

Title (en)  
FE-NI-BASED ALLOY THIN PLATE

Title (de)  
DÜNNE PLATTE AUS EINER LEGIERUNG AUF FE-NI-BASIS

Title (fr)  
PLAQUE MINCE EN ALLIAGE À BASE DE FE-NI

Publication  
**EP 4328331 A3 20240522 (EN)**

Application  
**EP 23217804 A 20170822**

Priority  
• JP 2016190743 A 20160929  
• EP 17855488 A 20170822  
• JP 2017029964 W 20170822

Abstract (en)  
Provided are an Fe-Ni-based thin plate capable of having isotropic mechanical characteristics even if the plate is widened, and a method for producing the same. The Fe-Ni-based alloy thin plate and the method for producing the Fe-Ni-based alloy thin plate are characterized by the following: the thin plate is formed of, in terms of mass percentage, 35.0-43.0% of Ni + Co (Co is 0-6.0%), 0.5% or less of Si, 1.0% or less of Mn, with the remainder being Fe and impurities; a hot-rolled material is used as a material for cold rolling; first cold rolling is conducted on the material for cold rolling, with a rolling reduction ratio of 85% or higher; after the first cold rolling, recrystallization sintering is conducted on such material under conditions where the temperature is 800°C or higher and the retention time is 0.1-1.2 minutes; after the recrystallization sintering, a final cold rolling is conducted on such material with a rolling reduction ratio of 40% or less to obtain a Fe-Ni-based alloy thin plate having a thickness of 0.25 mm or less; and no heat treatment is conducted after the final cold rolling.

IPC 8 full level  
**C21D 9/46** (2006.01); **B21B 3/02** (2006.01); **C21D 6/00** (2006.01); **C21D 7/02** (2006.01); **C21D 8/02** (2006.01); **C21D 8/04** (2006.01); **C22C 38/00** (2006.01); **C22C 38/08** (2006.01); **C22C 38/10** (2006.01); **H01J 9/14** (2006.01); **H01J 29/07** (2006.01)

CPC (source: EP KR)  
**C21D 6/001** (2013.01 - EP); **C21D 8/0236** (2013.01 - EP); **C21D 8/0436** (2013.01 - EP); **C21D 8/0468** (2013.01 - EP); **C21D 9/46** (2013.01 - KR); **C22C 38/00** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/08** (2013.01 - EP); **C22C 38/105** (2013.01 - EP KR); **H01J 9/142** (2013.01 - EP); **C21D 7/02** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **H01J 2229/0733** (2013.01 - EP)

Citation (search report)  
• [A] WO 03070996 A1 20030828 - JFE STEEL CORP [JP], et al  
• [A] JP 2001262231 A 20010926 - NIPPON MINING CO  
• [A] JP 2003253398 A 20030910 - JFE STEEL KK  
• [A] US 5620535 A 19970415 - INOUE TADASHI [JP], et al  
• [A] JP H05220503 A 19930831 - NIPPON KOKAN KK  
• [A] JP H03281756 A 19911212 - NIPPON KOKAN KK

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