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**Construction of Steel Plants and Coastal Engineering Projects**

Masao Nagano, Toyokazu Sakaki, Tamotsu Kimura, Katsuaki Okamoto, Kei Wada,  
Keisuke Shiota

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**Synopsis :**

Kawasaki Steel Corporation has developed Chiba and Mizushima integrated steelworks on reclaimed lands. The construction of these works was not limited to the construction of plants but extended to the total development of the water front area near the Chiba and Mizushima Works. The surrounding region and the construction history of the two steelworks are described. The developed technologies, which are useful for any water front construction, are introduced, such as the interlocked steel pipe pile method, walled steel pipe pile well method, prefabricated corrugated cell bulkhead, underwater junction method, and fast offshore pile driving system.

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# Construction of Steel Plants and Coastal Engineering Projects\*



Masao Nagano



Toshiyuki Sakaki



Tomotaru Kimura

## Synopsis:

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Chiba and Mizushima. In the construction of both of these plants, a number of new techniques were developed related to extensive dredging, land reclamation,

the northeast side of Tokyo Bay. On the southern side, the Keiyo Industrial Area extends to the vicinity of Kisarazu City. Chiba Works has developed along with

area, and the West Plant, which is created by land reclamation along the shore south of Chiba City. The JR

industrial area and residential facilities along a waterfront.

Highway are adjacent to the Main Plant, and company facilities such as dormitories, housing, and a hospital are

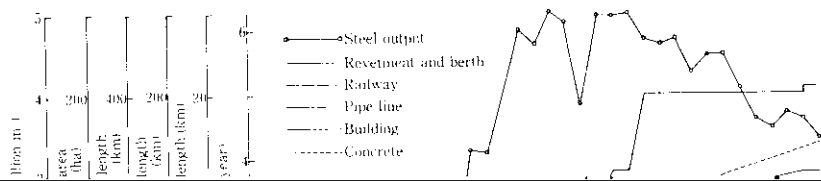
area. Mizushima Works faces the Seto Inland Sea, which is a natural waterway. The steelworks has been

### 3 History of Steelworks Construction<sup>5)</sup>

Figures 4 and 5 show the ground profiles of the Chiba and Mizushima sites respectively. The Main Plant

by constructing an integrated steelworks to meet the demand of a shallow sea area near the old coastline.





current, and various other conditions such as power and water supply, traffic, and the environment.

## 4.2 Walled Steel Pipe Pile Well Method

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formed by joining the pipes using braces with the exter-

tional efficiency while reducing the number of operations. Further, with this method it is possible to drive

The field of local development with such waterfront projects at its center is one of the pillars of the com-

ease of assembly and disassembly also helps reduce rela-

local development is based on three points: (1) efficient

cation costs. The method is extremely effective in the construction of projection type piers, detached piers, and access causeways to manmade islands.

## 5 Development of Engineering Activities

utilization of company-owned land, (2) purchase of land for development, and (3) the creation of new ventures with the company's participation in management and administration. The foundation of local development activities is a user-oriented business philosophy, a capability of carrying out large projects, to date cultivated in

wall berth were constructed a coal pier in Hsinta the

ed Pipe Cellular Cofferdam Engineering Method". *Kawa-*

Republic of China (1091-1092) which employed large

*saki Steel Gihō* 1(1969) 78-91