

Remarks on Special Issue on Construction and Architectural Materials



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The Diet Building, which often appears in TV news programs, is a familiar edifice to us all and one of Japan's social assets, having been used for over 70 years. However, I doubt that many people pay attention to its structure. If asked what this building is made of, the majority of the people would probably answer that it is a masonry or reinforced concrete structure.

Actually, the Diet Building is a steel frame construction. The former government-managed Yawata Works fabricated and factory-assembled the steel frames weighing some 10,000 tons. It is no exaggeration to say that the building was the first fully fledged steel structure made in Japan.

Thanks to our predecessors' efforts to encourage the use of steel in the field of construction following completion of the Diet Building in 1936, the construction market has come to account for nearly 50% of the domestic demand for steel. Needless to say, structural steel materials play an important role in the development and maintenance of social infrastructure in modern times.

In the past decade, in particular, the steel industry has been striving to recover public trust in steel structures, which had been strongly shaken by a series of incidents, from the Great Hanshin Earthquake to the fraudulent misrepresentation of quakeproof strength, and to increase the safety and security of steel structures in view of the shocking collapse of the World Trade Center caused by the terrorist attacks on September 11, 2001, the possibility of major earthquakes in the near future, and the aggravation of climate change ascribable to global warming, etc.

On the other hand, structural steel materials play a vital role in improving the efficiency and transparency of social capital development, including the

building of a recycle-minded society, the reduction of expenditure on public works and the renewal of urban areas, in order to cope with the aggravating problems of waste disposal and suchlike.

I believe that our company has been responding effectively to these situations by continually performing the following two activities - prompting the innovation and sophistication of construction technology through constant development of steel materials that offer new functionality, new forms and higher strengths and the introduction of technology for the application of such new steel materials while proposing new steel materials, construction materials and methods that meet specific construction needs through quick perception of any progress made in the construction industry.

The above activities of our company in pursuit of leading-edge technologies have been conducted in collaboration with the developers of structural steel materials and the developers/designers of building structures and construction methods, coupled with a concerted effort by the manufacturing, marketing, engineering, and development departments.

I believe that in the future the company must continue to pursue and even step up the above activities, and continually develop new technologies, methods and workable solutions that make the most effective use of the advantages - high strength, outstanding toughness, good formability, etc. - of steel as a construction material and thereby meet the increasingly diverse needs of society.

Nippon Steel's Structural Division/Construction & Architectural Materials Development & Engineering Service Div. and Steel Research Laboratories/Steel Structure R&D Center that have been in charge of the development of products and markets in the construction field for over 24 years and 15 years, respectively, have been expanding the sphere of their activities, from materials/methods to processed construction materials/solutions, from simple structural members to joint materials, from construction to LCC assessment, including maintenance and repair, and from domestic operations to overseas operations.

This Special Issue on Construction and Architectural Materials is intended to help our customers deepen their understanding of our activities in the field of construction, although it does not cover all the relevant subjects for want of space. I look forward to the continued cooperation and guidance of our customers and business colleagues.