

Title (en)
Interior bending tool for bending a metal sheet for making tubes using rollers

Title (de)
Innenform-Werkzeug zum Biegen eines Blechs zu einem Rohr durch Rollen

Title (fr)
Outil de cintrage intérieur destiné au cintrage d'une tôle en un tube par rouleaux

Publication
EP 1872879 A1 20080102 (DE)

Application
EP 07011527 A 20070613

Priority
DE 102006029491 A 20060627

Abstract (en)
The interior-forming tool for remodeling a sheet metal (2) to a tube, comprises two symmetrically rotatable rollers (4, 5) arranged around rotating axes, unit (11) for the synchronization of the rollers, a stem connected with a holder of the rollers by the synchronization unit, which is formed as tooth segments combing together, a moving element arranged between a carrier element (3) and the holder, an inset element for holding, and an adjustable element formed as a screw-nut-element. The rotating axes are formed directly in the rollers. The interior-forming tool for remodeling a sheet metal (2) to a tube, comprises two symmetrically rotatable rollers (4, 5) arranged around rotating axes, unit (11) for the synchronization of the rollers, a stem connected with a holder of the rollers by the synchronization unit, which is formed as tooth segments combing together, a moving element arranged between a carrier element (3) and the holder, an inset element for holding, and an adjustable element formed as a screw-nut-element. The rotating axes are formed directly in the rollers, which run on one side of the sheet metal and which are arranged symmetrical to a middle plain of the joint carrier elements. The moving element rotates around the rotating axes. A non-rotatable middle roller (6) is arranged alternatively in a direction lying in the middle plain of the carrier elements.

Abstract (de)
Die Erfindung betrifft ein Innenform-Werkzeug (1) zum Umformen eines Blechs (2), zu einem Rohr, mit mindestens zwei um Schwenkachsen (8, 9) schwenkbar angeordneten Rollen (4, 5, 6), die an der einen Seite (7) des Blechs (2) zwecks Umformung desselben anlaufen. Um eine bessere Anpassung an das umzuformende Gut zu ermöglichen, sieht die Erfindung vor, dass unmittelbar in jeder der beiden Rollen (4, 5) eine Schwenkachse (8, 9) ausgebildet ist.

IPC 8 full level
B21D 5/12 (2006.01)

CPC (source: EP US)
B21D 5/12 (2013.01 - EP US)

Citation (applicant)
US 3472053 A 19691014 - CHANG WILLIAM J H

Citation (search report)
• [XAY] JP S5666323 A 19810604 - NIPPON STEEL CORP
• [XA] US 3472053 A 19691014 - CHANG WILLIAM J H
• [XA] JP H0441021 A 19920212 - SUMITOMO METAL IND
• [XA] US 3776010 A 19731204 - KRAKOW H
• [Y] WO 9010511 A1 19900920 - HU METAL ENG PTY LTD [AU]

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

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1872879 A1 20080102; EP 1872879 B1 20100811; AT E477067 T1 20100815; CA 2592798 A1 20071227; CA 2592798 C 20100601; CN 101096036 A 20080102; CN 101096036 B 20120905; DE 102006029491 B3 20080403; DE 502007004694 D1 20100923; ES 2349677 T3 20110110; JP 2008006505 A 20080117; JP 4660508 B2 20110330; US 2008072645 A1 20080327; US 8464569 B2 20130618

DOCDB simple family (application)
EP 07011527 A 20070613; AT 07011527 T 20070613; CA 2592798 A 20070626; CN 200710109693 A 20070627; DE 102006029491 A 20060627; DE 502007004694 T 20070613; ES 07011527 T 20070613; JP 2007164445 A 20070622; US 82180307 A 20070626