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New Weathering Steels of Extremely-Low Carbon Bainitic Type with Excellent Weldability

] ^a T k (Kazuhiko Shiotani) d - s B (Fumimaru Kawabata) ` ± £ ? (Keniti Amano)

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溶接性に優れた極低炭素ベイナイト型新耐候性鋼*

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要旨

炭素含有量を約 0.02 mass% に低減した極低炭素ベイナイト型の
川崎製鉄株式会社 新製鋼部 新製鋼課 関野 隆一 関野 隆一 関野 隆一

Conventional weathering steel

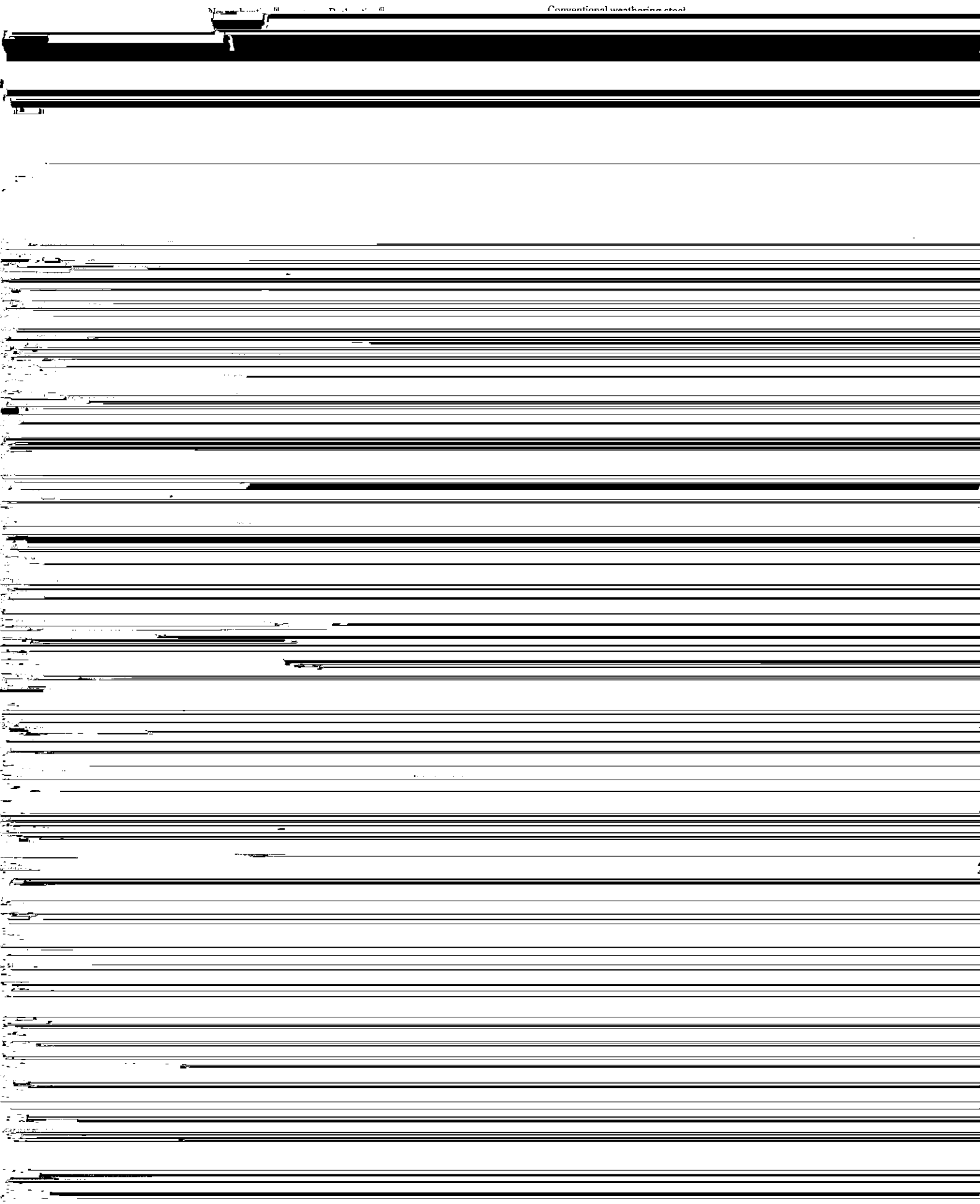
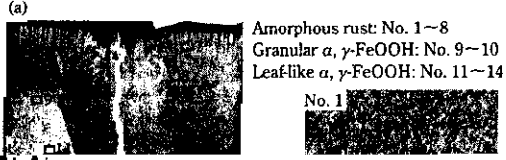


Table 1 Constituents of iron rusts for the 0.02C-2.7Ni steel and conventional one exposed in Okinawa for 1 year

	α -FeOOH	β -FeOOH	γ -FeOOH	Fe ₃ O ₄	X-ray amorphous rust
0.02C-2.7Ni steel	14.4	2.4	15.6	0.6	67.0
Conventional weathering steel	14.5	2.7	26.1	0.9	55.8



3.1 化学成分

開発した田園用新耐候性鋼および海浜用新耐候性鋼の化学組成を Table 2 に示す。田園用新耐候性鋼は、耐候性合金元素として Ni, Cu, Cr を添加し、JIS G 3114 の成分規格に適合している。海浜用

Table 3 Mechanical properties of new weathering steels

		Thickness, <i>t</i>	Tensile properties*	V-notch Charpy properties**
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Table 4 Welding conditions for evaluation of weld performance of 490 MPa grade new weathering steel for coastal use and mechanical properties of welded joints

	Tensile test*	Charv	V-notch Charov impact test***
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