

Title (en)
Frac plug mill bit

Title (de)
Frac-Plug-Fräsboreinsatz

Title (fr)
Tête de fraisage de fracturation

Publication
EP 2910727 A1 20150826 (EN)

Application
EP 15151298 A 20150115

Priority
US 201414185727 A 20140220

Abstract (en)
A fixed cutter bit for milling a frac plug includes a body and a face. The face includes a base surface and a plurality of cutter support structures extending from the base surface. Each cutter support structure has a peripheral portion and an inner portion disposed radially internal of the peripheral portion. At least one first-type cutter is supported by each peripheral portion; at least one second-type cutter is supported by each inner portion. The first type cutter is adapted to mill a harder material than the second-type cutter, and the first-type is different from the second-type.

IPC 8 full level
E21B 10/43 (2006.01); **E21B 29/08** (2006.01)

CPC (source: EP US)
E21B 10/567 (2013.01 - EP US); **E21B 29/00** (2013.01 - US); **E21B 29/08** (2013.01 - EP US)

Citation (applicant)
• US 4538691 A 19850903 - DENNIS MAHLON D [US]
• US 7958940 B2 20110614 - JAMESON STEVE D [US]
• US 5984007 A 19991116 - YUAN YUSHENG [US], et al
• US 8517123 B2 20130827 - REESE MICHAEL R [US]
• US 8162081 B2 20120424 - BALLARD BRIAN D [US], et al
• US 5010789 A 19910430 - BRETT J FORD [US], et al

Citation (search report)
• [X] WO 2013017859 A2 20130207 - OMEGA WELL MONITORING LTD [GB], et al
• [X] US 2007079995 A1 20070412 - MCCLAIN ERIC E [US], et al
• [X] US 2010155149 A1 20100624 - KESHAVAN MADAPUSI K [US], et al
• [A] CN 203022637 U 20130626 - UNIV CHINA PETROLEUM

Cited by
CN108468522A; WO2024054231A1

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 2910727 A1 20150826; CA 2875881 A1 20150820; RU 2015105046 A 20160910; US 2015233187 A1 20150820

DOCDB simple family (application)
EP 15151298 A 20150115; CA 2875881 A 20141223; RU 2015105046 A 20150216; US 201414185727 A 20140220