

Remarks on Special Issue on Steelmaking

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The company name was changed in April 2019 to Nippon Steel Corporation. In May 2019, the Japanese era name was also changed to Reiwa. We are pleased to publish the Special Issue on Steelmaking as Nippon Steel Technical Report in this commemorative first year.

The last special issue on steelmaking was issued in 2012 as the former company's Nippon Steel Technical Report before the business integration. Seven years later, the former company and Sumitomo Metal Industries, Ltd. have merged. The integration of the two companies' technologies that were improved by steel engineers of the two companies including senior members has advanced our steelmaking technologies considerably.

Meanwhile, during the period, the environment surrounding our company has significantly changed. The crude steel production in the world increased by 2.5 hundred million tons and reached 18.1 hundred million tons in 2018. Most of the rise was the production increase in China. In addition, the crude steel production in India exceeded one hundred million tons in 2017 and in 2018 India overtook Japan to take second place following China. Since the productive capacity has been continuously enhanced mainly in Asia like this, we are involved in fierce competition in the sector of general-purpose products, so we need to continue developing products with higher value added while maintaining cost competitiveness.

Under these circumferences, in the refining operation, we have been reducing the cost in the converter process by increasing the hot metal pretreatment ratio, dividing pretreatment processes, and recycling slag while working actively for environmental harmony by reducing slag volume discharged in the steelmaking. In the continuous casting, we have been continuously working to manufacture higher-grade cast metal to satisfy the quality demanded by customers as before. In addition, as themes common to the refining and continuous casting, we have been focusing on stabilizing production and improving the productivity.

This special issue on steelmaking introduces the latest topics—mainly papers and reports on the work mentioned above. The previous Technical Report on steelmaking was issued for the first time approximately 20 years ago, so it summarized the history of steelmaking technology development. This special issue shows the specific technologies that have advanced in the seven years since then.

We would appreciate it if you read this issue to familiarize yourself with our work in the steel-making sector and give us your guidance and encouragement.