

Title (en)

METHOD FOR MANUFACTURING NON-ORIENTED SILICON STEEL WITH HIGH-MAGNETIC INDUCTION

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES NICHT AUSGERICHTETEN SILICIUMSTAHL MIT HOHER MAGNETISCHER INDUKTION

Title (fr)

PROCÉDÉ DE FABRICATION D'ACIER AU SILICIUM NON ORIENTÉ AVEC UNE FORTE INDUCTION MAGNÉTIQUE

Publication

**EP 2508629 A4 20161130 (EN)**

Application

**EP 11835489 A 20110414**

Priority

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- CN 2011072775 W 20110414

Abstract (en)

[origin: EP2508629A1] Abstract: A manufacture process of non-oriented silicon Steel with high magnetic induction comprising the procedures: 1) smelting and casting: the steel's chemical compositions by weight percent: Si 0.1~1%, Al 0.005~1.0%, C # 0.004%, Mn = 0.10~1.50%, P # 0.2%, , S # 0.005%, N # 0.002, Nb+V+Ti # 0.006%, and the rest is Fe; molten steel is smelted and secondary refined and then casted into a billet; 2) hot-rolling: the billet is heated to 1150~1200 °C, and then hot-rolled into a plate at finish-rolling temperature 830~900 °C , at a temperature # 570 °C, and is coiled; 3) flattening: the plate is cold-rolled at compression ratio 2~5%; 4) normalization: the plate is normalized at temperature not below 950 °C for 30~180s; 5) pickling and cold-rolling: the normalized plate is pickled, and then is successively cold-rolled several times at total compression ratio 70~80% into a sheet with thickness of finished product; 6) finish-annealing: the cold-rolled sheet is quickly heated to 800~1000 °C at temperature rise rate # 100 °C/s, and soaked for 5~60s, thereafter, cooled slowly to 600~750C, then left to cool naturally. The manufacture process can raise magnetic induction of non-oriented silicon Steel by at least 200 Gauss without increasing iron loss.

IPC 8 full level

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CPC (source: EP KR US)

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Citation (search report)

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