

FOREWORD

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Reduction of emissions of greenhouse gases (GHG) based on the Kyoto Protocol began in April 2008. The importance of a sustainable society harmonized with both the economy and the environment has been recognized anew, and the formation of a recycling-oriented society, which makes a major contribution to CO₂ reduction, is demanded. As a good corporate citizen, JFE Group is striving to contribute to the achievement of better living standards and the creation of a society that exists in harmony with the global environment.

“Iron and steel slag products” use byproducts from the iron and steel making process as recycled resources. In Japan, 40 million tons of these slag byproducts are produced each year. Iron and steel slag products have been used as valuable materials since the 16th century in Germany. In Japan, various kind of slag product applications have been developed, such as raw material for cement, material for civil construction, base course material for roads, fertilizer, and so on. The JFE Group investigates slag product applications not merely in such traditional areas, but also in original research areas which take advantage of the properties attributed to iron and steel slag products, such as water-retaining paving materials to alleviate the urban “heat island” phenomenon, materials for restoring coral reefs, and others. The use of iron and steel slag products can contribute to society in conservation of the natural environment as a substitute for natural resources and in reduction of CO₂ emissions.

As another viewpoint, it is also important to focus on general waste disposal in order to build a recycling-oriented society. The JFE Group has developed a variety of recycling processes based on our steel industry and engineering businesses, and proposes various kinds of environmental solutions in line with the needs of customers and society.

This issue of JFE Technical Report is presented as a special edition of “Environmental Engineering Technology,” focusing on two main topics with “slag products” as a key word: production and utilization technologies for iron and steel slag products, and technologies of various types for waste processing. In the area of iron and steel slag products, not merely traditional applications, such as granulated blast furnace slag and materials for civil

engineering applications, but also new technologies that contribute to improvement of the marine environment are introduced. In the second category, our original melting facilities for various types of waste and application of their products are introduced.

The JFE Group firmly pledges to contribute to society through the development and supply of advanced technology and better products and services, not limited to iron and steel products, but also including slag products and the field of environmental engineering technology, under our Corporate Vision of “contributing to society with the world’s most innovative technology.” We hope that this issue will be helpful in realizing the properties of slag products, and will contribute to building a recycling-oriented society.