

Title (en)

DEVICE AND METHOD FOR WIDENING METAL ELEMENTS

Title (de)

VORRICHTUNG UND VERFAHREN ZUM AUFWEITEN VON METALLELEMENTEN

Title (fr)

DISPOSITIF ET PROCEDE POUR ELARGIR DES ELEMENTS METALLIQUES

Publication

EP 1993754 A1 20081126 (DE)

Application

EP 07711713 A 20070228

Priority

- EP 2007001734 W 20070228
- DE 102006010795 A 20060308

Abstract (en)

[origin: US2010000284A1] A device and a method for widening elongated metal elements which move in the longitudinal direction and are planar at least in certain regions are described. The device comprises at least two clamping sections which are opposite one another and of which one is arranged and designed for clamping a first longitudinal side of the metal element in place and the other is arranged and designed for clamping a second longitudinal side of the metal element in place, said second longitudinal side being opposite the first longitudinal side of the metal element. The clamping sections are each provided on a support unit by means of which the clamping sections, during the forward movement of the metal element, are automatically moved apart essentially perpendicularly to the direction of movement of the metal element.

IPC 8 full level

B21D 31/04 (2006.01)

CPC (source: EP KR US)

B21D 31/04 (2013.01 - EP KR US); **Y10T 29/18** (2015.01 - EP US); **Y10T 29/49373** (2015.01 - EP US)

Citation (search report)

See references of WO 2007101594A1

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 NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

US 2010000284 A1 20100107; US 8276249 B2 20121002; AR 059787 A1 20080430; AT E442922 T1 20091015; AU 2007222710 A1 20070913; AU 2007222710 A2 20081113; AU 2007222710 B2 20101202; BR PI0708686 A2 20110607; CA 2644522 A1 20070913; CA 2644522 C 20101221; CN 101394949 A 20090325; CN 101394949 B 20121114; CY 1109688 T1 20140813; DE 102006010795 A1 20070913; DE 502007001545 D1 20091029; DK 1993754 T3 20091207; EP 1993754 A1 20081126; EP 1993754 B1 20090916; EP 1993754 B9 20091202; ES 2330973 T3 20091217; GE P20115267 B 20110825; HR P20090666 T1 20100228; IL 193932 A 20111229; KR 101144765 B1 20120511; KR 20080098417 A 20081107; MX 2008011436 A 20081209; MY 148067 A 20130228; NZ 571805 A 20110630; PL 1993754 T3 20100331; PT 1993754 E 20091022; RS 51120 B 20101031; RU 2008139896 A 20100420; RU 2414318 C2 20110320; SI 1993754 T1 20100129; TW 200800434 A 20080101; TW I346015 B 20110801; UA 93396 C2 20110210; WO 2007101594 A1 20070913; ZA 200807461 B 20090729

DOCDB simple family (application)

US 28214207 A 20070228; AR P070100957 A 20070308; AT 07711713 T 20070228; AU 2007222710 A 20070228; BR PI0708686 A 20070228; CA 2644522 A 20070228; CN 200780008057 A 20070228; CY 091101334 T 20091214; DE 102006010795 A 20060308; DE 502007001545 T 20070228; DK 07711713 T 20070228; EP 07711713 A 20070228; EP 2007001734 W 20070228; ES 07711713 T 20070228; GE AP2007010889 A 20070228; HR P20090666 T 20091214; IL 19393208 A 20080907; KR 20087021975 A 20070228; MX 2008011436 A 20070228; MY PI20083418 A 20070228; NZ 57180507 A 20070228; PL 07711713 T 20070228; PT 07711713 T 20070228; RS P20090530 A 20070228; RU 2008139896 A 20070228; SI 200730107 T 20070228; TW 96107790 A 20070307; UA A200810894 A 20070228; ZA 200807461 A 20080829