

Title (en)

HIGH MANGANESE STEEL HAVING EXCELLENT OXYGEN CUTTING PROPERTIES, AND MANUFACTURING METHOD THEREFOR

Title (de)

MANGANREICHER STAHL MIT AUSGEZEICHNETEN SAUERSTOFFSCHNEIDEIGENSCHAFTEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER À HAUTE TENEUR EN MANGANÈSE AYANT D'EXCELLENTE PROPRIÉTÉS DE COUPE À L'OXYGÈNE ET PROCÉDÉ DE FABRICATION S'Y RAPPORTANT

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Application

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Abstract (en)

The high manganese steel having excellent oxygen cutting properties, according to one aspect of the present invention, comprises 0.1-0.5 wt% of carbon (C), 20-26 wt% of manganese (Mn), 0.05-0.4 wt% of silicon (Si), at most 2.0 wt% of aluminum (Al), and at most 4 wt% of chromium (Cr), with the remainder being Fe and other unavoidable impurities, and has a cutting sensitivity (Sc), calculated according to [relational expression 1] below, of at least 430 and may comprise at least 95 area% of austenite as a microstructure. [Relational expression 1] Cutting sensitivity (Sc) = $1742 - 662 \cdot [C] - 19.2 \cdot [Mn] + 1.6 \cdot [Al] - 140 \cdot [Cr]$ (In [relational expression 1], [C], [Mn], [Al], and [Cr] represent the respective percentages by weight of C, Mn, Al, and Cr included in the steel and, if the elements concerned are not included, represent 0.)

IPC 8 full level

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