

Title (en)
DRILL STRING ROD WITH SHOULDER

Title (de)
BOHRSTRANGSTANGE MIT SCHULTER

Title (fr)
TIGE DE TRAIN DE TIGES AVEC ÉPAULEMENT

Publication
EP 3023575 A1 20160525 (EN)

Application
EP 14194246 A 20141121

Priority
EP 14194246 A 20141121

Abstract (en)
A drill string rod (100) and a drill string assembly that includes a drill rod (100) and a drill bit (112) in which the rod comprises a threaded male end (103) and a female end (102). An axially extending shoulder (110) is provided at the male end and comprises an axial length (L A) being greater than an outside diameter (D A) of the shoulder to provide a shoulder driven rod exhibiting enhanced guidance to achieve straighter holes and better collaring.

IPC 8 full level
E21B 17/042 (2006.01); **E21B 1/00** (2006.01); **E21B 17/00** (2006.01); **E21B 17/04** (2006.01)

CPC (source: CN EP US)
E21B 1/00 (2013.01 - CN EP US); **E21B 17/00** (2013.01 - CN EP US); **E21B 17/04** (2013.01 - CN EP US); **E21B 17/042** (2013.01 - US); **E21B 17/0426** (2013.01 - CN EP US); **E21B 17/16** (2013.01 - US)

Citation (applicant)
• US 4332502 A 19820601 - WORMALD PHILIP J, et al
• US 4398756 A 19830816 - DURET JEAN [FR], et al
• US 1926925 A 19330912 - WESCOTT BLAINE B
• US 5169183 A 19921208 - HALLEZ CHARLES P [BE]
• EP 1705415 A2 20060927 - INTELLISERV INC [US]
• GB 2321073 A 19980715 - BOART LONGYEAR INC [CA]
• US 4076436 A 19780228 - SLATOR DAMON T, et al
• US 6030004 A 20000229 - SCHOCK WILLIAM H [US], et al
• CA 2634557 A1 20091107 - DOVER CORP CANADA LTD [CA]
• US 4687368 A 19870818 - EKLOF AANGSTROEM KE T [SE], et al
• WO 0065192 A1 20001102 - SANDVIK AB [SE]
• US 4874045 A 19891017 - CLAYTON CHARLES H [US]
• EP 0192622 A2 19860827 - AIRAM AB OY [FI]
• CA 2550801 A1 20071222 - BOART LONGYEAR INC [CA]
• US 2002050362 A1 20020502 - LARSSON KENNETH [SE], et al

Citation (search report)
• [XY] WO 2006121386 A1 20061116 - SANDVIK INTELLECTUAL PROPERTY [SE], et al
• [X] CN 203257337 U 20131030 - SHANGHAI HILONG PETROLEUM TUBULAR GOODS RES INST, et al
• [X] US 5358285 A 19941025 - WILSON GERALD E [US]
• [X] US 2012199400 A1 20120809 - BOULET JEAN [FR], et al
• [Y] WO 9949176 A1 19990930 - SANDVIK AB [SE]

Cited by
CN109372443A; US10627023B2

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3023575 A1 20160525; AU 2015348706 A1 20170518; BR 112017010617 A2 20180214; CA 2965868 A1 20160526; CL 2017001287 A1 20171215; CN 107002467 A 20170801; MX 2017006589 A 20171214; PE 20171231 A1 20170824; RU 2017121599 A 20181221; RU 2017121599 A3 20190215; US 2017321496 A1 20171109; WO 2016079013 A1 20160526; ZA 201702931 B 20191030

DOCDB simple family (application)
EP 14194246 A 20141121; AU 2015348706 A 20151113; BR 112017010617 A 20151113; CA 2965868 A 20151113; CL 2017001287 A 20170518; CN 201580063020 A 20151113; EP 2015076502 W 20151113; MX 2017006589 A 20151113; PE 2017000842 A 20151113; RU 2017121599 A 20151113; US 201515527778 A 20151113; ZA 201702931 A 20170426