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Development of Hot Rolled Steel Sheet KHN for Enameling Use

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Synopsis :

Effects of Ti and C on fishscale formation and hydrogen diffusivity were examined using

Development of Hot Rolled Steel Sheet KHN for Enameling Use*

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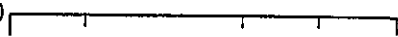
Yoshihiro MATSUMOTO**

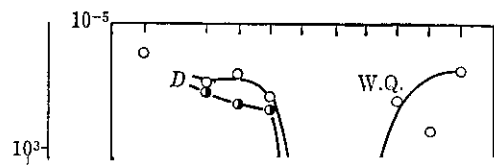
Isamu ARUGA***

*Effects of Ti and C on fishscale formation and hydrogen diffusivity were examined
using hot rolled titanium bearing steel sheets.*

are TiN, TiC, solid solute Ti and microvoids^{6,8,9). In}

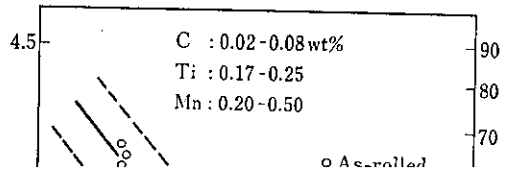
0.20





From the above-mentioned results, the hydrogen trap sites of Ti-bearing steel are discussed below. Asaoka et al. showed, from experiments using autoradiography, that the grain boundary has only a small tran effect and the boundary between the precipita-

C : 0.02-0.08wt%
Ti : 0.17-0.25
Mn : 0.20-0.50



850°C, and 700°C were employed, respectively. After

Table 2 Tensile properties of KHN sheets

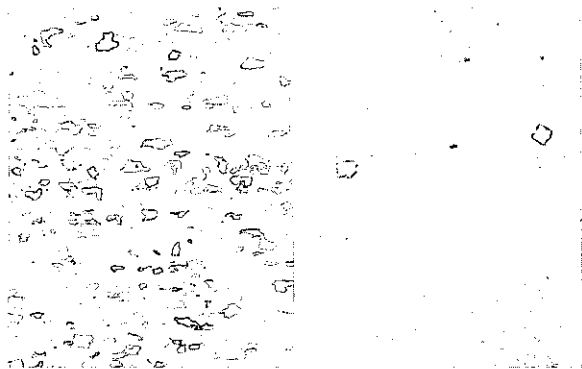
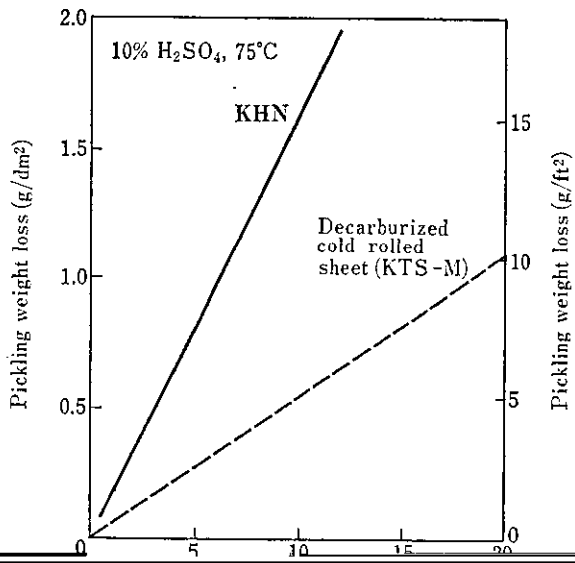


Photo. 2 Micrographs of hot rolled sheet, KHN

Thickness (mm)	Sampling position	Enamel pretreatment		
		As-shot-blasted	Shot blasting + pickling**	Shot blasting + pickling + Ni flash***
1.6	LE	0.3*	0.3	0.3
	TE	0.3	0/3	0/3
3.2	LE	0/3	0/3	0/3
	TE	0/3	0/3	0/3

(2) After cold reduction

Thickness (mm)	Reduction (%)	Enamel pretreatment		
		As-shot-	Shot blasting	Shot blasting
		0.3	0/3	0/3



enameled sheets which has been closed to conven-

5) G. K. P. Chu: *Bull. Inst. Vitreous Enamellers*, 10 (1960),
p. 335