

13Cr ステンレス鋼管の製造と諸特性^{*1}

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Manufacturing and Characteristics of 13% Cr Stainless Steel Tubing

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Synopsis:

5AC L-80) の製造実績をもとに、製造技術および品質特性について述べた。ビレットは、連铸材を用い、熱間加工性を改善するためS量を0.002%以下に抑えた。

Mannesmann mandrel mill, upsetting and heat treatment in Chita Works, Kawasaki Steel Corporation. The billet has been made by continuous casting and rolling at the billet mill. Sulfur content of the billet is lowered to less than 0.002% to improve hot workability. High piercing efficiency of the billet is re-

Table 1. Mechanical Properties of 13Cr Stainless Steel O.C.T.G.

Cr stainless steel O.C.T.G.							
User	Grade	YS (ksi)	TS (ksi)	El (%)	Hard- ness (HRC)	Toughness (ft·lb)	
						avg.	min.
A	80	80~ 95	≥ 95	API Formula	≤ 23		
	85	85~ 100	≥ 100	API Formula	≤ 23		
	13Cr-75	75~ 90	≥ 95	API Formula	≤ 22	30	23

steel									
(wt %)									
	C	Si	Mn	P	S	Ni	Cr	Mo	N
13% Cr	0.20	0.50	0.60	≤ 0.020	0.001	—	13.0	—	0.025

	°F					°F		
100	1 600	1 800	2 000	2 200	2 400	2 000	2 200	2 400

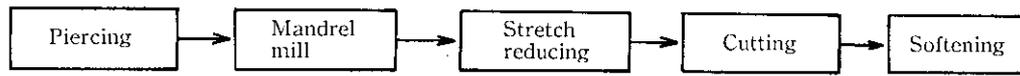
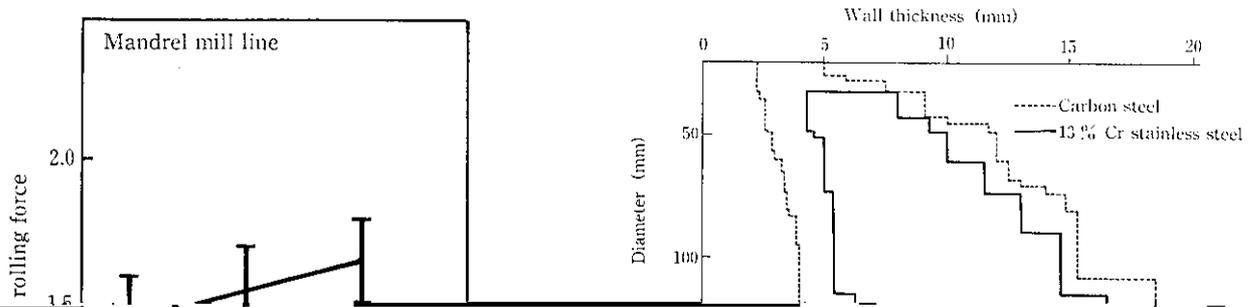
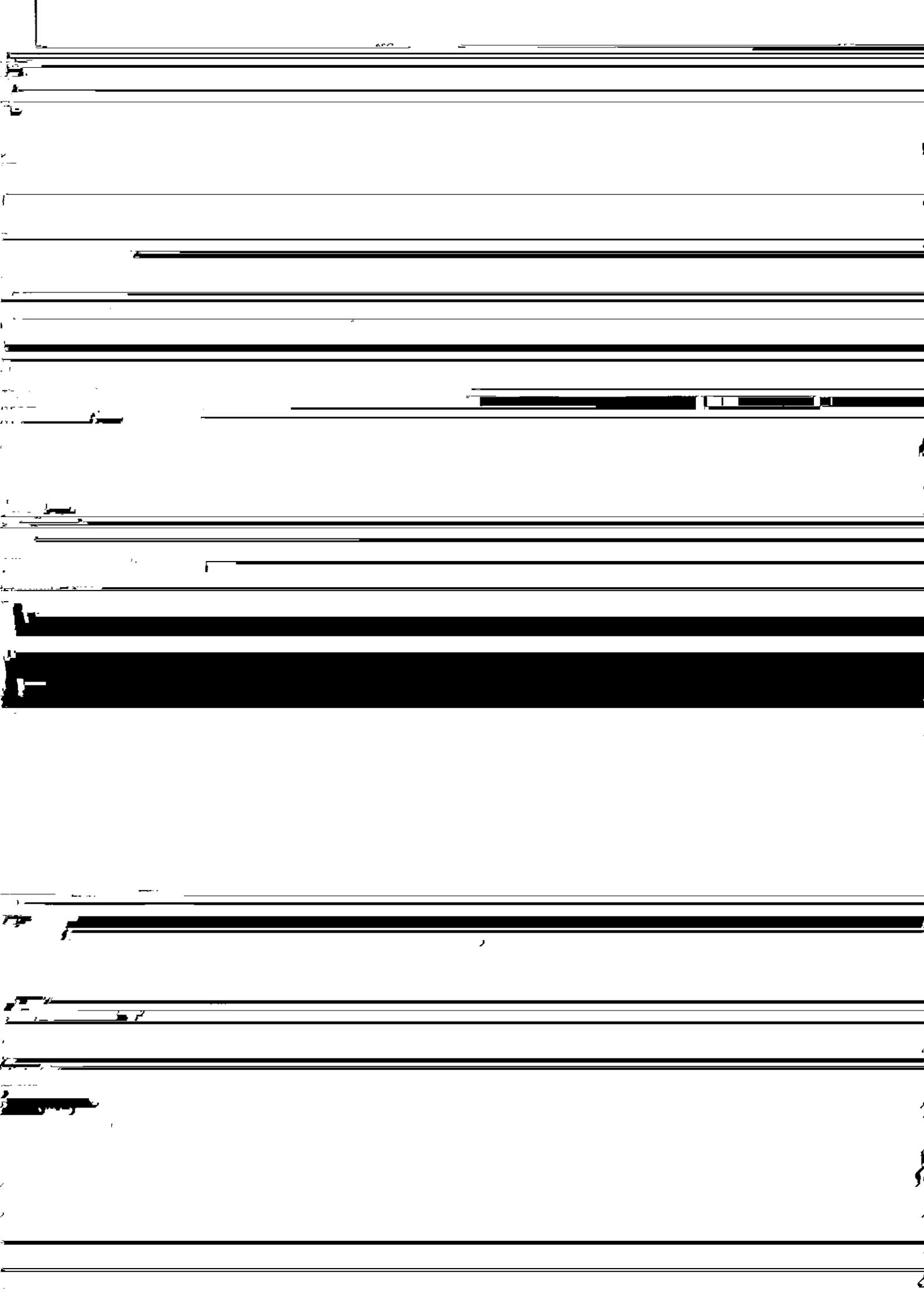
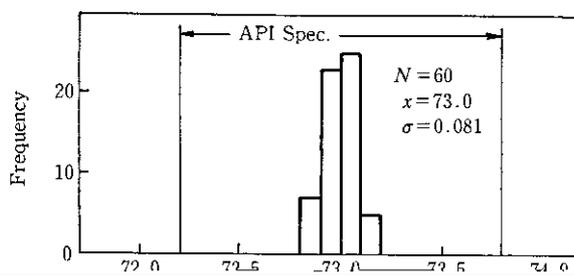
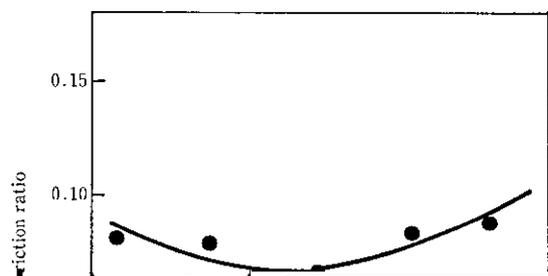


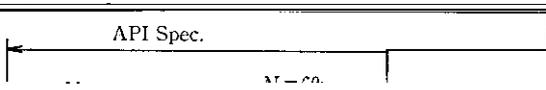
Fig. 7 Manufacturing process of 13% Cr upset-tubing







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15 % NaCl 80°C	<input type="checkbox"/> Cracking
	<input type="checkbox"/> Small crack
	<input type="checkbox"/> No crack

6 結 言

今回製造した 13Cr アプセットチュービング 27/8"×6.5lb/ft
(ASTM A 312-90) の製造条件は、13Cr 系 ステンレス鋼