

Title (en)

Method of manufacturing a high Mn non-magnetic steel sheet for cryogenic temperature use

Title (de)

Verfahren zum Herstellen eines nicht-magnetischen, hoch mangan enthaltenden Stahlblechs für kryogene Verwendungen

Title (fr)

Procédé de fabrication d'un acier non-magnétique à haute teneur en manganèse pour applications cryogéniques

Publication

EP 1024204 A2 20000802 (EN)

Application

EP 00101428 A 20000125

Priority

JP 1791299 A 19990127

Abstract (en)

A method of manufacturing a high Mn non-magnetic steel sheet having low permeability at a cryogenic temperature suitable for use in large scale particle accelerators, the method comprises rolling a steel material containing, on the wt% basis, from 0.05 to 0.18% of C, from 26.0 to 30.0% of Mn, from 5.0 to 10.0% of Cr, 0.05 to 0.15% of N and, optionally, from 0.50 to 5.0% of Ni, in which a rolling start temperature is from 1050 to 1200 DEG C and a rolling end temperature is from 700 to 1000 DEG C. Further, a cold rolled sheet is annealed at an annealing temperature for cold rolled sheet of from 1050 to 1200 DEG C and cooled after annealing, the annealed sheet being preferably applied with temper rolling under control for the strength by varying a draft ratio. <IMAGE>

IPC 1-7

C21D 8/02; **C22C 38/38**

IPC 8 full level

C21D 8/02 (2006.01); **C21D 9/46** (2006.01); **C22C 38/00** (2006.01); **C22C 38/38** (2006.01); **C22C 38/58** (2006.01); **H01F 1/00** (2006.01)

CPC (source: EP)

C21D 8/0205 (2013.01); **C22C 38/001** (2013.01); **C22C 38/38** (2013.01); **C22C 38/58** (2013.01); **C21D 8/0226** (2013.01); **C21D 8/0236** (2013.01); **C21D 8/0263** (2013.01); **C21D 8/0273** (2013.01)

Cited by

CN101798658A; CN103834781A

Designated contracting state (EPC)

DE FR GB SE

DOCDB simple family (publication)

EP 1024204 A2 20000802; **EP 1024204 A3 20040128**; JP 2000212646 A 20000802; JP 3864600 B2 20070110

DOCDB simple family (application)

EP 00101428 A 20000125; JP 1791299 A 19990127