KAWASAKI STEEL TECHNICAL REPORT
No.25 (September 1991)
Special Issue on 'H-Shapes with Fixed Outer Dimension' and 'Steel Pipe'

Recent Progress in Pipemaking Technology Developed at Kawasaki Steel Corporation

Yasuhiro Sayama

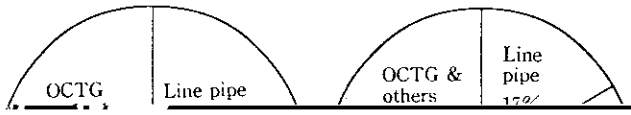
Synopsis :
Kawasaki Steel has manufactured pipe and tubes since 1952, with production concentrated at two facilities, the integrated Chiba Works and the specialty Chita Works. Pipe and tubes comprise approximately 12% of Kawasaki's steel product mix, and are thus of major importance to the company. The development of pipe-making technology has been closely related to progress in fields such as energy development, architecture, and construction. This paper describes recent progress in pipe-making process technology at Kawasaki Steel and technical features of the company's newly developed tubular products. Sophisticated inspection techniques and methods of evaluation for practical applications are also discussed.

The body can be viewed from the next page.

KAWASAKI STEEL TECHNICAL REPORT No. 25 September 1991

Recent Progress in Pipemaking Technology Developed at Kawasaki Steel Corporation*

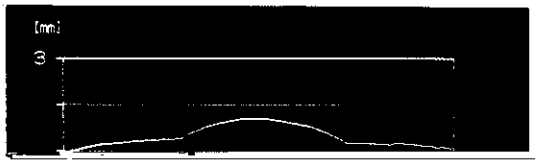
Synopsis

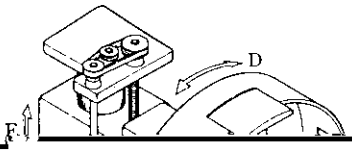

OCTG
Line pipe
OCTG &
others
Line
pipe

[redacted]

3.2 Manufacturing Process for Welded and Forged Pipe

3.2.1 ERW Pipe




D
F

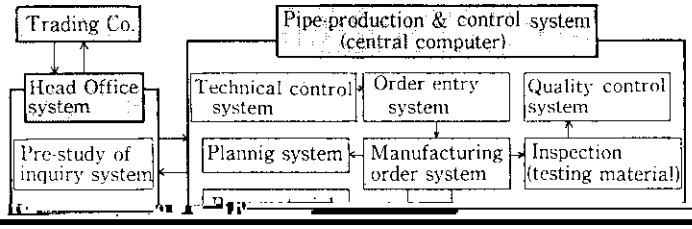
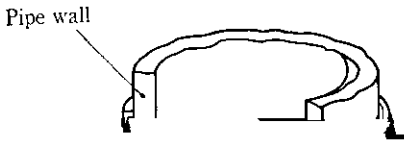

Trading Co.
Pipe-production & control system (central computer)
Head Office system
Technical control system
Order entry system
Quality control system
Pre-study of inquiry system
Plannig system
Manufacturing order system
Inspection (testing material)

Table 2 List of Kawasaki Steel's special casing and tubing "KO-series"



nesmann process, following a thorough study of the chemical composition of materials and pipemaking techniques. These products are now widely used in super heaters and reheaters. A type of ferritic boiler tube

to fused zinc embrittlement (CEZ $\leq$ 0.28, $R_{\sigma,\text{ft=400}} \leq 40\%$).[33]

A : C steel (ERW steel pipe)
B : Low S steel (ERW steel pipe)
C : Low S + REM steel (ERW steel pipe)
D : Low S + Cu + Ni steel (ERW steel pipe)

5.4.4 Square steel pipe (K Column B)

6 Conclusions

This paper has presented a brief outline of the manufacturing techniques for the various steel pipe products

11) T. Toyooka, A. Shiga, Y. Hashimoto, K. Kobayashi, A. Kobayashi, and Y. Onoda: Proc. 40th. Japan Joint Conf. Tech. Plasticity Vol. II, (1989), 357

12) T. Toyooka, A. Shiga, Y. Hashimoto, Y. Sayama, K. Kobayashi, and Y. Onoda: Proc. 1990 Japanese Spring