KAWASAKI STEEL TECHNICAL REPORT
No.45 (November 2001)
"Developed Machinery Maintenance Technology
in Steelmaking Plant"

Management System Supporting Reliability of Equipment

Kitamura, H.; Fukumoto, M.

Synopsis :

An equipment maintenance management system has been developed with the purpose of

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Synopsis:

2 Trends in Equipment Management Technology

Reviewing the history of equipment management in Japan, the 1950s was a period of preventive maintenance, which was introduced from the United States. In the 1960s, productive maintenance was adopted, and [illegible]

[illegible] TPM (total productive maintenance) began in the 1970s. Chronologically, so-called time based maintenance was practiced until the 1970s, and in the 1980s, predictive maintenance, namely, the concept of condition-based maintenance took root.

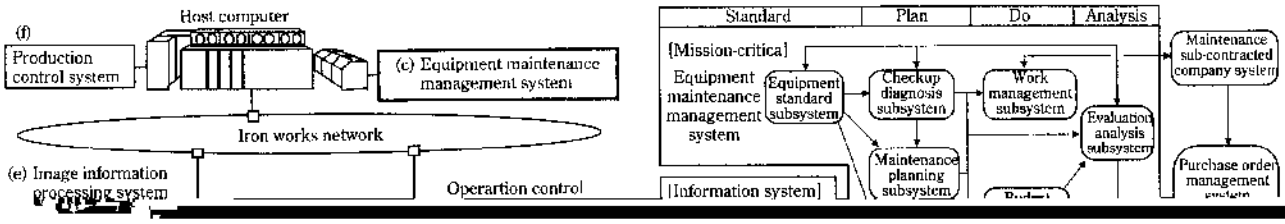
[illegible]

printer has been replaced by a high-speed laser printer giving distinct hardcopies.

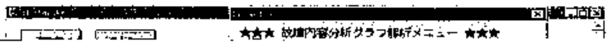
Under the circumstances, nowaday even operators at the work site use own personal computers, and it has become possible to perform all work from his or her own personal computer.

Th [illegible] no longer used only by a limited number of equipment engineers, but has now been transformed into a general purpose system that can be used by all engineers and persons with practical work responsibilities by way of a single personal computer.

[illegible]


Host computer
(f)
Production control system
(c) Equipment maintenance management system
Iron works network
(e) Image information processing system
Operartion control
Standard
Plan
Do
Analysis
[Mission-critica]
Equipment maintenance management system
Equipment standard subsystem
Checkup diagnosis subsystem
Work management subsystem
Evaluation analysis subsystem
Maintenance planning subsystem
[Information system]
Maintenance sub-contracted company system
Purchase order management

but also the system itself was a basic obstacle to use.



New Design

discussed as practical examples, and improved efficiency

[illegible] by the introduction of CUI was also

In the future, in order to ensure stable operation of equipment, it seems that the role borne by technical capabilities in maintenance will be even more important, and development of theoretical equipment management backed by measured data will become indispensable.

[illegible]

2) M. Tanaka, S. Kasai, and A. Yokokawa: "Techniques for

Modernization of Plant Management System", 9th European

3) H. Kitamura, Y. Kawamatsu, and S. Kasai: JIPM 1st Int. Conf. TPM, (1991)
4) S. Kasai, Y. Kawamatsu, H. Kitamura, and T. Nishikawa: *Plant-Engineer*, (1991)11, 48–54
5) T. Terada and T. Takano: 24th Ishikawa-syo Jyusyo-Kinen, (1993), 17
6) T. Takano, H. Kitamura, and T. Nishikawa: "Advanced Main-