate Philosophy of "Contributing to society with the world's most innovative technology," we will continue to promote reduction of environmental loads in production processes and recycling, as well as effective utilization of energy in order to contribute to society. We sincerely request your further guidance and support in the future, as in the past.