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Manufacturing of Trimming Free Plates

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TFP

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Synopsis :

At the plate mill in Mizushima Works, the world's first edger attached to the finisher was installed which was based on the results of basic experiment with lead and hot steel and aimed at producing trimming free plates(TFP). A cold milling machine was installed in the shear line for producing TFF. The technology of producing TFP was realized by a highly accurate width control system of the edger, optimum combination of MAS(Mizushima automatic plan view pattern control system) rolling and edging, and highly accurate cutting by the milling machine. The new technology contributed to a high yield, responding to the demand for highly accurate plate dimensions by the user.

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# 厚板圧延におけるトリミングフリー厚鋼板 製造技術の確立

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## Manufacturing of Trimming Free Plates

### 要旨

水島製鉄所厚板工場では、幅刃断が不要のトリミングフリー厚鋼板 (TFP) の製造を目的として、鉛および鋼片による基礎実験を行



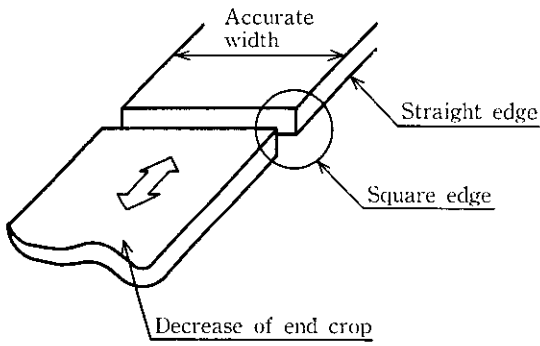


Fig. 1 Requirements for trimming free plates (TFP)

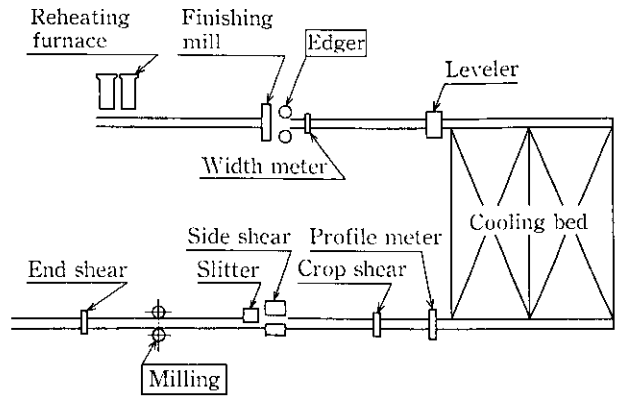
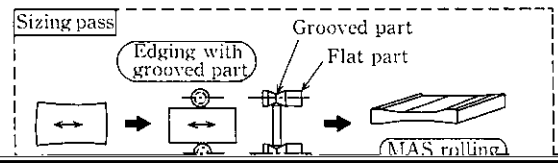


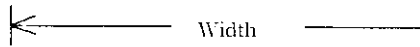
Fig. 2 Layout of the edger and milling

みおよびバルジングに関する報告例<sup>17)</sup>は少ない。そこで、エッジ

Table 2 Specifications of the milling

Place	Between side shear and end shear
Type	Helical milling
Cutter head	1 000 mmφ × 2





← Width →

ロスを小さくするためには、幅出し終了時点の幅形状を先後端の幅が中央部よりも広いいわゆるツヅミ形状として、全長にわたり十分な幅圧下量を確保する必要があることがわかる。

幅出し終了時点の幅形状を制御する手段としては、成形パスでの



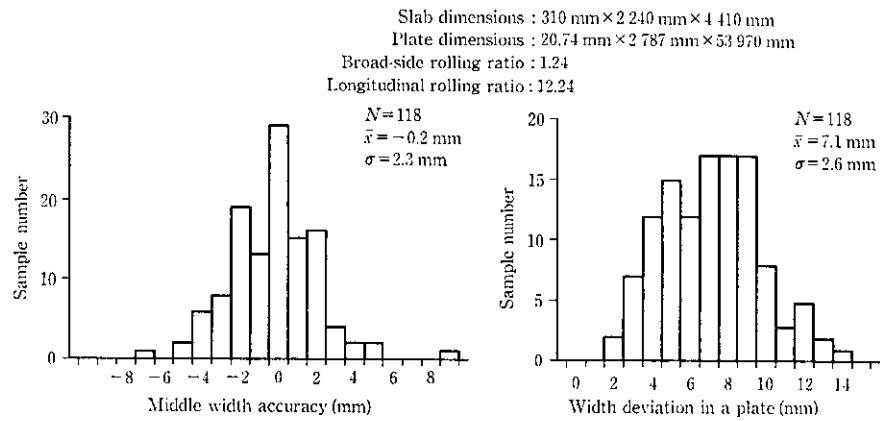


Fig. 11 An example of width accuracy and width deviation by TFP process