

Automatic Seam Tracing System for ERW Pipe Mill*



Synopsis:

Kawasaki Steel has developed two types of new equipment to detect and trace the weld-seam of ERW on pipe, and installed them at the 26 inch ERW pipe mill of its Chita Works. In most ERW pipe mills, a longitudinal weld-

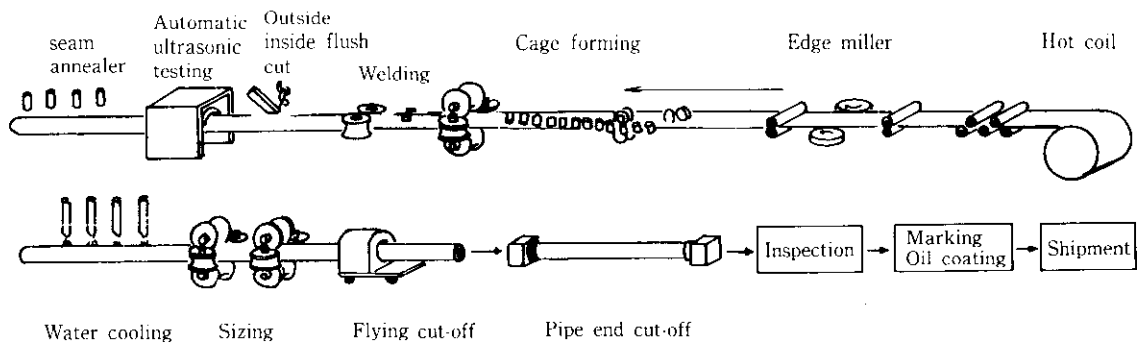


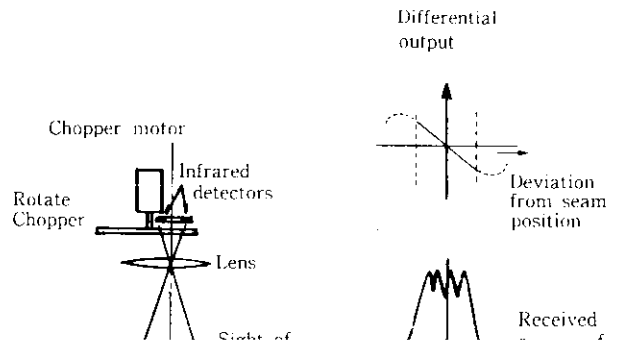
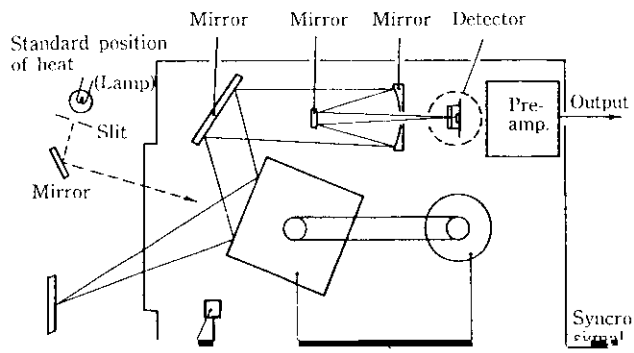
Fig. 1 Manufacturing process of ERW pipe

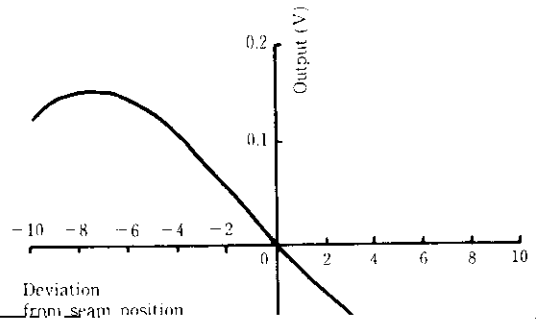
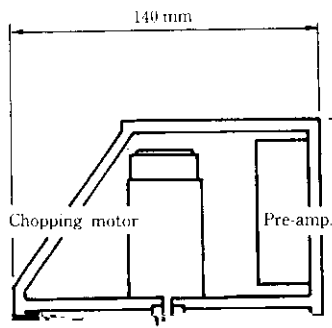
in characteristics, a method of detecting the effect of proximity effect, and heating is accomplished by giving the same quantity of heating to both edge surfaces of the

Seam



not only by temperature but also by fluctuations in emissivity, and when emissivity is minimal, the temperature





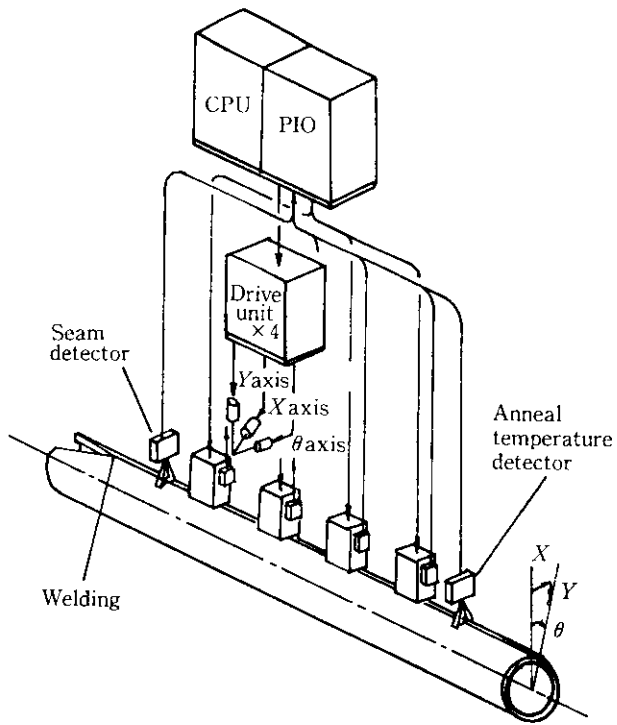


Fig. 9 Seam annealer control system using absolute seam position detector

constant value (500 mm). Since the pyrometer is of a rotary-scanning this prevents changes in dimensional

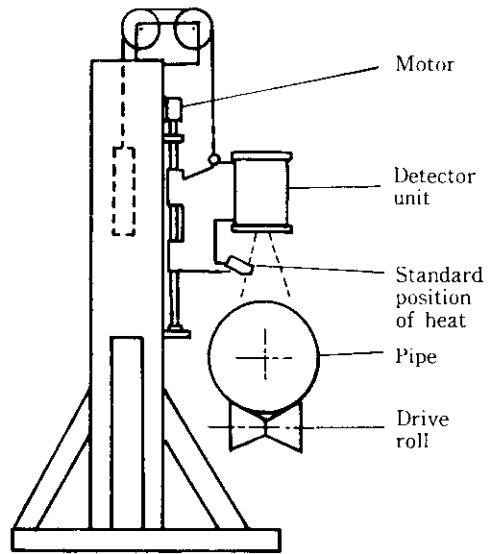
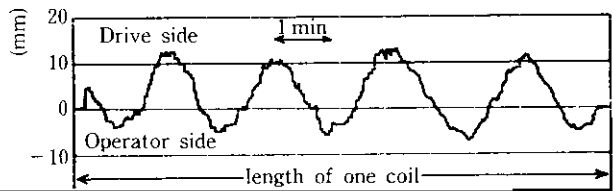
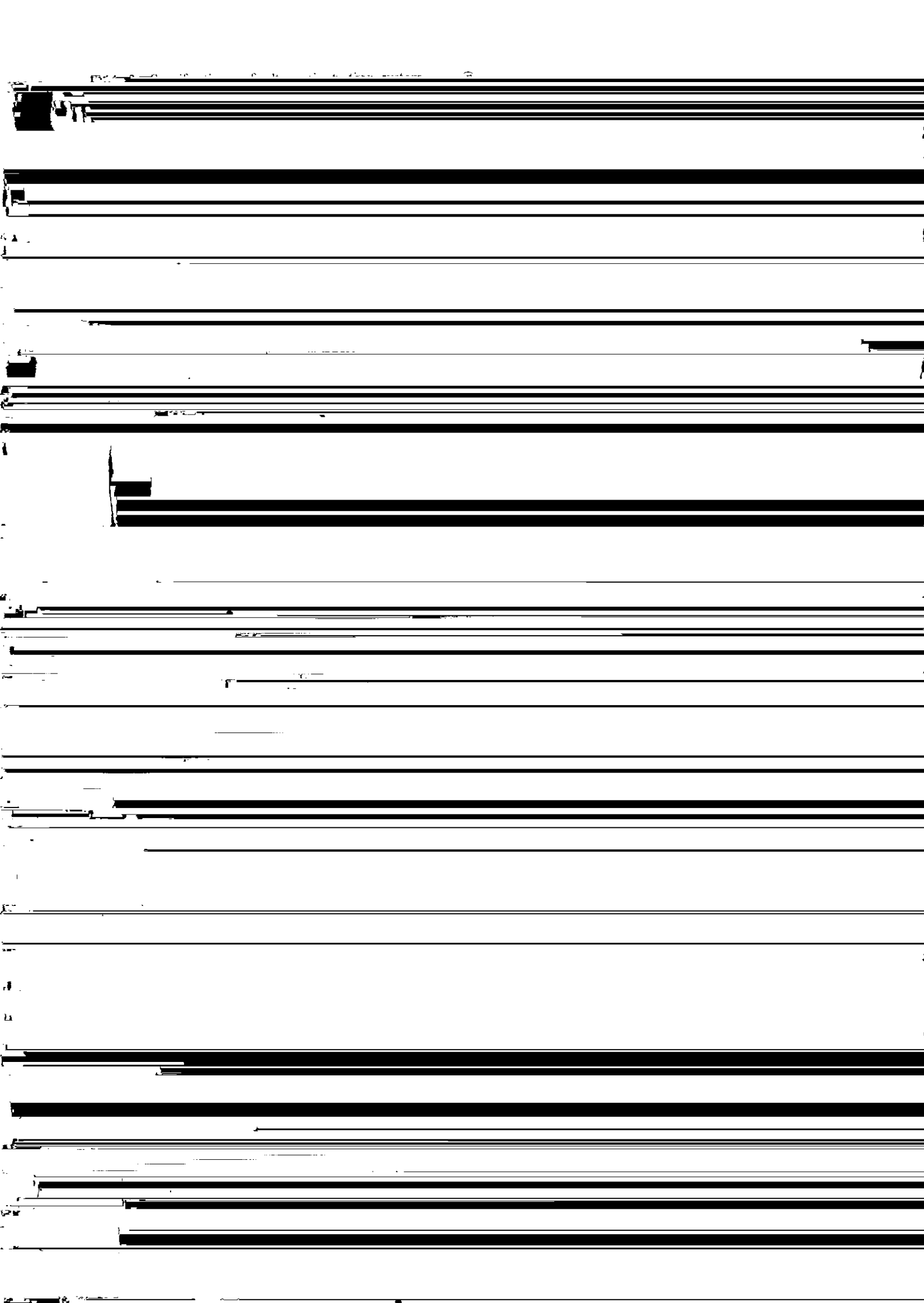


Fig. 10 Absolute seam position detecting system installed in 26" ERW mill





Automatic

Manual

With the seam annealer, an accuracy of ± 1.5 mm is ordinarily obtained, thereby contributing to the reliable low-temperature toughness of the steel pipe manufac-