

FOREWORD

Hirotake Sato

Director

Assistant General Manager,
Steel Business Planning & Sales Division



The remarkable changes are now taking place in information technology, especially on computers and telecommunications, driving revolutionary changes in corporate information processing. The effective use of information technology in management is becoming a decisive factor in the survival of businesses, and at the same time, the creation of new business opportunities which take advantage of this technology has been an important recent topic in the media and elsewhere. In particular, technology has brought about impressive changes, from an era in which the host computer played the central role to one characterized by decentralization and downsizing. Thus, responding sensitively to such change and contributing to the re-engineering in corporate management is an important management task for all corporate system departments.

In the Japanese steel industry, the use of computers already has a history of forty years. A series of systems extending from order receiving to production and shipping have gradually been constructed. These systems enable companies to make more effective use of the equipment in which they have invested enormous sums and to manufacture high-quality products at low cost, and have thus made a major contribution to the industries in Japan.

However, virtually all the computerization has employed large-scale centralized systems built around the host computer, and the range of use, as alluded to previously, has mainly involved order receiving and production control systems applied to many product types and mass production equipment.

Recently, UNIX, personal computers, and other medium and small machines which provide high performance at low cost have become available. These systems which have good human-machine interface (HMI) and a large amount of low-cost, general purpose application programs are easy for staff members to use, and have therefore had a significant impact on the formation of systems and on the frame of work.

Kawasaki Steel was quick to promote these trends, which the company has applied in various areas such as system renovation, functional expansion, and others. This special issue is presented as a compilation and introduction of these movements.

Following an article which gives an overview of the early efforts of Kawasaki Steel in adopting open and decentralized information systems, we will introduce two examples of head office work support systems involving complex decentralized systems of host, UNIX, and personal computers. These are PEGASUS domestic sales and production system and steelmaking raw material planning and purchase management system.

Next, as information technology used in carrying out a major renovation of the basic systems of production control and operational control in line with the construction of the new steelmaking shop and hot strip mill at Chiba Works, we will present an example of the introduction of UNIX in these basic systems, HMI using engineering workstations in the field of production control, and systems which take advantage of UNIX and personal computers for staff support in operation control and

production control. This example demonstrates that open system technology is capable of satisfactorily meeting the requirements of the basic system used in plant production control.

Focusing next on the improvement of white-collar productivity, which has recently become an important topic, we will introduce personal computer networking system to assist staff jobs. By adopting UNIX machines as departmental servers, this system broadly improves work speed in comparison with conventional host-centered systems. Moreover, OA is being promoted by taking advantage of the graph, figure, drawing, and other GUI (graphical user interface) functions of workstations and personal computers, at the same time demonstrating important fruits in the development of EUC/EUD.

Finally, the two new products with which we conclude this special issue were created in the course of the activities described above and are finding active use in actual situations.

The systems department of Kawasaki Steel has achieved the concrete results discussed above by constantly taking up the challenge of innovative technologies in concert with Kawasaki Steel Systems R&D Corp. Needless to say, these results have contributed to corporate management through systemization as such, and have also made an important contribution to a marked improvement in cost performance.

In closing, I would like to express my deep appreciation to the related departments and persons for their cooperation and guidance in the publication of this special issue and ask for continued encouragement in the future.