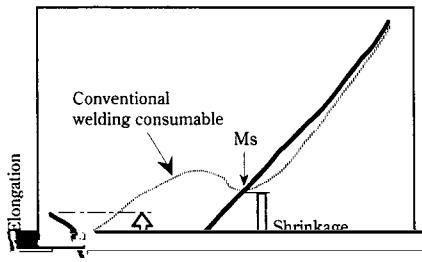
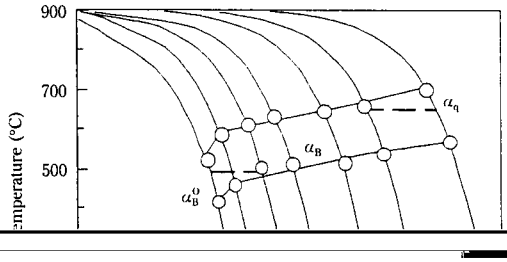
KAWASAKI STEEL TECHNICAL REPORT No. 44 June 2001

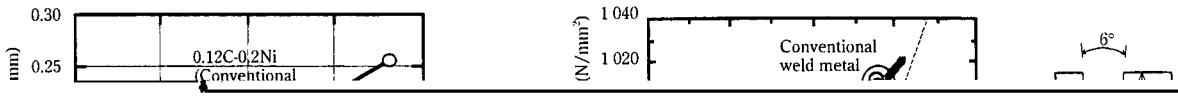
Development of High Performance Steel Plates for Reliable and Economical Steel Structures*

Synopsis:

Steel structures are now evaluated from the viewpoint


Conventional
welding consumable
Ms
Elongation
Shrinkage


900
700
500
α_η
α_B
α_B^O


0.30
0.25
mm)
0.12C-0.2Ni
(Conventional
1 040
1 020
(N/mm²)
Conventional
weld metal
6°

Deposited metal tests

(mass%)

Steel	C	Si	Mn	P	S	Al	Cu	Ni	Nb
TM1	0.07	0.11	1.45	0.010	0.001	0.035	0.26	0.73	0.012

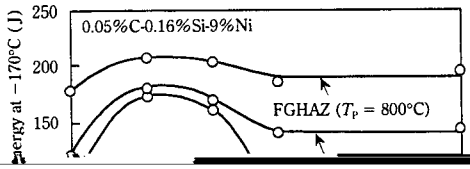


Table 1 Results of V-notch Charpy absorbed energy at the mid-thickness of 110 mm thick SCMV4 steel

Case	Homogenizing treatment	Forging ratio (%)		vTrs
		Widthwise	Thicknesswise	

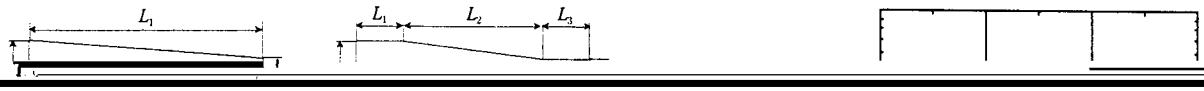
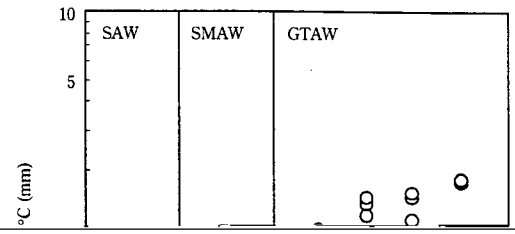

L_1
L_1
L_2
L_3

Table 2 Production data of extremely-low C bainitic steel plates

3.3 Building Structural Steels

Vibration-damping design which uses vibration dampers is receiving attention as a technique to improve the seismic-resistance of buildings. Many hysteresis-type dampers of attenuation strain made of low yield point steels have been developed that are stable, eco-



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