

Title (en)
DEVICE FOR HOT DIP COATING METAL STRANDS

Title (de)
VORRICHTUNG ZUR SCHMELZTAUCHBESCHICHTUNG VON METALLSTRÄNGEN

Title (fr)
DISPOSITIF DE REVETEMENT PAR IMMERSION A CHAUD DE BANDES CONTINUES METALLIQUES

Publication
EP 1483424 A1 20041208 (DE)

Application
EP 03743812 A 20030220

Priority
• DE 10210429 A 20020309
• EP 0301722 W 20030220

Abstract (en)
[origin: WO03076681A1] The invention relates to a device for hot dip coating metal strands (1), particularly strip steel, in which the metal strand (1) can be vertically guided through a reservoir (3), which accommodates the molten coating metal (2), and through a guide channel (4) connected upstream therefrom. An electromagnetic inductor (5) is mounted in the area of the guide channel (4) and in order to retain the coating metal (2) inside the reservoir (3), can induce induction currents in the coating metal (2) by means of an electromagnetic traveling field. While interacting with the electromagnetic traveling field, said induction currents exert an electromagnetic force. The inductor (5) has at least two main coils (6) that are arranged in succession in movement direction (X) of the metal strand (1), and has at least two correction coils (7) for controlling the position of the metal strand (1) inside the guide channel (4) in direction (N), which is normal to the surface of the metal strand (1). These correction coils are also arranged in succession in movement direction (X) of the metal strand (1). In order to improve the efficiency of the control of the metal strip inside the guide channel, the invention provides that at least a portion of the correction coils (7), when viewed in movement direction (X) of the metal strand (1), are arranged so that they are offset with regard to one another perpendicular to movement direction (X) and perpendicular to direction (N) that is normal to the surface of the metal strand (1).

IPC 1-7
C23C 2/24

IPC 8 full level
C23C 2/40 (2006.01); **C23C 2/24** (2006.01)

CPC (source: EP KR US)
C23C 2/24 (2013.01 - EP KR US)

Citation (search report)
See references of WO 03076681A1

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

DOCDB simple family (publication)
WO 03076681 A1 20030918; AT E328134 T1 20060615; AU 2003210320 A1 20030922; AU 2003210320 B2 20080731; BR 0307201 A 20041103; CA 2474275 A1 20030918; CA 2474275 C 20100817; CN 100436637 C 20081126; CN 1639379 A 20050713; DE 10210429 A1 20030918; DE 50303578 D1 20060706; EP 1483424 A1 20041208; EP 1483424 B1 20060531; ES 2263008 T3 20061201; JP 2005525466 A 20050825; JP 4382495 B2 20091216; KR 100941623 B1 20100211; KR 20040090993 A 20041027; MX PA04008698 A 20050713; PL 205346 B1 20100430; PL 370504 A1 20050530; RO 120776 B1 20060728; RS 50748 B 20100831; RU 2004129776 A 20050610; RU 2309193 C2 20071027; UA 79112 C2 20070525; US 2005076835 A1 20050414; US 6929697 B2 20050816; YU 79704 A 20060303; ZA 200404643 B 20050210

DOCDB simple family (application)
EP 0301722 W 20030220; AT 03743812 T 20030220; AU 2003210320 A 20030220; BR 0307201 A 20030220; CA 2474275 A 20030220; CN 03805619 A 20030220; DE 10210429 A 20020309; DE 50303578 T 20030220; EP 03743812 A 20030220; ES 03743812 T 20030220; JP 2003574874 A 20030220; KR 20047011615 A 20030220; MX PA04008698 A 20030220; PL 37050403 A 20030220; RO 200400687 A 20030220; RU 2004129776 A 20030220; UA 20041008181 A 20030220; US 50387104 A 20040806; YU P79704 A 20030220; ZA 200404643 A 20040611