

Title (en)

HIGH HARDNESS LOW ALLOYED HOT ROLLED STEEL AND METHOD OF MANUFACTURING THEREOF

Title (de)

NIEDRIG LEGIERTER, WARMGEWALZTER STAHL MIT HOHER HÄRTE UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

ACIER LAMINÉ À CHAUD FAIBLEMENT ALLIÉ DE HAUTE DURETÉ ET SON PROCÉDÉ DE FABRICATION

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Application

EP 22800790 A 20221020

Priority

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Abstract (en)

[origin: WO2023067544A1] A high hardness low alloyed hot rolled steel having improved abrasion resistance, impact toughness, hardness, and weldability is provided. The high hardness low alloyed hot rolled steel comprises the following composition expressed in weight %: C: 0.10-0.25, Mn: 1.05-1.5, Si: 0.25-0.35, Cr: 0.15-0.25, Mo: 0.05-0.15, Ni: 0.45-0.55, Al: 0.15-0.25, carbon equivalent: 0.34-0.69, and the balance being Iron (Fe) and unavoidable impurities. The high hardness low alloyed hot rolled steel comprises a microstructure of maximum 10 % ferrite, maximum 10% austenite, maximum 20% pearlite, maximum 20% bainite and 60-100 % martensite. The high hardness low alloyed hot rolled steel exhibits tensile strength ≥ 600 MPa, a total elongation 10-20%, a hardness ≥ 200 Hv, and a yield strength ≥ 500 MPa. A method (100) for manufacturing high hardness low alloyed hot rolled steel strip of the above-mentioned composition is also provided.

IPC 8 full level

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