

Title (en)
FORMABLE LIGHTWEIGHT STEEL WITH IMPROVED MECHANICAL PROPERTIES AND METHOD FOR PRODUCING SEMI-FINISHED PRODUCTS FROM SAID STEEL

Title (de)
UMFORMBARER LEICHTBAUSTAHL MIT VERBESSERTEN MECHANISCHEN EIGENSCHAFTEN UND VERFAHREN ZUR HERSTELLUNG VON HALBZEUG AUS DIESEM STAHL

Title (fr)
ACIER LÉGER DEFORMABLE DE CONSTRUCTION PRÉSENTANT DES PROPRIÉTÉS MÉCANIQUES AMÉLIORÉES ET PROCÉDÉ DE FABRICATION DE PRODUIT SEMI-FINI À PARTIR DE CET ACIER

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Application
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Abstract (en)
[origin: WO2017013193A1] The invention relates to a formable lightweight steel having improved mechanical properties and high resistance to delayed hydrogen-induced cracking and hydrogen embrittlement, comprising the following elements (in wt.%): C 0.02 to ≤ 1.0 ; Mn 3 to 30; Si ≤ 4 ; P max. 0.1; S max. 0.1; N max. 0.03; Sb 0.003 to 0.8, particularly advantageously to 0.5, as well as at least one or more of the following carbide-forming elements in the specified proportions (in wt.%): Al ≤ 15 ; Cr > 0.1 to 8; Mo 0.05 to 2; Ti 0.01 to 2; V 0.005 to 1; Nb 0.00 to 1; W 0.005 to 1; Zr 0.001 to 0.3; with the remainder consisting of iron including the usual steel-accompanying elements, with the optional addition of the following elements in wt.%: Ni max. 5, Co max. 10, Ca max. 0.005, B max. 0.01 and Cu 0.05 to 2. The invention also relates to a method for producing said lightweight steel.

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