

Title (en)

HOT PRESS FORMING STEEL PLATE, FORMED MEMBER USING SAME, AND METHOD FOR MANUFACTURING THE PLATE AND MEMBER

Title (de)

HEISSPRESSFORMUNG EINER STAHLPLATTE, DARAUS GEFORMTES ELEMENT SOWIE VERFAHREN ZUR HERSTELLUNG DER PLATTE UND DES ELEMENTS

Title (fr)

PLAQUE D'ACIER POUR FORMAGE PAR PRESSAGE À CHAUD, ÉLÉMENT FORMÉ À L'AIDE DE CELLE-CI ET PROCÉDÉ DE FABRICATION DE LA PLAQUE ET DE L'ÉLÉMENT

Publication

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Application

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Priority

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Abstract (en)

[origin: EP2733228A1] The present invention relates to a hot press forming steel plate made of a composition comprising: 0.3-1.0 wt % of C; 0.01-4.0 wt % of Mn; 1.0-2.0 wt % of Si; 0.01-2.0 wt % of Al; 0.015 wt % or less of S; 0.01 wt % or less of N; and the remainder being Fe and unavoidable impurities. Further, the present invention relates to a method for manufacturing the hot press forming steel plate, characterized by comprising the steps of: heating, to between 1100 and 1300 °C, a steel slab having the composition; performing hot rolling finishing between an Ar3 transformation point and 950 °C; and performing winding between MS and 720 °C. Further, the present invention relates to a hot press formed member characterized by having the composition, and having a dual phase microstructure made of bainite and residual austenite. In addition, the present invention relates to a method for manufacturing the hot press formed member, characterized by comprising the steps of: heating the steel plate having the composition to a temperature of an Ac3 point or higher; hot press molding the heated steel plate; performing cooling at a cooling speed of 20 °C/sec or higher to a temperature between MS and 550 °C; and performing a heat treatment in a heating furnace between MS and 550 °C.

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Citation (search report)

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