

Title (en)

A METHOD OF MANUFACTURING A GRAIN-ORIENTED ELECTRICAL STEEL STRIP

Publication

EP 0378131 A3 19920930 (EN)

Application

EP 90100231 A 19900105

Priority

- JP 177889 A 19890107
- JP 8650289 A 19890405

Abstract (en)

[origin: EP0378131A2] Provided is a method of manufacturing a grain-oriented electrical steel strip having excellent magnetic properties, that is, high magnetic flux density in particular, which is characterized in that the average diameter d of grain (primary recrystallization grain) of a material before final annealing is set to a value greater than $15\text{ }\mu\text{m}$ and the coefficient σ^* of deviation in grain diameter is set to a value less than 0.6. According to the present invention, the aggregation to the $\{110\}<001>$ orientation of a product can be made to be remarkably high so as to obtain a product having a high magnetic flux density B_8 which is equal to or greater than 1.88 tesla.

IPC 1-7

C21D 8/12

IPC 8 full level

C21D 3/04 (2006.01); **C21D 8/12** (2006.01); **C21D 11/00** (2006.01)

CPC (source: EP)

C21D 3/04 (2013.01); **C21D 8/12** (2013.01); **C21D 11/00** (2013.01); **C21D 8/1222** (2013.01); **C21D 8/1233** (2013.01); **C21D 8/1272** (2013.01)

Citation (search report)

- [Y] US 2867559 A 19590106 - MAY JOHN E
- [Y] EP 0219611 B1 19900516
- [A] EP 0098324 A1 19840118 - NIPPON STEEL CORP [JP]
- [A] BE 688060 A 19670410
- [AD] US 2599340 A 19520603 - LITTMANN MARTIN F, et al
- [AD] US 3287183 A 19661122 - SATORU TAGUCHI, et al
- [AD] US 3932234 A 19760113 - IMANAKA TAKUICHI, et al
- [AD] US 4770720 A 19880913 - KOBAYASHI HISASHI [JP], et al

Cited by

DE102011107304A1; WO2013004747A1; US5720196A; EP0585956A1; CN110457729A; EP0726328A1; US5665178A; EP0534432A3; KR100501003B1; EP0947597A3; KR100501002B1; EP0648847A1; US5472521A; EP0539858A1; US5261972A; CN103748240A; US6858095B2

Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

EP 0378131 A2 19900718; EP 0378131 A3 19920930; EP 0378131 B1 19970528; DE 69030771 D1 19970703; DE 69030771 T2 19970911

DOCDB simple family (application)

EP 90100231 A 19900105; DE 69030771 T 19900105