

Title (en)
HEAVY-WALLED STEEL PLATE HAVING 450MPA-GRADE TENSILE STRENGTH AND EXCELLENT RESISTANCE TO HYDROGEN INDUCED CRACKING AND METHOD FOR MANUFACTURING SAME

Title (de)
DICKWANDIGE STAHLPLATTE MIT 450MPA-GRAD-ZUGFESTIGKEIT UND HERVORRAGENDER BESTÄNDIGKEIT GEGEN WASSERSTOFFINDUZIERTER RISSBILDUNG SOWIE VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
MATÉRIAU D'ACIER À PAROI ÉPAISSE DOTÉ D'UNE RÉSISTANCE À LA TRACTION DE 450 MPA ET D'UNE EXCELLENTE RÉSISTANCE À LA FISSURATION INDUITE PAR HYDROGÈNE, ET PROCÉDÉ DE FABRICATION D'UN TEL MATÉRIAU D'ACIER À PAROI ÉPAISSE

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Application
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Abstract (en)
The present disclosure relates to a heavy-wall steel plate having 450MPa-grade tensile strength and excellent resistance to hydrogen induced cracking, and a method for manufacturing the same. The heavy-wall steel plate includes, by weight, carbon (C): 0.03% to 0.06%, silicon (Si): 0.2% to 0.4%, manganese (Mn): 1.0% to 1.6%, phosphorus (P): 0.03% or less, sulfur (S): 0.003% or less, aluminum (Al): 0.06% or less, nitrogen (N): 0.01% or less, copper (Cu): 0.05% to 0.4%, nickel (Ni): 0.05% to 0.5%, calcium (Ca): 0.0005% to 0.003%, a balance of iron (Fe), and other unavoidable impurities, wherein a thickness of the heavy-wall steel plate is 40 mm or more.

IPC 8 full level
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