

Title (en)
CRYOGENIC AUSTENITIC HIGH-MANGANESE STEEL HAVING EXCELLENT SHAPE, AND MANUFACTURING METHOD THEREFOR

Title (de)
KRYOGENER AUSTENITISCHER STAHL MIT HOHEM MANGANANTEIL UND AUSGEZEICHNETER FORM UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
ACIER AUSTÉNITIQUE CRYOGÉNIQUE À HAUTE TENEUR EN MANGANÈSE AYANT UNE EXCELLENTE FORME, ET PROCÉDÉ DE FABRICATION ASSOCIÉ

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Abstract (en)
[origin: EP3872216A1] The cryogenic austenitic high-manganese steel having an excellent shape, according to one aspect of the present invention, comprises 0.2-0.5 wt% of C, 23-28 wt% of Mn, 0.05-0.5 wt% of Si, 1 wt% or less (but not 0 wt%) of Cu, 0.03 wt% or less of P, 0.005 wt% or less of S, 0.5 wt% or less of Al, 2.5-4.5 wt% of Cr, and 0.0005-0.01 wt% of B, with the remainder being Fe and other unavoidable impurities, and also comprises at least 95 area% of austenite as a microstructure, wherein the Charpy impact toughness at - 196°C is least 30 J (based on a thickness of 5 mm), and the maximum difference in height between a crest and a trough formed within an area of 2 m along the direction of rolling may be at most 10 mm.

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