

KAWASAKI STEEL TECHNICAL REPORT

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Highly Efficient Production and

Application of sheet Products, and

Application Development in Open System's Age

New Steelmaking and Hot Rolling Production Control System at Chiba Works

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Synopsis :

The new Steelmaking Shops and Hot Strip Mill at Kawasaki Steel's Chiba Works, where the hot strip mill is linked directly to the steelmaking shops, with the time required to transport the slab from the steel making shops to the hot strip mill and the time required to reheat the slab being zero, are fully automated by process control computers. The authors have restructured the production control system to fit it to the new plants, applying a distributed system with UNIX system computers. The system functions have been separated into the human system part and the computer system part in such a way that computers perform calculations and checks of data and people make decisions, thereby reducing the overall manufacturing time. In addition, a centralized management function for the process control variables has been added in order to strengthen support ability for automatization and labor-saving, and a data analysis system using personal computers has been applied in order to support new product development.

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The body can be viewed from the next page.

New Steelmaking and Hot Rolling Production Control System at Chiba Works*

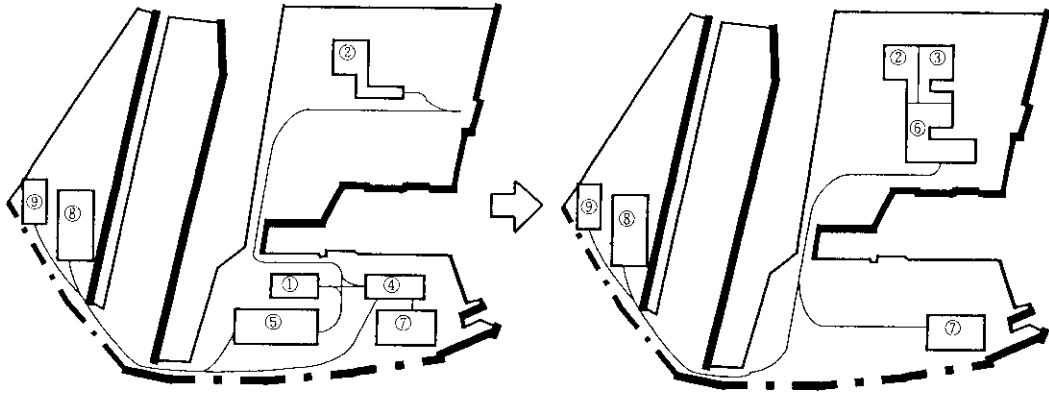


Synopsis:

The new Steelmaking Shops and Hot Strip Mill at Kawasaki Steel's Chiba Works, where the hot strip mill is linked directly to the continuous casting process.

Before renovation

After renovation



① No.1 Steelmaking Shop

④ No.1 Hot Strip Mill

⑦ No.1 Cold Strip Mill

② No.1 Hot Strip Mill

③ No.1 Cold Strip Mill

⑤

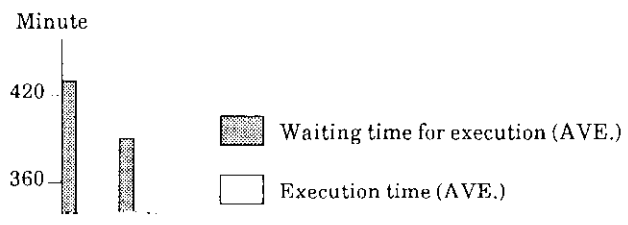
⑥

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computer promptly checks what the instruction making a centralized way. When modifying...

...screen has done against the standard...

...operations as he was issued...



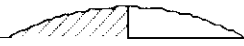
TOMAS system is distributed to each data server for each end-user department.

(3) The data on the data server for each department are transmitted to the personal computers.

(4) Each end-user department analyzes the data and makes reports using the personal computers.

The series of work from data analysis through data

“department file sever” for the personal computers



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