Title (en)

HOT-ROLLED WEATHER RESISTANT STEEL PRODUCT AND METHOD OF MANUFACTURING THE SAME

Title (de)

WARMGEWALZTES WETTERFESTES STAHLPRODUKT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

PRODUIT D'ACIER LAMINÉ À CHAUD RÉSISTANT AUX INTEMPÉRIES ET SON PROCÉDÉ DE FABRICATION

Publication

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Application

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Priority

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Abstract (en)

This invention relates to a hot-rolled weather resistant steel product comprising a composition consisting of, in terms of weight percentages (wt. %): C 0.015 - 0.045, Si 0.15 - 0.75, Mn 0.8 - 1.6, Al 0.005 - 0.12, Nb 0.0 - 0.08, Cu 0.2 - 1.0, Cr 0.35 - 1.0, Ni 0.01 - 1.0, Ti 0.0 - 0.12, Mo > 0.05 - 0.35, V 0.0 - 0.14, B < 0.0006, P ≤ 0.035, S ≤ 0.025, W optionally < 0.1 %, Co optionally < 0.1 %, N < 0.0200 %, H < 0.0004 %, O < 0.0100 %, Ca < 0.01 %, REM < 0.1 %, and remainder Fe and inevitable impurities. Said steel product has a microstructure comprising a matrix consisting of, in terms of volume percentages (vol. %), measured at ¼ thickness: Polygonal ferrite (PF): 0 ≤ PF ≤ 10, Quasipolygonal ferrite (QPF): 5 ≤ QPF ≤ 36, Granular bainite (GB): 20 ≤ GB ≤ 70, Lath bainite (LB): 16 ≤ LB ≤ 80, Retained austenite (RA): RA ≤ 2, Martensite/austenite constituents (MA): MA ≤ 5, Pearlite (P): P ≤ 5, and GB+LB > 50 %,

IPC 8 full level

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