

Remarks on Special Issue on Stainless Steel



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If you take a moment to look around, you will quickly recognize how important a material stainless steel is, since it is already used in many daily necessities and yet its scope is ever increasing, although you are probably not keenly aware of those facts in everyday life. Consider, for example, a water tank made from stainless steel panels. It is fabricated by joining together rectangular stainless steel panels which have been worked at the center. Today, glistening stainless steel water tanks can be seen in various places—on the roofs of buildings, in local neighborhoods, even on golf courses. In recent years, they have rapidly become more widespread not simply for their aesthetic appeal, but also because they have proved to be much sturdier in the past than conventional water tanks during several major earthquakes. Stainless steel is also being increasingly used in vehicle exhaust systems, although that is hardly evident from the outside. Until about 20 years ago, aluminum-plated steel sheets were primarily used for such exhaust systems. With the rise in temperature of exhaust gases from vehicles as a result of advances in environmental measures, there was a shift to stainless steel, as it offers both superior heat and corrosion resistance. Stainless steel is used for the drums in washing machines too. Since stainless steel affords advantages not only in terms of cleanliness but also strength, it can be used to make a sturdier drum, which permits the manufacturing of a larger washing machine. Stainless steel bodies have also become the mainstream for railway carriages, since they

are lighter and more durable than conventional car bodies.

Thus, stainless steel plays an important role and has been developed as a fundamental material to help improve our standard of living, enhance convenience, achieve social risk management goals, save energy, conserve the environment, and so forth. In the future, from the standpoint of protecting the global environment too, it is necessary to accelerate the shift towards a resource-saving, recycling-based, sustainable society. Since stainless steel has a number of excellent properties and can be recycled easily, it will be of great help in meeting that challenge. Accordingly, demand for stainless steel is expected to continue increasing significantly in the future.

With “Contributing to society through stainless steel” as its basic philosophy, Nippon Steel & Sumikin Stainless Steel Corporation (NSSC) has energetically developed and proposed new materials, new production techniques and new application methods to its customers in order to supply higher-performance products at reasonable cost and on a stable basis, and thereby help to meet contemporary needs. This Special Issue on Stainless Steel contains articles on the company’s efforts to develop new products and new technologies. Although space is limited, it reviews recent trends in the stainless steel market and the major advances in stainless steel products and production techniques that have been achieved in the past. In addition, it describes the development of materials and production techniques in the fields of sheet, bar and wire rods, and plate. It also describes application and evaluation techniques that help to make the most effective use of stainless steel. As part of the company’s contribution to creating a recycling-based society, the technology for recycling the slag byproducts from its manufacturing processes is discussed briefly.

As a specialist stainless steel manufacturer in the Nippon Steel Group, NSSC is determined to exert its utmost efforts to meet customer needs and contribute to society by proposing new products and solutions. In these endeavors, we very much appreciate the continuing cooperation of our customers and business associates.

We wish to express our heartfelt thanks to our customers for their continued patronage.