Title (en)

STRUCTURAL ULTRA-THICK STEEL HAVING EXCELLENT RESISTANCE TO BRITTLE CRACK PROPAGATION, AND PRODUCTION METHOD THEREFOR

Title (de)

ULTRADICKER BAUSTAHL MIT AUSGEZEICHNETER BESTÄNDIGKEIT GEGEN SPRÖDRISSAUSBREITUNG UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER DE STRUCTURE ULTRA ÉPAIS PRÉSENTANT 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 structural ultra-thick steel having excellent resistance to brittle crack propagation and a production method therefor. Provided according to the present invention are: structural ultra-thick steel, which has excellent resistance to brittle crack propagation, comprises 0.02-0.1 wt % of C, 0.8-2.5 wt % of Mn, 0.05-1.5 wt % of Ni, 0.005-0. 1 wt % of Nb, and 0.005-0. 1 wt % of Ti 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 one aspect of the present invention, ultra-thick structural steel, which has excellent resistance to brittle crack propagation and has excellent yield strength and an excellent impact transition temperature in the center, can be obtained.

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