

Title (en)
HIGH-STRENGTH THICK STEEL PLATE FOR CONSTRUCTION HAVING EXCELLENT CHARACTERISTICS FOR PREVENTING DIFFUSION OF BRITTLE CRACKS, AND PRODUCTION METHOD THEREFOR

Title (de)
HOCHFESTE DICKE STAHLPLATTE ZUR KONSTRUKTION MIT HERVORRAGENDEN MAGNETISCHEN EIGENSCHAFTEN ZUR VERHINDERUNG DER DIFFUSION VON SPRÖDEN RISSEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
PLAQUE D'ACIER ÉPAISSE DE HAUTE RÉSISTANCE MÉCANIQUE POUR STRUCTURE DOTÉE D'EXCELLENTE PROPRIÉTÉS D'ARRÊT DE PROPAGATION DE FISSURES CASSANTES, ET PROCÉDÉ DE FABRICATION DE CELLE-CI

Publication
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Application
EP 12863408 A 20120518

Priority
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• JP 2012063409 W 20120518

Abstract (en)
[origin: EP2799584A1] Provided is a high-strength thick steel plate for structural use having a thickness of 50 mm or more and excellent brittle crack arrestability which can be preferably used for ships and a method for manufacturing the steel plate. The steel plate with excellent brittle crack arrestability has a metallographic structure mainly including a bainite phase, a texture in which the integration degree I of the RD//{110} plane in a central portion in the thickness direction is 1.5 or more, and a Charpy fracture appearance transition temperature $vTrs$ in a surface portion and the central portion in the thickness direction of $-40^{\circ}C$ or lower. Further, the steel plate preferably has the Charpy fracture appearance transition temperature and the integration degree I of the RD//{110} plane in the central portion in the thickness direction satisfying the relational expression (1) below: $vTrs \ 1/2 \ \# \ t - 12 \times I \ RD \ // \ 110 \ \# \ 1/2 \ \# \ t \ \# - 70$ where $vTrs \ (1/2t)$: fracture appearance transition temperature ($^{\circ}C$) in the central portion in the thickness direction and $I \ RD \ // \ (110) \ [1/2t]$: integration degree of the RD//{110} plane in the central portion in the thickness direction.

IPC 8 full level
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Citation (search report)
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