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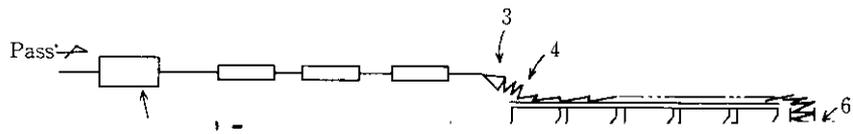
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## New Type Stelmor Equipment of Wire Rod and Bar Mill at Mizushima Works



### 要旨

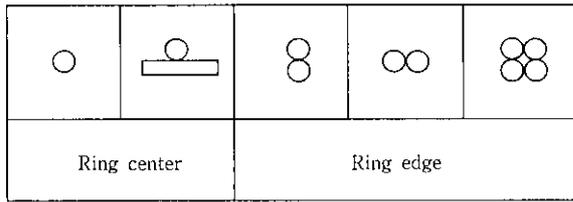
水島製鉄所の線材棒鋼工場のステルモア装置の導入にあたって、コンベア上のリング状線材の均一冷却特性を向上させるための検討を行った。基本実験から、冷却速度は風速分布から求められること、最適風速分布が存在することなどがわかった。また、シミュレ



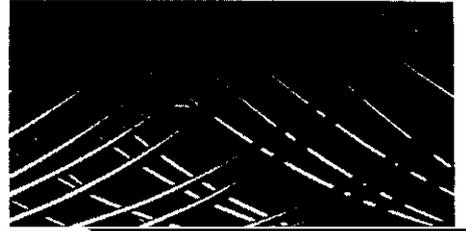
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1. Finishing mill

4. Hoop wire



(a)



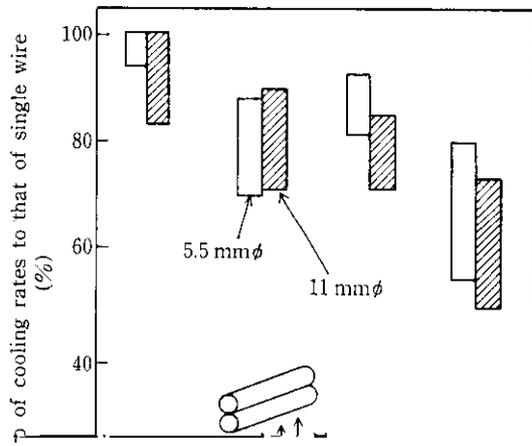
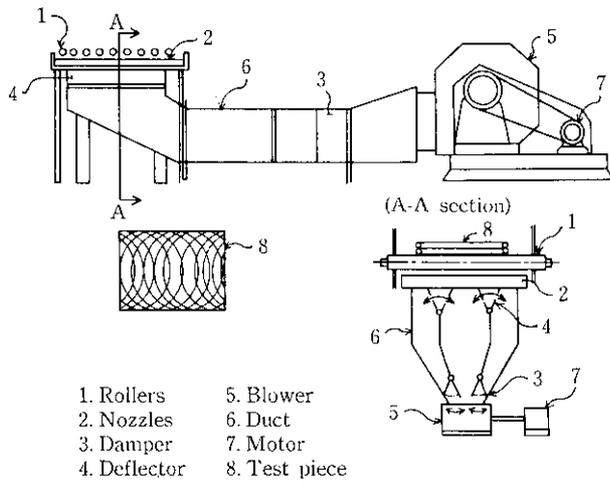


Table 2 Influence of the nozzle location on the cooling rate of wire (nozzle width 25 mm) (°C/s)

Static pressure (mmAq)	Nozzle location:	
	Between Rollers	Under Rollers
15	8.2	7.9
150	13.8	13.8

	Between rollers	Under rollers
40	$P_s$ ○ 150 mm Aq ● 15 mm Aq	$P_s$ ○ 150 mm Aq ● 15 mm Aq



- 1. Rollers
- 2. Nozzles
- 3. Damper
- 4. Deflector
- 5. Blower
- 6. Duct
- 7. Motor
- 8. Test piece

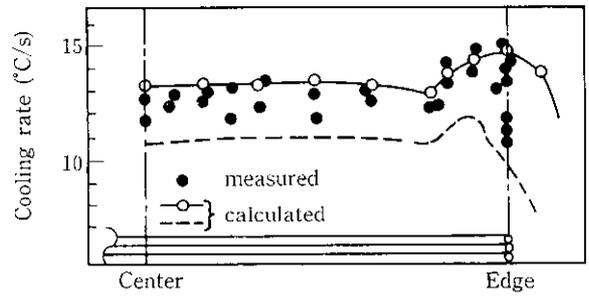


Fig. 14 Cooling rate at the simulator (measured and calculated)



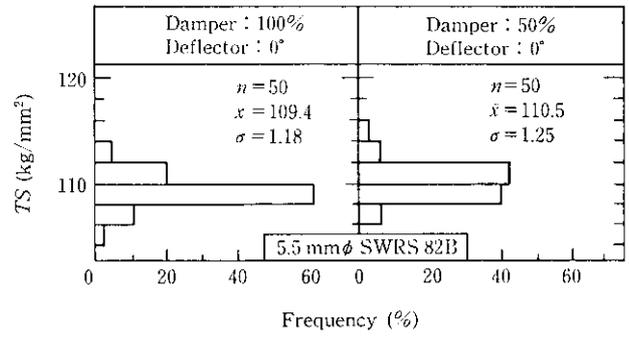
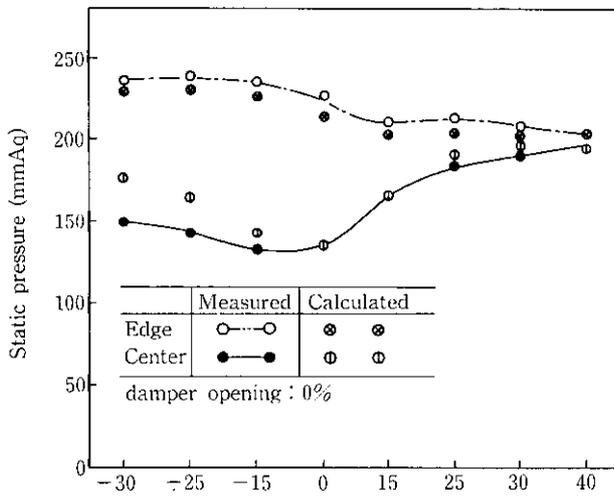


Fig. 19 Tensile strength at the simulator

Deflector angle (°)

$q_1 \sim q_5$ : 流量

$u$ : 重力加速度

$\gamma$ : 比重量

より, センターダクト内圧力  $P_0$  は,

$$P_0 = \left[ \frac{C_4 S_4}{\gamma} \right]^{1/2}$$

(2)

