

Title (en)

METALLIC PIPE BENDING APPARATUS, AND METHOD FOR MANUFACTURING A METALLIC PIPE HAVING A BENT PORTION

Title (de)

VORRICHTUNG ZUM BIEGEN VON METALLROHREN UND VERFAHREN ZUR HERSTELLUNG EINES METALLROHRS MIT EINEM GEBOGENEN TEIL

Title (fr)

APPAREIL DE PLIAGE DE TUYAU MÉTALLIQUE, ET PROCÉDÉ DE FABRICATION D'UN TUYAU MÉTALLIQUE AYANT UNE PORTION PLIÉE

Publication

EP 2165780 A4 20101110 (EN)

Application

EP 08790798 A 20080702

Priority

- JP 2008061947 W 20080702
- JP 2007179001 A 20070706

Abstract (en)

[origin: EP2165780A1] A metal pipe bending apparatus comprises heating means for fully circumferentially heating a portion of a metal pipe which is an object for a bending process, propulsion means for propulsively driving the metal pipe toward the heating means in an axial direction of pipe, guiding means including a cramp arm for cramping the metal pipe and configured for pivotal movement about a pivot shaft, for cramping a point in front of a region of the metal pipe heated by the heating means with the cramp arm, revolving the cramp point about the pivot shaft in association with the metal pipe propulsively driven by the propulsion means, and thereby applying a bending moment to the metal pipe, and compression means for causing a compression force to act on the metal pipe by applying a draw-back force to the metal pipe through the cramp arm with the pivot shaft serving as a fulcrum, where the draw-back force includes a force in a direction opposite to a direction in which the metal pipe is propulsively driven by the propulsion means. The compression means is disposed such that a distance from a point at which the draw-back force is applied to the pivot shaft is larger than a distance from a point at which the metal pipe is cramped by the cramp arm to the pivot shaft. The amount of reduced thickness can be further restrained without requiring an increase in compression driving force in a metal pipe bending process.

IPC 8 full level

B21D 7/16 (2006.01)

CPC (source: EP)

B21D 7/025 (2013.01); **B21D 7/162** (2013.01)

Citation (search report)

- [X] JP S6117329 A 19860125 - MITSUBISHI HEAVY IND LTD
- See references of WO 2009008295A1

Cited by

CN105499344A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 2165780 A1 20100324; **EP 2165780 A4 20101110**; CN 101687241 A 20100331; CN 101687241 B 20121219; JP 2009012062 A 20090122; KR 101443818 B1 20140923; KR 20100045459 A 20100503; TW 200924870 A 20090616; TW I439335 B 20140601; WO 2009008295 A1 20090115

DOCDB simple family (application)

EP 08790798 A 20080702; CN 200880023213 A 20080702; JP 2007179001 A 20070706; JP 2008061947 W 20080702; KR 20107002556 A 20080702; TW 97125077 A 20080703