

Title (en)

DRILLS STRING COMPONENTS HAVING MULTIPLE-THREAD JOINTS

Title (de)

BOHRSTRANGKOMPONENTEN MIT MULTIGEWINDEVERBINDUNGEN

Title (fr)

COMPOSANTS DE TRAIN DE TIGES DE FORAGE PRÉSENTANT DES JOINTS À FILETAGES MULTIPLES

Publication

**EP 3767068 A1 20210120 (EN)**

Application

**EP 20180399 A 20130913**

Priority

- US 201261700401 P 20120913
- EP 13837637 A 20130913
- US 2013059716 W 20130913

Abstract (en)

Implementations of the present invention comprise drill string components having at least one thread extending around a body. The leading end of the thread can have a configuration having increased strength and resistance to jamming and cross-threading. In particular, the leading end of the thread can comprise a planar surface normal to the body. The leading end of the thread can provide an abrupt transition to full thread depth that helps reduce or eliminate cross-threading and can be oriented at an angle relative to the axis of the drill string component. The thread can further provide at least one of a variable thread width and a variable thread pitch configured to create an axial progressive fit. The thread can also provide a cylindrical thread root and a thread crest that circumscribes a frusta-cone over at least a portion of the axial length of the threads configured to create a radial progressive fit.

IPC 8 full level

**E21B 17/042** (2006.01); **E21B 19/16** (2006.01)

CPC (source: CN EP RU)

**E21B 17/042** (2013.01 - RU); **E21B 17/0423** (2013.01 - CN EP)

Citation (applicant)

- US 5788401 A 19980804 - DRENTH CHRISTOPHER L [CA]
- US 8186925 B2 20120529 - LITTLELY KEITH WILLIAM [AU]
- EP 13837637 A 20130913
- US 2013059716 W 20130913
- US 201261700401 P 20120913

Citation (search report)

- [XI] WO 0008370 A1 20000217 - HYDRIL CO [US]
- [XI] WO 2010056277 A1 20100520 - GANDY TECHNOLOGIES CORP [US], et al
- [XI] US 6485061 B1 20021126 - MOSING DONALD E [US], et al
- [XI] US 4707001 A 19871117 - JOHNSON FREDERICK W [US]

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 2014043505 A1 20140320**; AU 2013315186 A1 20150409; AU 2013315186 B2 20161201; AU 2017201366 A1 20170316;  
AU 2017201366 B2 20181206; AU 2017201366 C1 20190725; AU 2019201562 A1 20190328; AU 2019201562 B2 20201001;  
BR 112015005576 A2 20170808; BR 112015005576 B1 20210302; CA 2884798 A1 20140320; CA 2884798 C 20170815;  
CA 2973262 A1 20140320; CA 2973262 C 20200630; CL 2015000632 A1 20150703; CN 104769210 A 20150708; CN 104769210 B 20180921;  
EP 2895679 A1 20150722; EP 2895679 A4 20160601; EP 2895679 B1 20200805; EP 3767068 A1 20210120; IN 2778DEN2015 A 20150904;  
PE 20150586 A1 20150506; PE 20200332 A1 20200213; RU 2015113367 A 20161110; RU 2016149672 A 20181102;  
RU 2016149672 A3 20200402; RU 2020117937 A 20211201; RU 2607560 C2 20170110; RU 2723056 C2 20200608; ZA 201502415 B 20190731;  
ZA 201806700 B 20200129

DOCDB simple family (application)

**US 2013059716 W 20130913**; AU 2013315186 A 20130913; AU 2017201366 A 20170228; AU 2019201562 A 20190306;  
BR 112015005576 A 20130913; CA 2884798 A 20130913; CA 2973262 A 20130913; CL 2015000632 A 20150313;  
CN 201380051222 A 20130913; EP 13837637 A 20130913; EP 20180399 A 20130913; IN 2778DEN2015 A 20150406;  
PE 2015000362 A 20130913; PE 2019001917 A 20130913; RU 2015113367 A 20130913; RU 2016149672 A 20130913;  
RU 2020117937 A 20200601; ZA 201502415 A 20150410; ZA 201806700 A 20181009