Title (en)

HIGH-STRENGTH STEEL HAVING SUPERIOR BRITTLE CRACK ARRESTABILITY, AND PRODUCTION METHOD THEREFOR

Title (de)

HOCHFESTER STAHL MIT HERVORRAGENDER SPRÖDBRUCHSTABLITÄT UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER À HAUTE RÉSISTANCE AYANT UNE EXCELLENTE RÉSISTANCE À LA PROPAGATION DE FISSURES FRAGILES ET SON PROCÉDÉ DE PRODUCTION

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Application

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Abstract (en)

The present invention provides high-strength steel having superior brittle crack arrestability and a production method therefor. Provided according to the present invention are: high-strength steel, which has superior brittle crack arrestability, comprises 0.05-0.1 wt% of C, 0.9-1.5 wt% of Mn, 0.8-1.5 wt% of Ni, 0.005-0.1 wt% of Nb, 0.005-0.1 wt% of Ti, 0.1-0.6 wt% of Cu, 0.1-0.4 wt% of Si, at most 100 ppm of P, and at most 40 ppm of S with the remainder being Fe and other inevitable impurities, and has microstructures including one structure selected from the group consisting of a single-phase structure of ferrite, a single-phase structure of bainite, a complex-phase structure of ferrite and bainite, a complex-phase structure of ferrite and pearlite, and a complex-phase structure of ferrite, bainite, and pearlite; and a production method therefor. According to the present invention, high-strength steel having high yield strength and superior brittle crack arrestability can be obtained.

IPC 8 full level

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