

Title (en)

STEEL PRODUCT MADE OF LIGHTWEIGHT STEEL CONTAINING MANGANESE AND METHOD FOR PRODUCTION THEREOF

Title (de)

STAHLPRODUKT AUS MANGANHALTIGEM LEICHTBAUSTAHL UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

PRODUIT EN ACIER CONSTITUÉ D'ACIER LÉGER DE CONSTRUCTION CONTENANT DU MANGANÈSE, ET SON PROCÉDÉ DE FABRICATION

Publication

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Application

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Abstract (en)

[origin: WO2020169764A1] The invention relates to a steel product made of lightweight steel containing manganese, having a minimum notched bar impact work at -40 °C in the transverse direction of  $\geq 20$  Joules, preferably at least 30 Joules, having the following chemical composition in wt. %: C: 0.1 to 1.8, preferably 0.3 to 1.5; Mn: 15 to 35, preferably 20 to 30; Al: 6 to 12, preferably 7 to 10; Si: 0.2 to 1.5, preferably 0.5 to 1.2; Mo: 0.1 to 1.2, preferably 0.5 to 1.1; V: 0.05 to 0.5, preferably 0.07 to 0.3; Nb: 0.01 to 0.5, preferably 0.05 to 0.3; Cr: 0.05 to 3, preferably 0.1 to 2; Ni: 0.05 to 3, preferably 0.1 to 2; P:  $< 0.04$ ; S:  $< 0.02$ ; N:  $< 0.02$ ; remainder iron, including unavoidable elements accompanying steel, together with the optional addition of one or more of the following elements: Ti, Cu, B, Co, W, Zr, Ca and Sn, having a joint consisting of at least 40 vol. % austenite, less than 60 vol. % ferrite, remainder martensite and/or carbides up to 2%, consisting of kappa carbides and/or vanadium carbides and/or niobium carbides and/or molybdenum carbides having a good combination of strength, distension and forming properties. The invention further relates to a method for producing a steel product in the form of a flat steel product made from the aforementioned lightweight steel containing manganese.

IPC 8 full level

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