Title (en)
METHOD FOR POSTWELD HEAT TREATMENT

Publication
EP 0034057 B1 19840815 (EN)

Application
EP 81300509 A 19810206

Priority
JP 1499780 A 19800209

Abstract (en)
[origin: EP0034057A2] A method for postweld heat treatment (hereinafter referred to as PWHT) for multilayer welding, in which the terminating point of the PWHT is judged correctly to preclude cracking due to insufficient treatment or uneconomical excessive treatment, the method comprising; determining the residual hydrogen concentration directly beneath the final welded layer immediately after completion of welding; determining a crack-preventing critical hydrogen concentration to obtain a ratio of the critical hydrogen concentration to the residual hydrogen concentration; determining the value of a product of a hydrogen diffusivity coefficient during the heat treatment and a holding time where a hydrogen concentration currently occurring in the heat treatment reaches the critical hydrogen concentration, on the basis of the relation of a ratio of the current hydrogen concentration to the residual hydrogen concentration and a sum of a parameter of hydrogen diffusion to be determined depending upon the welding conditions and the above-mentioned product; measuring the temperature of the heat treatment at a suitable point of the weld; and terminating the heat treatment at a time point when a time-integrated value of a hydrogen diffusivity coefficient at the measured temperature exceeds the value of the above-mentioned product.

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C21D 9/50; C21D 3/06; C21D 11/00

IPC 8 full level
B23K 31/00 (2006.01); C21D 3/06 (2006.01); C21D 9/50 (2006.01); C21D 11/00 (2006.01)

CPC (source: EP)
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Cited by
CN104169035A; USRE48063E; WO2013140798A3

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EP 0034057 A2 19810819; EP 0034057 A3 19811007; EP 0034057 B1 19840815; AU 544035 B2 19850516; AU 6696881 A 19810820; CA 1189427 A 19850625; DE 3165473 D1 19840920; JP S56112421 A 19810904; JP S5856014 B2 19831213

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