

FOREWORD

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In this JFE Technical Report, we are publishing a Special Issue focusing on the sales, production and logistics field for the first time in 11 and a half years, since August 2011. Although separate divisions in charge of sales, production and logistics have been established in JFE Steel, the company has created a committee called the Sales, Production, and Logistics Technology Subcommittee, with members including the IT departments and research division in addition to the sales, production and logistics divisions, in order to achieve integrated management of sales, production and logistics horizontally across those divisions, and is working to strengthen coordination spanning the company's various production sites/divisions and optimize operations as a whole.

In recent years, the changes in the external environment surrounding the iron and steel industry have been both large and rapid. Globally, competition is becoming increasingly more intense, centering on Asia, and efforts to reduce CO₂ emissions as a countermeasure against the climate change problem have become an urgent issue common to all countries. Turning our gaze to Japan, labor shortages are becoming more serious associated with the problems of a low birthrate, aging society and declining population, and from this viewpoint, improvement of labor productivity through automation and labor-saving is also an urgent challenge.

Among the internal changes in JFE Steel, the upstream processes (ironmaking and steel-making) and hot strip mill at East Japan Works Keihin District are scheduled to be shut down during fiscal year 2023. Although the Keihin District will transition to a production system which uses semifinished goods supplied by the company's other plants, mainly as a base for production of plates for construction materials and steel pipes, further efforts to strengthen the linkage between bases and achieve higher efficiency in logistics will be necessary to ensure smooth operation of this system.

JFE Steel is working to improve its technical capabilities and competitiveness in all fields in order to respond to these various changes. From the establishment of JFE up to the present, we have devoted great effort to automation and labor-saving utilizing digital technologies, and to accumulating and visualizing information embodying the experience and intuition of veterans. Concrete examples of these activities, such as automation of crane operation, are also

described in the papers included in this Special Issue. In the future, we will also actively utilize advanced technologies, beginning with AI and big data, and promote digital transformation (DX).

Regarding our response to the problem of climate change, the JFE Group has established the “JFE Group Environmental Vision for 2050” toward achievement of carbon neutrality in 2050, and is grappling with green transformation (GX) by developing various types of technologies that can contribute to reduction of CO₂ emissions in the steel manufacturing process and reduction of CO₂ in society as a whole with the aim of realizing a sustainable society.

On the other hand, even in the midst of these reforms in the work system and our business model as a steel company, as seen in DX and GX, there are also things that remain unchanged: The prime example is the importance of customer satisfaction (CS), and in pursuit of this goal, it is necessary to improve Quality, Cost, Deliver and Development (QCDD). On this point, shortening production time and transportation time can be mentioned activities that are deeply related to sales, production and logistics. In this regard, we have accumulated various activities in the past, including slow-but-steady improvements. Continuing from those efforts, together with incorporating the results of these steady activities, we will also utilize advanced technologies. I believe that shortening the time required for these various processes is not only a weapon for responding to timely delivery, but will also lead to strengthening of cost competitiveness and improved cash efficiency through inventory reduction.

Together with responding quickly and flexibly to all types of environmental changes, the sales, production and logistics divisions, as one, will also work to improve competitiveness in the future in order to contribute to society and ensure that customers will continue without change to choose JFE Steel.