

Title (en)
DEVICE FOR INDUCTIVELY HEATING METALLIC STRIPS

Title (de)
VORRICHTUNG ZUR INDUKTIVEN ERWÄRMUNG VON METALLISCHEN BÄNDERN

Title (fr)
DISPOSITIF POUR CHAUFFER DES BANDES METALLIQUES PAR INDUCTION

Publication
EP 1314339 A1 20030528 (DE)

Application
EP 01971634 A 20010828

Priority
• DE 0103208 W 20010828
• DE 10042454 A 20000829

Abstract (en)
[origin: US6770858B2] For optimum induction heating of metallic strips (1) of differing widths-particularly in the edge region-one multicoil transverse field inductor is positioned both above and below the strip (1) to be heated, whose coil axes are positioned vertically to the strip surface. In this case, each inductor comprises at least one inductor segment (2, 3; 7; 15; 17), which is constructed as a coil composite of multiple approximately rectangular coils (8, 9, 10; 16; 18) which extend predominantly transversely to the transport direction of the strip (1), the coils (8, 9, 10; 16; 18) having different, stepped transverse extensions and the coil having the highest transverse extension extending at most up to the lateral edges of the widest strip and the coil having the lowest transverse extension extending at most up to the lateral edges of the narrowest strip. Each inductor segment (2, 3; 7; 15; 17) is connected to a circuit for defined clocking of its coils (8, 9, 10; 16; 18), and each inductor segment (3; 7; 15; 17) below the strip is assigned an identical inductor segment (2; 7; 15; 17) above the strip. Through the device according to the present invention, overheating of the edges of metal strips (1) is prevented during induction heating-independently of the strip width.

IPC 1-7
H05B 6/02; H05B 6/36

IPC 8 full level
H05B 6/10 (2006.01); **C21D 1/42** (2006.01); **H05B 6/02** (2006.01); **H05B 6/36** (2006.01); **H05B 6/40** (2006.01); **H05B 6/44** (2006.01)

CPC (source: EP US)
H05B 6/104 (2013.01 - EP US); **H05B 6/365** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0219773 A1 20020307; AT E281056 T1 20041115; CA 2419558 A1 20030213; DE 50104322 D1 20041202; EP 1314339 A1 20030528; EP 1314339 B1 20041027; ES 2231549 T3 20050516; JP 2004507870 A 20040311; US 2003164372 A1 20030904; US 6770858 B2 20040803

DOCDB simple family (application)
DE 0103208 W 20010828; AT 01971634 T 20010828; CA 2419558 A 20010828; DE 50104322 T 20010828; EP 01971634 A 20010828; ES 01971634 T 20010828; JP 2002522466 A 20010828; US 34463003 A 20030318