

Title (en)  
METAL PIPE, AND METHOD AND DEVICE FOR PROCESSING METAL PIPE

Title (de)  
METALLROHR SOWIE VERFAHREN UND VORRICHTUNG ZUR VERARBEITUNG VON METALLROHREN

Title (fr)  
TUYAU MÉTALLIQUE, PROCÉDÉ ET DISPOSITIF POUR LE TRAITER

Publication  
**EP 2546005 A1 20130116 (EN)**

Application  
**EP 10853382 A 20101220**

Priority  
JP 2010007385 W 20101220

Abstract (en)  
A method for processing a metal pipe 1 to make part of the metal pipe 1 in an axial direction thereof into a thick portion 10, the method includes: forming a shoulder as a stress concentration portion in an axial center of the metal pipe 1 to concentrate a stress thereon; setting the metal pipe 1 in an outer die 20; and forming the thick portion 10 by inserting an inner die 25 in the metal pipe 1 to provide space S for forming the thick portion 10 between the inner and outer dies 25 and 20, and applying the axial pressure to the metal pipe 1 to concentrate the stress on the shoulder to deform the shoulder after the forming and the setting, thereby forming the thick portion 10 from the deformed stress concentration portion as a starting point.

IPC 8 full level  
**B21J 5/08** (2006.01); **B21K 21/12** (2006.01)

CPC (source: EP US)  
**B21D 9/00** (2013.01 - US); **B21J 5/08** (2013.01 - EP US); **B21K 21/12** (2013.01 - EP US)

Cited by  
EP3213837A1; RU2652931C1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2546005 A1 20130116; EP 2546005 A4 20140101**; CN 102712031 A 20121003; CN 102712031 B 20160330; JP 5734950 B2 20150617; JP WO2012085961 A1 20140522; US 2013269408 A1 20131017; WO 2012085961 A1 20120628

DOCDB simple family (application)  
**EP 10853382 A 20101220**; CN 201080028917 A 20101220; JP 2010007385 W 20101220; JP 2012502373 A 20101220; US 201013381497 A 20101220