Title (en)

NON-ORIENTED ELECTRICAL STEEL SHEET HAVING SUPERIOR MAGNETIC PROPERTIES AND A PRODUCTION METHOD THEREFOR

Title (de)

NICHTKORNORIENTIERTES ELEKTROBLECH MIT HERVORRAGENDEN MAGNETISMUSEIGENSCHAFTEN UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

TÔLE MAGNÉTIQUE EN ACIER NON ORIENTÉ PRÉSENTANT DES PROPRIÉTÉS MAGNÉTIQUES SUPÉRIEURES ET PROCÉDÉ DE PRODUCTION DE CELLE-CI

Publication

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Application

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Abstract (en)

The present invention relates to a non-oriented electrical steel sheet. Provided are: a non-oriented electrical steel sheet having outstanding magnetic properties and comprising, as percentages by weight, from 1.0 to 3.0% of Al, from 0.5 to 2.5% of Si, from 0.5 to 2.0% of Mn, from 0.001 to 0.004% of N, from 0.0005 to 0.004% of S and a balance of Fe and other unavoidably incorporated impurities, wherein the Al, Mn, N and S are included so as to satisfy the compositional formulae {[Al]+[Mn]}#¤3.5, 0.002#¤{[N]+[S]}#¤0.006, 300#¤{([Al]+[Mn])/([N]+[S])}#¤1,400; and a production method therefor. By optimising the Al, Si, Mn, N and S added components in this way, the distribution density of coarse inclusions is increased, thereby making it possible to improve crystal-grain growth properties and domain wall motility and so produce the highest grade of non-oriented electrical steel sheet having superior magnetic properties, low hardness, and superior customer workability and productivity.

IPC 8 full level

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CPC (source: EP US)

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