

KAWASAKI STEEL TECHNICAL REPORT

No.12 (July 1985)

Production of Hot Rolled Steel Sheet for High Strength Steel Pipes with Good

Summary

Nobuo AOYAGI*2
Minoru NISHIDA*5

Hiroaki UENO*3
Isao TAKAHASHI*6

Masatoshi SHINOZAKI*4

High strength steel sheet for high strength steel pipe which is used for automobiles, motor-cycles and various structures has been developed. The high strength steel pipe has been practi-

[The remainder of the page is heavily obscured by horizontal black bars, likely representing redaction or severe scanning artifacts.]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]



1.4

1.5

1.6

1.7

1.8

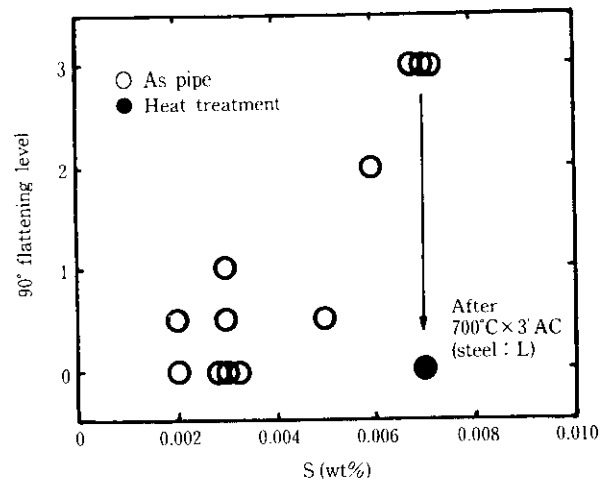
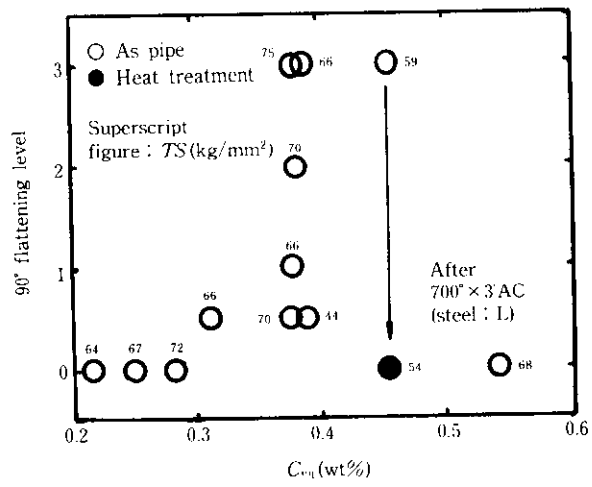
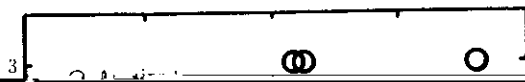
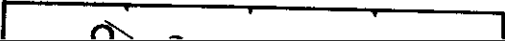
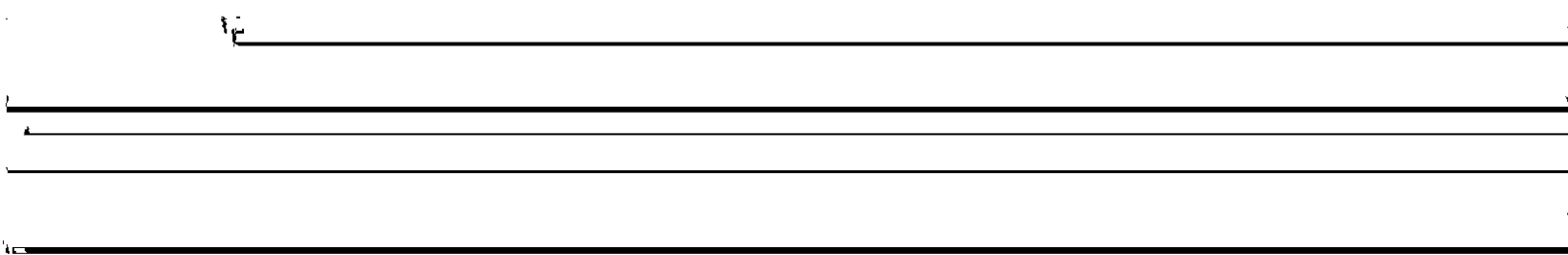
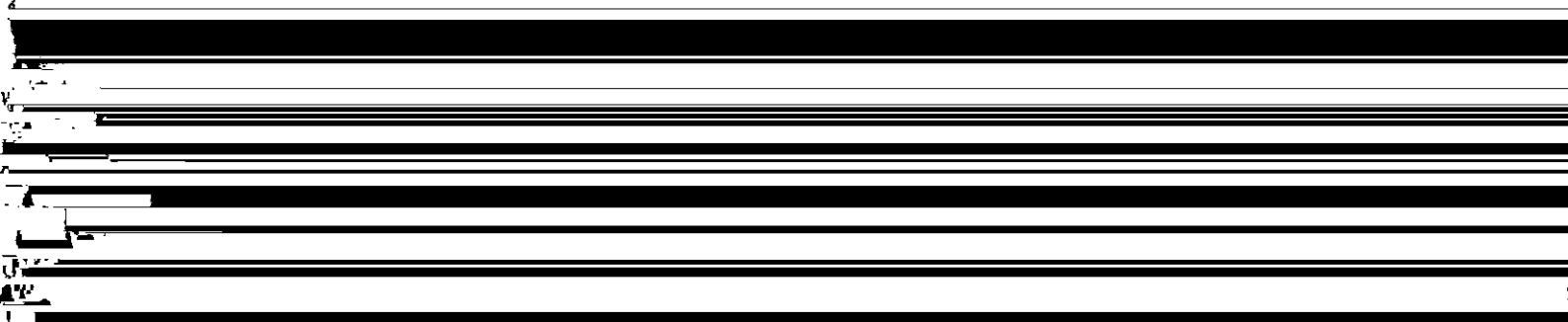


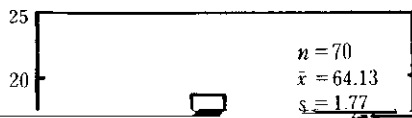
Fig. 9. Effect of S contents on 90° flattening properties





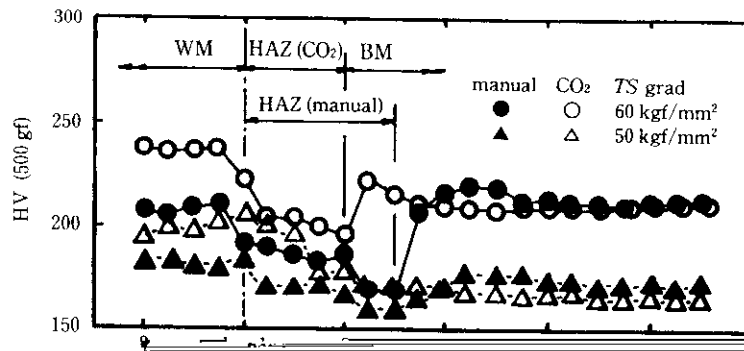
being equal. Although the weld hardness of softening-





3.2 Welded Joint Properties

Steel pipe applications often require welding. For



Distance from bond (mm)
Fig. 15 Hardness profile of manual-arc-welded and CO₂-gas-arc-welded joints

60 TS60 100/10002 reversed load control and a repetitive frequency of 8 Hz

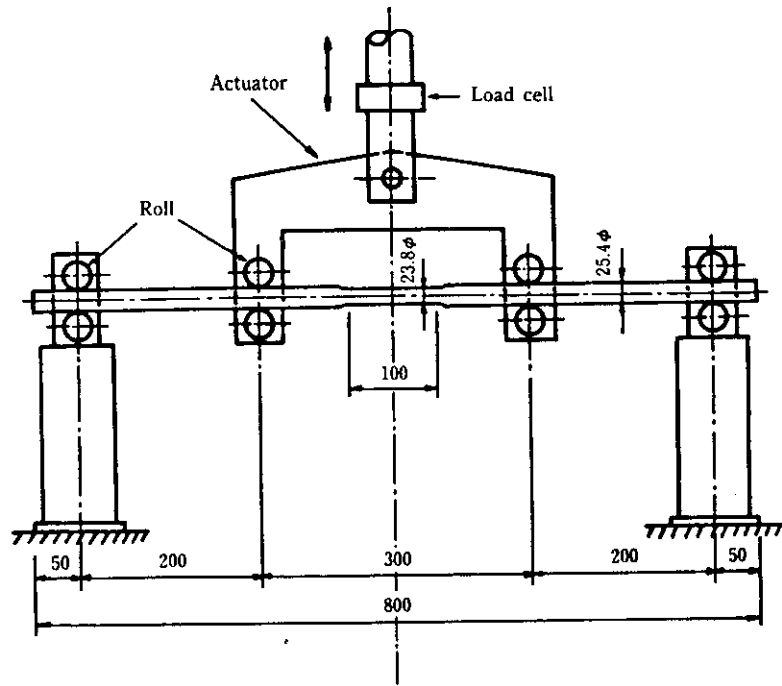


Fig. 17 Bend fatigue test method of pipe

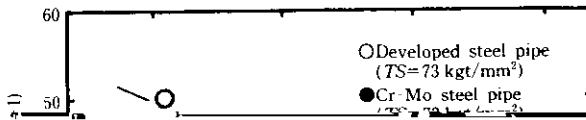


Figure 20 shows the test results. The fatigue strength of the high strength steel pipe is slightly lower than that of the Cr-Mo steel pipe on the low cycle side, but is higher on the high cycle side. The fatigue limit value of

500

○ Developed steel pipe

the newly-developed steel. The figure indicates that with a larger diameter, thinner walled pipes the increase in