

Title (en)  
METHOD FOR THE CONTINUOUS CASTING AND DIRECT SHAPING OF A METAL STRAND, IN PARTICULAR A STEEL CAST STRAND

Title (de)  
VERFAHREN ZUM STRANGGIESSEN UND UNMITTELBAREN VERFORMEN EINES METALL-, INSBESONDERE EINES GIESSSTRANGS AUS STAHLWERKSTOFFEN

Title (fr)  
PROCEDE DE COULEE CONTINUE ET DE FACONNAGE DIRECT D'UN METAL, NOTAMMENT D'UNE BARRE DE COULEE EN MATERIAUX A BASE D'ACIER

Publication  
**EP 1478479 B1 20051214 (DE)**

Application  
**EP 03702564 A 20030130**

Priority  
• DE 10207597 A 20020222  
• DE 10236368 A 20020808  
• EP 0300915 W 20030130

Abstract (en)  
[origin: WO03070399A1] The invention relates to a method and a continuous casting device for the direct shaping of a metal strand, in particular a steel cast strand (1) of any format (1d). According to said method, the cast strand (1) is only cooled by a liquid coolant (4) in longitudinal sections (6), where the interior of the cast strand (1) remains liquefied and the temperature of the cast strand (1) in a transition zone (7) upstream of, in and/or downstream of a bending and straightening unit (8) is evened out by an insulation of the exterior surface (1 b), essentially without the use of a liquid coolant (4), and by progressive thermal radiation. The cast strand (1) is shaped in a dynamically variable reduction section (9) as a result of the compressive strength that is measured on individual shaping rolls (10) or roll segments (11), depending on the compressive force that can be locally applied.

IPC 1-7  
**B22D 11/12**; **B22D 11/124**; **B22D 11/22**; **B22D 11/20**; **B22D 11/128**

IPC 8 full level  
**B22D 11/00** (2006.01); **B22D 11/12** (2006.01); **B22D 11/124** (2006.01); **B22D 11/128** (2006.01); **B22D 11/20** (2006.01); **B22D 11/22** (2006.01)

CPC (source: EP US)  
**B22D 11/1206** (2013.01 - EP US); **B22D 11/124** (2013.01 - EP US); **B22D 11/128** (2013.01 - EP US); **B22D 11/20** (2013.01 - EP US); **B22D 11/225** (2013.01 - EP US)

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 03070399 A1 20030828**; AT E312675 T1 20051215; AU 2003205708 A1 20030909; CA 2470961 A1 20030828; CA 2470961 C 20101109; CN 1293966 C 20070110; CN 1635936 A 20050706; DE 50301920 D1 20060119; EP 1478479 A1 20041124; EP 1478479 B1 20051214; ES 2254903 T3 20060616; JP 2005526618 A 20050908; JP 4351068 B2 20091028; RU 2004128254 A 20050420; RU 2302313 C2 20070710; US 2005011629 A1 20050120; US 2007023161 A1 20070201; US 7121323 B2 20061017; US 7849911 B2 20101214

DOCDB simple family (application)  
**EP 0300915 W 20030130**; AT 03702564 T 20030130; AU 2003205708 A 20030130; CA 2470961 A 20030130; CN 03804364 A 20030130; DE 50301920 T 20030130; EP 03702564 A 20030130; ES 03702564 T 20030130; JP 2003569346 A 20030130; RU 2004128254 A 20030130; US 49865004 A 20040610; US 51799706 A 20060907