

Title (en)  
ROBOTIC APPARATUS FOR AUTOMATED INTERNAL PIPELINE GIRTH WELD ULTRASONIC INSPECTION

Title (de)  
ROBOTISCHE VORRICHTUNG FÜR EINE AUTOMATISIERTE ULTRASCHALLPRÜFUNG INNERER RUNDNAHTEN VON ROHREN

Title (fr)  
APPAREIL ROBOTIQUE DE CONTRÔLE INTÉRIEUR ULTRASONIQUE AUTOMATISÉ DE SOUDURES CIRCONFÉRENTIELLES DE PIPELINES

Publication  
**EP 2718741 A1 20140416 (EN)**

Application  
**EP 12796247 A 20120607**

Priority

- US 201161494602 P 20110608
- CA 2012050383 W 20120607

Abstract (en)  
[origin: WO2012167380A1] This invention relates to a method and apparatus for inspecting pipeline girth welds from the inside of a pipeline by means of a robotic cart, remotely controlled externally by either an umbilical cord or a bi-directional wireless link. The robotic cart can be self propelled and can be driven from weld to weld by an operator, assisted by CCTV cameras. An array of ultrasonic probes are deployed from a rotating, robotic arm that extends from the cart front to the pipe wall, allowing the ultrasonic array to be placed at the weld and then rotated around the weld to provide 100% inspection of the weld. The acquired ultrasonic inspection data can be stored on an on-board computer for later analysis, and/or transmitted to an external computer for immediate analysis.

IPC 8 full level  
**G01S 15/88** (2006.01); **B23K 37/00** (2006.01); **F16L 13/02** (2006.01); **F16L 55/26** (2006.01); **F17D 5/00** (2006.01)

CPC (source: EP)  
**B23K 37/0276** (2013.01); **B23K 37/0282** (2013.01); **F17D 3/08** (2013.01); **F17D 5/06** (2013.01); **G01N 29/04** (2013.01); **G01N 29/069** (2013.01); **G01N 29/225** (2013.01); **G01N 29/262** (2013.01); **F16L 2101/30** (2013.01); **G01N 2291/2636** (2013.01)

Citation (search report)  
See references of WO 2012167380A1

Cited by  
US2020175667A1; US10783623B2; US10929968B2; US10890505B2; US11587217B2; US11887291B2; US11143599B2; US11635391B2; US11946882B2

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)  
**WO 2012167380 A1 20121213**; AU 2012267129 A1 20140109; CA 2838608 A1 20121213; EP 2718741 A1 20140416; MX 2013014458 A 20140724; RU 2013156530 A 20150720

DOCDB simple family (application)  
**CA 2012050383 W 20120607**; AU 2012267129 A 20120607; CA 2838608 A 20120607; EP 12796247 A 20120607; MX 2013014458 A 20120607; RU 2013156530 A 20120607