



Remarks on Special Issue on Iron and Steel Slag

Junji IGAWA

General Manager, Head of Div., Slag & Cement Div.
(Managing Director, Technical Div., Nippon Steel & Sumikin Slag Products Co.,Ltd.)

Annual production of iron and steel slag in Japan is approximately 40 million tons, of which Nippon Steel & Sumitomo Metal Corporation accounts for nearly 50%, or 19 million tons. To process such large volumes of slag into products that benefit our society and to maintain the balance between the production and selling of slag products at all times is an important task of the company's slag business. In addition, it is expected that advertising iron and steel slag products as an eco-friendly material will not only allow saving valuable natural resources but will also help to realize a low-carbon society through the use of slag as a raw material for cement, restoration of kelp grounds in sea areas, etc.

At present, the company has just managed to secure the balance between production and sales through the promotion of slag recycling inside and outside the company, development of new products, exploitation of new markets, unyielding efforts of the sales department, and the synergism thereof. However, in view of the shrinking market for slag products that reflects the anticipated reduction of future public investment and the changing environmental conditions, such as the growing public consciousness regarding environment and the tightening of environmental regulations, it is necessary to tackle the development of new products and technologies, to enhance values, and to gain public recognition—all for slag products—with due consideration toward building a more sustainable society in order to secure the stable balance between production and sales in the future.

With respect to blast furnace slag, its value addition has been appreciably enhanced by the efforts of the concerned people inside and outside the company. As a result, blast furnace slag has become a useful resource at home and outside. The company intends to continue its research and development for further enhancement of the value added of blast furnace slag, including the use of slag to realize a low-carbon society and to develop a high-quality cement concrete product.

In regards to steelmaking slag, on the other hand, there are two problems that must be solved, i.e., the expansion of slag and the alkali elution from slag. In fact, how to effectively control these problems has been the main focus in the development of steelmaking slag technology. Even today, it is recognized as a priority and the company is handling product development that will permit the improvement in steelmaking slag.

The company's business policy and priority on slag cement is based on compliance, balance, and cost. In line with that policy, the research department has cooperated with researchers in diverse fields discussing various technical problems for reducing the unit volume of sales through the promotion of slag recycling, assessing the environmental impact of slag products, developing new products, restraining slag expansion, and so on.

The company's research department is determined to continue making an all-out effort to develop and introduce new products of iron and steel slag, an attractive eco-friendly material, in the market. I am looking forward to the continued support and cooperation of all the concerned people inside and outside the company.