KAWASAKI STEEL GIHO
Vol.19 (1987) No.4

# ﺗ ﻟﺢ KS-1000

# Newly Developed Electrodes KS-1000 for Repair Welding under Pulsating Stress

ﻌ (Koki Sato) ی (Yutaka Kawai) (Tadamasa Yamaguchi) (Noboru Nishiyama) ﭼ ﻛ (Yasumasa Nakanishi) ﭼ (Yoshitaka Nakamura)

:
ﺗﺞ ﻟﺢ
ﺗ
ﻃﻢ ﺗ ﻟﺢ
ↄ ◡ KS-1000 ﮈ (1) ﺗ
ﺳﺨ ﻛ ﺑﻢ (2)KS-1000 ☻ ⁱ
ℯ ﺭ ⁱ ↄ ﺭ ◗ ℯ ķ ہ Δ δ 0.2mm
ḩ ⁱ ↄ Δ δ 1000=1.0mm ﻢﻣ (3)KS-1000
3 ﻳی

Synopsis :

New covered electrodes KS-1000 suited to repair welding of such structures as bridges and highways etc. under pulsating stress in service conditions have been developed by examining the effect of chemical compositions on hot crack sensitivity of the metal welded under pulsating stress. KS-1000 electrodes have excellent anti-cracking characteristics, and the critical root gap opening displacement range for cracking of the newly-developed electrodes under pulsating stress in much larger than that of conventional electrodes. Though KS-1000 has only a strength level of 490 MPa, it is possible to apply it to 590-MPA class high tensile strength steel by using it for the root pass, where hot cracks in weld metal were mainly observed, and to apply conventional electrodes to the remaining passes. KS-1000 electrodes are suited not only to repair welding of the structure under pulsating stress but also to tack welding and restraint welding for jigs.

# 変動応力下の補修溶接棒 KS-1000 の開発

川崎製鉄技報
19 (1987) 4, 263-267

# Newly Developed Electrodes KS-1000 for Repair Welding under Pulsating Stress

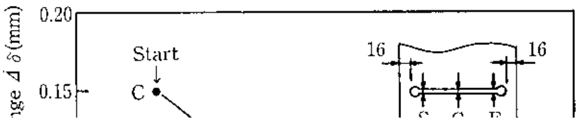
## 要旨

[illegible]

## 3 KS-1000 溶接棒の [illegible]

Table 4 Welding conditions of weld cracking tests under pulsating stress

| Type of specimen | Welding position | Pass | Current (A) | Voltage (V) | Speed (cm/min) | Pass sequence |
|---|---|---|---|---|---|---|



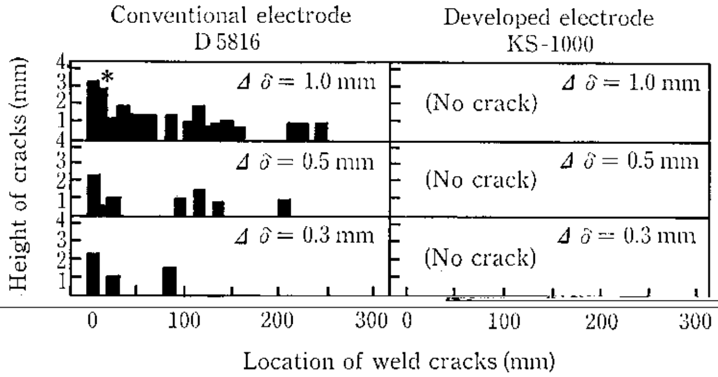


Fig. 6 Distribution of cracks in specimens tested under pulsating stress (Prerestraint free type specimen)

Note: *Inclusive of 2 nd pass layer

**Fig. 6** は初期無拘束型試験片における $\Delta\delta_{1000}$ と割れの大きさの関係を溶接線方向の割れ発生位置別に示したものである。KS-1000 は

ある。市販溶接棒（D 5816）では，図からも明らかなように $\Delta\delta_{1000}$ が 0.3 mm ですでに割れが発生し，$\Delta\delta_{1000}$ が 1.0 mm では溶接線の