

Title (en)
Method for manufacturing metal pipes

Title (de)
Verfahren zur Herstellung von Metallrohren

Title (fr)
Procédé de fabrication de tuyaux métalliques

Publication
EP 1121991 A1 20010808 (DE)

Application
EP 00400311 A 20000201

Priority
EP 00400311 A 20000201

Abstract (en)
[origin: US6513699B2] A process for the production of metal pipes is described in which a thin-walled metal band inclined toward cold spots is gradually formed into a slotted pipe, the longitudinal edges lying flush against one another are welded to one another, and the welded pipe is reduced in its diameter. The forming of the metal band into the slotted pipe is done by opposing metal forming rollers or forming cylinders cooperating pairwise. The forming rollers or forming cylinders guide the metal band to be deformed in its edge area with rolling friction between them. Therein the forming and guiding of the metal band is done with forming rollers and/or forming cylinders and the reduction with rollers whose surface hardness is greater than 100 GPa.

Abstract (de)
Es wird ein Verfahren zur Herstellung von Metallrohren beschrieben, bei dem ein dünnwandiges zur Kaltverschweißung neigendes Metallband (1) allmählich zum Schlitzrohr (3) geformt, die stumpf aneinanderliegenden Längskanten miteinander verschweißt (10) werden und das geschweißte Rohr in seinem Durchmesser reduziert (11) wird. Das Formen des Metallbandes (1) zum Schlitzrohr (3) erfolgt durch gegenläufige paarweise zusammenarbeitende Formrollen (4,5,6) oder Formwalzen aus Metall. Die Formrollen (4,5,6) oder Formwalzen führen das zu verformende Metallband in seinem Kantenbereich mit rollender Reibung zwischen sich. Hierbei erfolgt das Formen und Führen des Metallbandes mit Formrollen (4,5,6) und/oder Formwalzen und das Reduzieren mit Rollen (11), deren Oberflächenhärte höher als 100GPa ist. <IMAGE>

IPC 1-7
B21C 37/08; **B21C 3/08**

IPC 8 full level
B21C 3/08 (2006.01); **B21C 37/08** (2006.01); **B21D 5/12** (2006.01)

CPC (source: EP US)
B21C 3/08 (2013.01 - EP US); **B21C 37/08** (2013.01 - EP US)

Citation (search report)

- [A] US 3260099 A 19660712 - ELGE FRANK E
- [A] US 3974555 A 19760817 - STROHMEIER GEROLF, et al
- [A] DATABASE INSPEC [online] INSTITUTE OF ELECTRICAL ENGINEERS, STEVENAGE, GB; SCHEIBE H -J ET AL: "Laser-arc technology for industrial hard coating deposition", XP002144621, Database accession no. 5916770 & FIFTH INTERNATIONAL CONFERENCE ON PLASMA SURFACE ENGINEERING, GARMISCH-PARTENKIRCHEN, GERMANY, 9-13 SEPT. 1996, vol. 97, no. 1-3, Surface and Coatings Technology, Dec. 1997, Elsevier, Switzerland, pages 410 - 413, ISSN: 0257-8972
- [A] PATENT ABSTRACTS OF JAPAN vol. 017, no. 534 (M - 1486) 27 September 1993 (1993-09-27)
- [A] DATABASE INSPEC [online] INSTITUTE OF ELECTRICAL ENGINEERS, STEVENAGE, GB; BRAZA J F ET AL: "Tribological behaviour of diamond and diamondlike carbon films: status and prospects", XP002144622, Database accession no. 4256745 & 5TH INTERNATIONAL CONFERENCE ON SURFACE MODIFICATION TECHNOLOGIES, BIRMINGHAM, UK, 2-4 SEPT. 1991, vol. 8, no. 7, Materials Science and Technology, July 1992, UK, pages 574 - 581, ISSN: 0267-0836

Cited by
EP3797891A1; EP3797890A1

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

DOCDB simple family (publication)
EP 1121991 A1 20010808; **EP 1121991 B1 20021211**; AT E229386 T1 20021215; DE 50000912 D1 20030123; DK 1121991 T3 20030331; ES 2184682 T3 20030416; JP 2001246421 A 20010911; US 2001042773 A1 20011122; US 6513699 B2 20030204

DOCDB simple family (application)
EP 00400311 A 20000201; AT 00400311 T 20000201; DE 50000912 T 20000201; DK 00400311 T 20000201; ES 00400311 T 20000201; JP 2001024554 A 20010131; US 77163501 A 20010130