

## Title (en)

Forming thin metallurgical products between two cylinders

## Title (de)

Formen von dünnen metallurgischen Produkten zwischen zwei Zylindern

## Title (fr)

Mise en forme de produits métalliques minces entre deux cylindres

## Publication

**EP 0709152 A1 19960501 (FR)**

## Application

**EP 95402328 A 19951019**

## Priority

FR 9413102 A 19941028

## Abstract (en)

The appts. incorporates two cylinders (10, 11) installed in bearings (13, 14) on a frame (16). Each cylinder is provided with means (22) for measuring the position of its generatrix located diametrically opposite to the gap at three or more points in parallel planes (P1, P3, P5), and means (23) for measuring the position of its generatrix in the middle plane (P3) at an angle of 90 degrees relative to the gap. These measurements are used for continuous determination of the gap between the cylinders while the installation is in operation, with possible cylinder deformations taken into account.

## Abstract (fr)

Le dispositif comporte deux cylindres (10, 11) maintenus par des paliers (13, 14) sur un châssis (16) et, pour chaque cylindre, des moyens de mesure (22) de la position de la génératrice diamétralement opposée au col entre les cylindres, en trois points ou plus situés respectivement dans un plan médian (P3) perpendiculaire aux axes et dans des plans secondaires tels que (P1, P5) parallèles au plan médian, et des moyens de mesure (23), dans le dit plan médian, de la position d'une génératrice située à 90° par rapport au col Le procédé selon l'invention utilise ces mesures pour déterminer en continu l'entrefer entre les cylindres en tenant compte des déformations en service des cylindres. Application notamment à la coulée continue entre cylindres de bandes métalliques. <IMAGE>

## IPC 1-7

**B22D 11/06**; **B21B 38/10**; **B21B 38/12**

## IPC 8 full level

**G01B 11/14** (2006.01); **B21B 37/58** (2006.01); **B21B 38/10** (2006.01); **B21B 38/12** (2006.01); **B22D 11/06** (2006.01); **B22D 11/16** (2006.01); **G01B 21/16** (2006.01)

## CPC (source: EP KR US)

**B21B 1/00** (2013.01 - KR); **B21B 38/10** (2013.01 - EP US); **B21B 38/12** (2013.01 - EP US); **B22D 11/0622** (2013.01 - EP US)

## Citation (search report)

- [A] US 3358485 A 19671219 - DE CARO SAMUEL A, et al
- [A] PATENT ABSTRACTS OF JAPAN vol. 10, no. 249 (M - 511)<2305> 27 August 1986 (1986-08-27)
- [A] PATENT ABSTRACTS OF JAPAN vol. 16, no. 51 (M - 1209) 10 February 1992 (1992-02-10)
- [A] PATENT ABSTRACTS OF JAPAN vol. 15, no. 101 (M - 1091) 11 March 1991 (1991-03-11)

## Cited by

DE10003496A1; EP3587363A1; FR3083225A1; WO0016919A1; EP1225992B2

## Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

## DOCDB simple family (publication)

**EP 0709152 A1 19960501**; **EP 0709152 B1 20000301**; AT E189983 T1 20000315; AU 3448595 A 19960509; AU 685677 B2 19980122; BR 9505010 A 19971014; CA 2161557 A1 19960429; CN 1077461 C 20020109; CN 1130106 A 19960904; CZ 281095 A3 19960515; CZ 289802 B6 20020417; DE 69515251 D1 20000406; DE 69515251 T2 20000928; DK 0709152 T3 20000731; ES 2144589 T3 20000616; FI 107889 B 20011031; FI 955098 A0 19951026; FI 955098 A 19960429; FR 2726210 A1 19960503; FR 2726210 B1 19970110; GR 3033480 T3 20000929; JP H08229639 A 19960910; KR 100394475 B1 20031224; KR 960013498 A 19960522; PL 179092 B1 20000731; PL 311154 A1 19960429; PT 709152 E 20000731; RO 115335 B1 20000128; RU 2139772 C1 19991020; SK 133795 A3 19960807; SK 282541 B6 20021008; TR 199501337 A2 19960621; TW 305785 B 19970521; UA 35617 C2 20010416; US 5671625 A 19970930; ZA 958911 B 19960514

## DOCDB simple family (application)

**EP 95402328 A 19951019**; AT 95402328 T 19951019; AU 3448595 A 19951026; BR 9505010 A 19951030; CA 2161557 A 19951027; CN 95120313 A 19951027; CZ 281095 A 19951026; DE 69515251 T 19951019; DK 95402328 T 19951019; ES 95402328 T 19951019; FI 955098 A 19951026; FR 9413102 A 19941028; GR 20000401177 T 20000523; JP 30504095 A 19951030; KR 19950037897 A 19951028; PL 31115495 A 19951027; PT 95402328 T 19951019; RO 9501875 A 19951027; RU 95118136 A 19951027; SK 133795 A 19951026; TR 9501337 A 19951030; TW 84113291 A 19951213; UA 95104695 A 19951025; US 54960395 A 19951027; ZA 958911 A 19951020