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Improvements in Cold Rolling of Extra-thin Gage Strip

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Synopsis :

At Chiba Works, many kinds of technical improvement have progressed which permitted economical and stable production of extra-thin cold rolled steel sheet for tinsplate and galvanized sheets with high quality: (1) In tandem cold mills, "Keyless bearing", hydraulic push-down BISRA-AGC, roll eccentricity control and 6-high mill were adopted for improving gage accuracy and flatness. Moreover the highly efficient rolling lubricant providing method, "Hybrid system", was established. (2) Through hot rolling at low finishing temperature, the material was made softer so that easy cold rolling and good flatness would be attained. (3) In skinpass rolling, both brightness and flatness of strip were improved by selection of suitable roughness of the work roll surface.

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Improvements in Cold Rolling of Extra-thin Gage Strip*

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At Chiba Works, many kinds of technical improvement have progressed which

permitted economical and stable production of extra thin cold rolled steel sheets of

tinplate and galvanized sheets with high quality:

(1) In tandem cold mills, "Keyless bearing", hydraulic push-down BISRA-AGC, roll

maintaining control and high mill speed, and hot forming

at the 6 Std is controlled in accordance with the _____ to improve the gage accuracy through the improved _____

Roll eccentricity
control

10 s Time

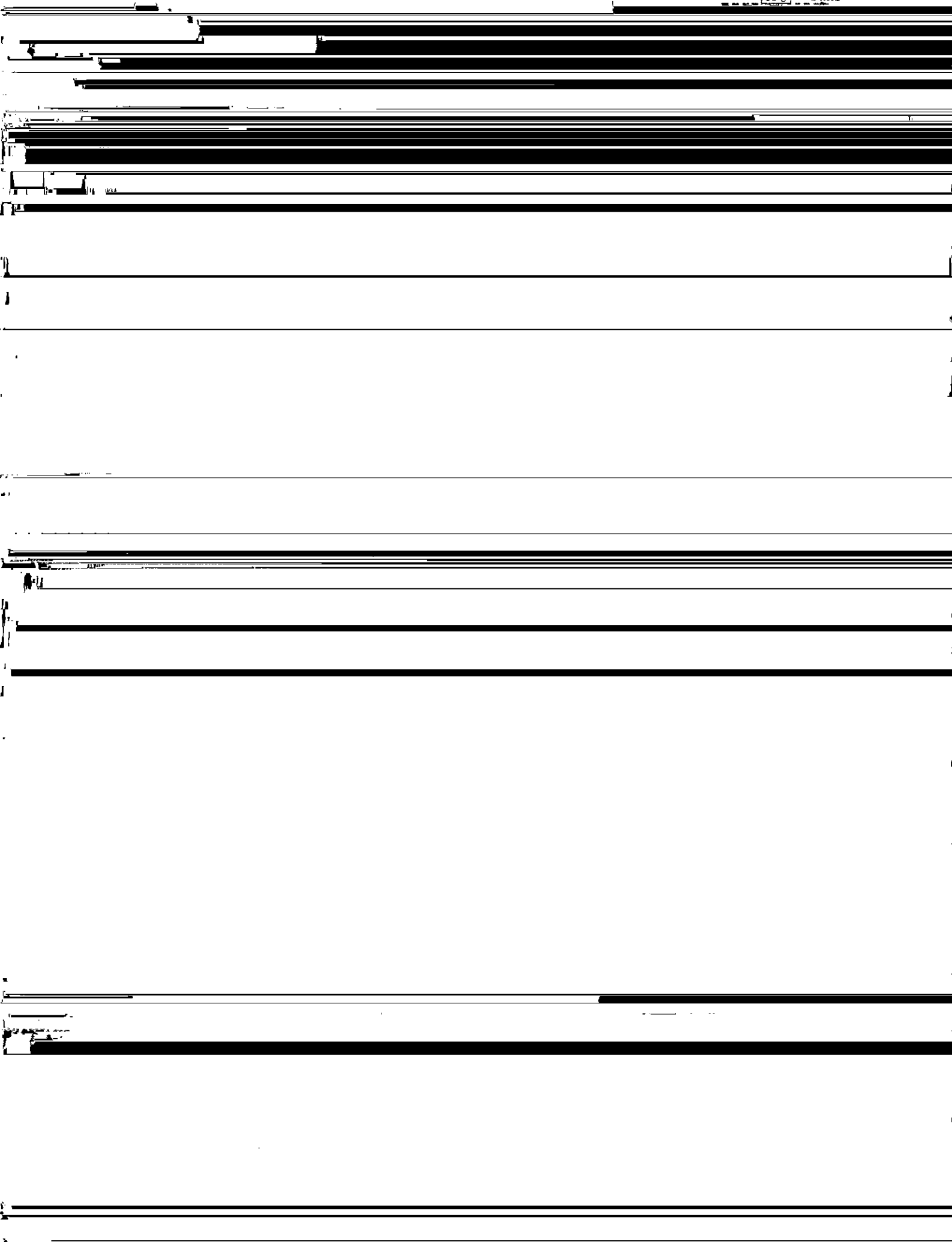


Table 1 Reconstruction items for improving gage accuracy (6 stand tandem mill at Chiba Works)

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composition is best suited. It has been said, however, determining the energy consumed (HHT: horse-

in materials of lower yield stress and smallest in

hard with fine grain microstructure as it was hot rolled in the center region; while the edge area is soft

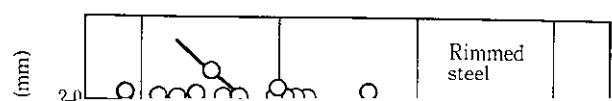
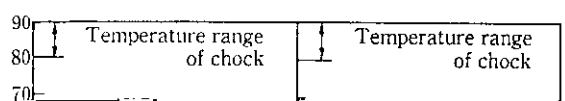
and to replace them at high frequency, which depressed the efficiency and was uneconomic

with coarser grain microstructure as the area was

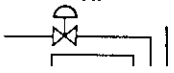
In November 1980, the 5 Std in the 5T was changed

bender (51.5 tf/chock) was installed at the 5 Std. A WRs of different roughness is as follows. The relation-

roll after
C



New oil



Hybrid line

