

## KAWASAKI STEEL TECHNICAL REPORT

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*Rolling Technology and Modernization of Chiba Works*

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### Development of Advanced Transverse Thickness Profile Control of Thin Hard Steel Strips at Tandem Cold Rolling Mill

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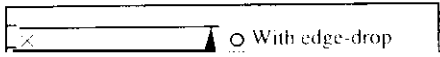
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#### Synopsis :

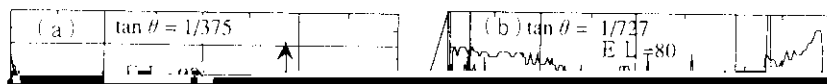
A new edge drop control system for thin hard steel strip has been developed by applying suitable taper profile in the one-side tapered work roll shifting method (K-WRS: Kawasaki Steel work roll shifting method) to four 6-high mills at the No. 2 tandem cold mill at the Mizushima Works of Kawasaki Steel. The feed-forward edge drop control system, corresponding to the amount of crown of a hot-rolled strip, and feed-back edge control system using an edge drop sensor, have been established in the tandem cold mill.

# Development of Advanced Transverse Thickness Profile Control of Thin Hard Steel Strips at Tandem Cold Rolling Mill\*

*Synopsis:*



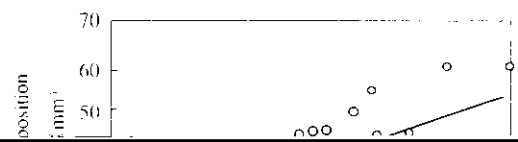
$C_m$  : measured strip crown     $C_p$  : ingoing strip crown  
 $C_c$  : calculated strip crown     $r$  : reduction in thickness

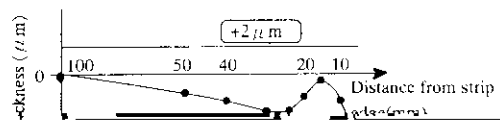
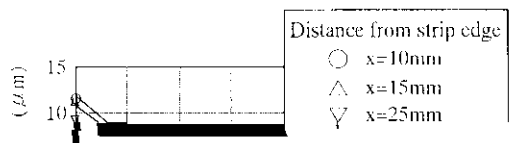


Ingoing strip profile



Edge-drop control





Rolling order

Crown

Quality assurance

○ rolling with profile control  
△ rolling with fixed work roll shifting  
× rolling with straight work roll

(mm)  
15  
10