

FOREWORD

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The history of Kawasaki Steel focuses mainly in its involvement in construction and operation of steel works.

In 1951, Kawasaki Steel began the construction of Chiba Works as Japan's first integrated steel works of the postwar period. The company then acquired technologies from other companies both overseas and in Japan, and with the cooperation of these firms, absorbed and developed the technologies necessary for this purpose. The Engineering Center was established in 1973 so that these accumulated technologies could be utilized not only within the company, but could also be made useful to others, after which was followed by the conception of the Engineering & Construction Division (ED), which was later organized in 1976.

The ED was assigned the role to sell technology, with the steel manufacturing technologies gained in the operation of its steel works and the construction technologies accumulated through its history of constructing coastal steel works as its core areas of business, and was required to maintain a sound business constitution which considers profit.

When the ED was established, Kawasaki Steel began the construction of Tubarão Works in Brazil and at the same time, the Philippine Sinter Corp. (PSC) sintering mill. These overseas engineering activities provided an important foothold for subsequent ED operations. It can also be said that the company was able to acquire a number of valuable assets through these projects, including techniques for improving equipment utilization from the user's standpoint, techniques for integrating and combining element technologies, and know-how in human resources development and international business, which together became the foundation for the overseas expansion of the company's engineering business.

In the steel division, the ED has steadily built a position in overseas engineering through the construction of a series of galvanizing lines, steel pipe plants, and tin mills in Thailand, Malaysia, Indonesia, Taiwan, and elsewhere. In recent years, the ED had continued to expand its business presence by constructing an electric arc furnace/H-shape mill and an integrated cold rolling mill in Taiwan and a steelmaking shop for Shanghai Baoshan in China, and by supplying leading-edge technologies such as pulverized coal injection, the KTB top oxygen blowing method for the circulation-type vacuum degasser, continuous annealing lines, electrogalvanizing lines, and continuous hot-dip galvanizing lines in Europe and North America, and in the process, has completed its technology base. Responding to the dramatic expansion of the steel plant market in recent years, centering on Asia, and now including India, the ED had also begun to provide integrated total engineering which covers all the stages from the development of the project through design, equipment procurement, construction, and startup, to include steel business management.

The ED's civil engineering business had its starting point in the construction of the sintering mill and large sea berth at PSC in the Philippines, and now encompasses a wide variety of engineering jobs, as can be seen in its numerous port and harbor projects in Southeast Asia, and also it

has managed to get involve in the installation of water pipe lines, industrial area development, railway construction, etc. to include ODA projects. Although these undertakings have involved a diverse range of country risks, the ED has successfully confronted a number of difficulties and tasks, including changes in the political and economic environment, exchange rate fluctuations, and increasingly complex managerial requirements. In each case, the company has attempted to respond as a business, and has been repaid for this effort with an invaluable accumulation of know-how.

At present, the number of major capital investment projects in Japan has become significantly smaller, and so, we are putting greater effort than ever before into overseas jobs so that we can continue to utilize and expand these technologies.

In this issue, we will introduce the construction and technology projects which the Engineering & Construction Divisional Group had carried out recently. We hope the papers presented here will give our readers some understanding of our thinking, and we look forward to hearing frank opinions of readers.