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Construction of New Stainless Steelmaking Shop with Highly Flexible Raw Material Choice:Construction and Operationof No. 4 Steelmaking Shop at Chiba Works

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Synopsis :
Kawasaki Steel started materialization of modernization project of the Chiba Works to establish environmental-friendly iron and steel works directing toward the 21st century. This project includes construction of No. 4 steelmaking shop and No. 3 hot strip mill, and reorganization of the east area of the works. No. 4 steelmaking shop, located at the west area of the works, was designed to produce especially stainless steel and high carbon steel and to replace the old No. 1 steelmaking shop. In the steelmaking process, an introduction of smelting reduction-decarburization process realizes a wide range of raw material choice. To meet the demand for a clean ultra low carbon stainless steel, VOD and vertical-bending type continuous caster were adopted. The operation of this new steelmaking shop started in July 1994 and has successfully contributed to the improvement of productivity, product quality and reduction in costs.

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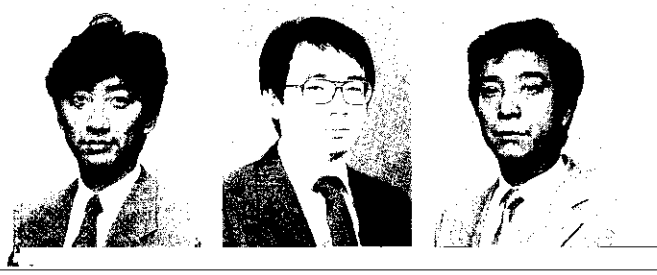
Construction of New Stainless Steelmaking Shop with Highly Flexible Raw Material Choice: Construction and Operation of No. 4 Steelmaking Shop at Chiba Works*



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plant, and a 100% transfer of production from the No. 1 steelmaking shop was completed in approximately one year. The ratio of production by direct smelting reduc-

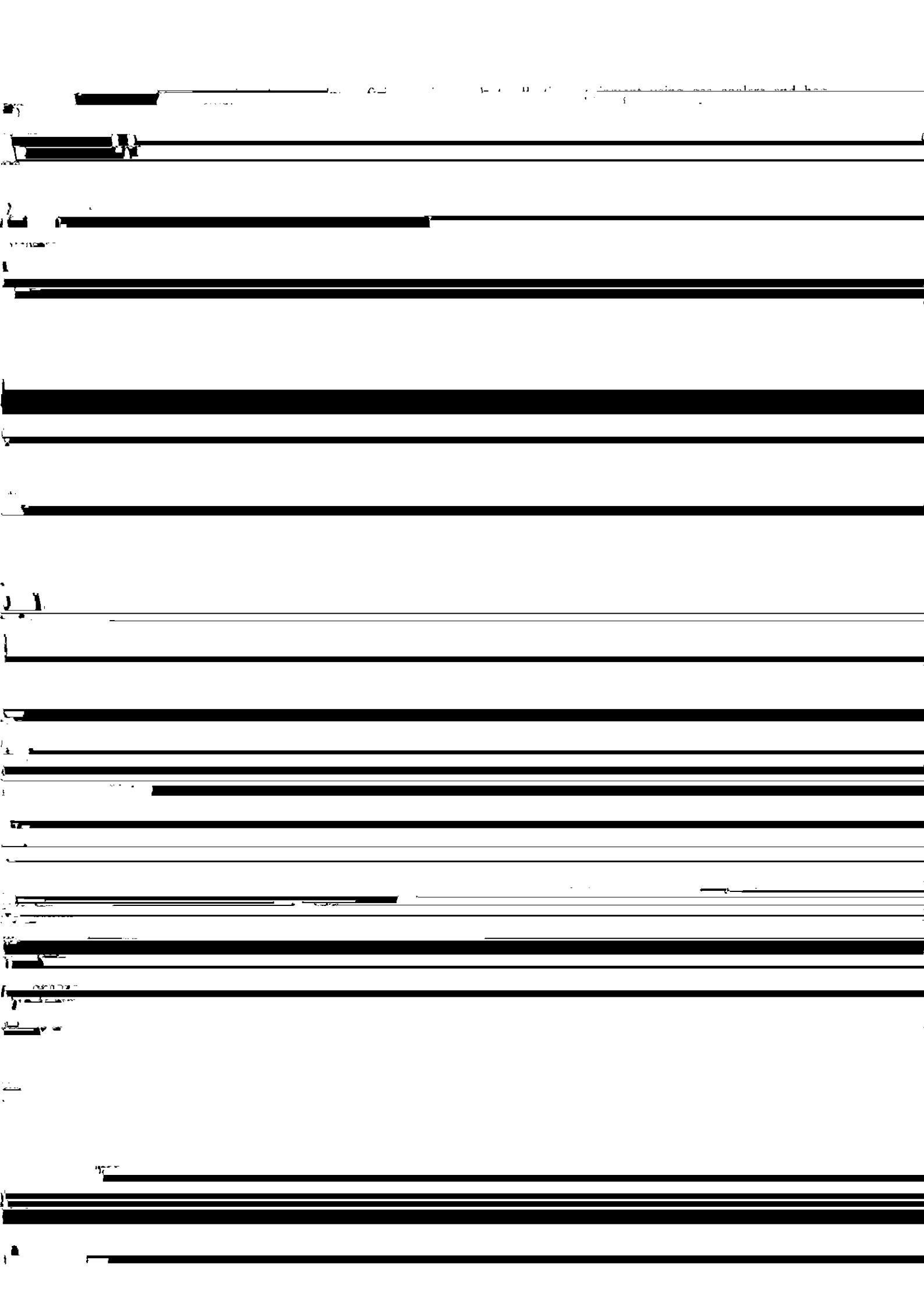
For increased raw material flexibility, full consideration was also given to the use of stainless scrap in large quantity. To meet increasing demand for ultra-low car-

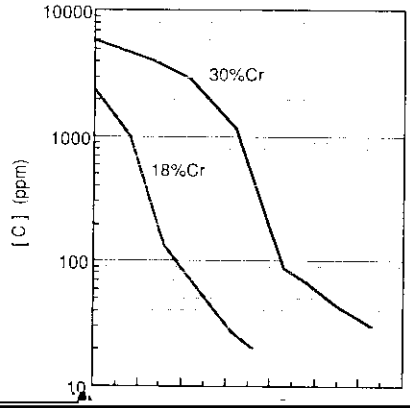
No. 3 steelmaking shop, which produces mainly carbon

Table 1 Specifications of SR-KCB

AISI 304

Table 3 Specifications of DC-KCB





Operation time (min)

Fig. 8 Result of VOD operation for super ferritic

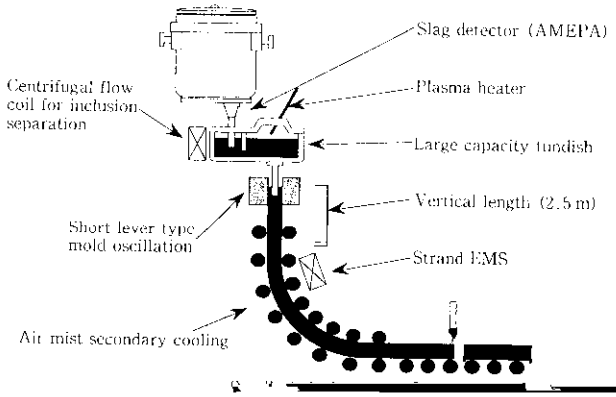


Fig. 9 Schematic illustration of representative facil-

stainless steel

Table 5 Specifications of No. 4CCM

speed that surpasses that of VOD of the No. 1 steel

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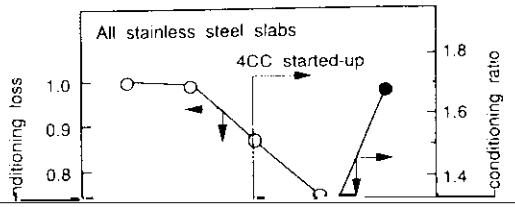

response to changing stainless steel raw material prices and further improvement in productivity and quality, making the maximum use of functions of the equipment.

References