

Title (en)
MAGNESIUM OXIDE COATING FOR ELECTRICAL STEELS AND THE METHOD OF COATING

Publication
EP 0416420 A3 19921119 (EN)

Application
EP 90116384 A 19900827

Priority
US 40471489 A 19890908

Abstract (en)
[origin: EP0416420A2] Decarburized grain oriented silicon steel is provided with an annealing separator which forms a glass film after the final high temperature anneal. The magnesia used as the annealing separator has a total chlorine level of 0.01 to 0.20% by weight based on the weight of magnesia with at least 0.01% metal chloride selected from the group of Mg, Ca, Na and K. The chloride addition acts to seal the coating surface during the final anneal to control diffusion and stabilize the secondary grain growth. The glass film which forms during the anneal may be laser scribed for domain refinement without coating damage. The magnesia may also contain additions of phosphates, TiO₂, SiO₂, Cr and B. The temperature of the magnesia is maintained below 25 DEG C to control hydration and eliminate the need for other additives in the magnesia slurry to control hydration.

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C21D 8/12; **C21D 1/70**

IPC 8 full level
C23C 22/00 (2006.01); **C21D 8/12** (2006.01); **C21D 9/46** (2006.01); **H01F 1/16** (2006.01); **C21D 3/04** (2006.01)

CPC (source: EP KR)
C21D 1/70 (2013.01 - KR); **C21D 8/12** (2013.01 - KR); **C21D 8/1283** (2013.01 - EP); **C21D 3/04** (2013.01 - EP)

Citation (search report)
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• [A] PATENT ABSTRACTS OF JAPAN vol. 3, no. 68 (C-48)13 June 1979 & JP-A-54 041 220 (SHIN NIPPON SEITETSU) 2 April 1979
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