

Title (en)  
DRILL BIT WITH CURVED SLUDGE GROOVES

Title (de)  
BOHRER MIT GEKRÜMMTEN SCHLAMMNUTEN

Title (fr)  
TRÉPAN À RAINURES DE BOUES INCURVÉES

Publication  
**EP 3617439 A1 20200304 (EN)**

Application  
**EP 18191621 A 20180830**

Priority  
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Abstract (en)  
A percussive drill bit having a head and an axially rearward skirt. A plurality of ribs project radially outward at the skirt and define lengthwise extending channels. The ribs and channels, in the lengthwise direction are curved or angled to deviate from a longitudinal axis of the drill bit to facilitate rearward transport of fines and flushing fluid.

IPC 8 full level  
**E21B 10/38** (2006.01); **E21B 10/60** (2006.01)

CPC (source: EP KR US)  
**E21B 10/38** (2013.01 - EP KR US); **E21B 10/60** (2013.01 - EP KR US)

Citation (applicant)  
WO 2006033606 A1 20060330 - SANDVIK INTELLECTUAL PROPERTY [SE], et al

Citation (search report)  
• [XA] GB 2212091 A 19890719 - BOART HARDMETALS [IE]  
• [XA] US 2016002979 A1 20160107 - NAKAMURA KAZUYOSHI [JP], et al  
• [X] US 2009321139 A1 20091231 - STRACHAN MICHAEL J [US]  
• [X] US 2013209184 A1 20130815 - BARRY JOHN JAMES [IE], et al

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 3617439 A1 20200304; EP 3617439 B1 20210728**; AU 2019328385 A1 20210311; BR 112021003320 A2 20210810;  
CA 3107849 A1 20200305; CL 2021000465 A1 20210723; CN 112585333 A 20210330; JP 2021535299 A 20211216;  
KR 20210049810 A 20210506; MX 2021002224 A 20210514; PE 20211613 A1 20210823; PL 3617439 T3 20211206;  
US 2021238927 A1 20210805; WO 2020043504 A1 20200305; ZA 202100662 B 20220727

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**EP 18191621 A 20180830**; AU 2019328385 A 20190815; BR 112021003320 A 20190815; CA 3107849 A 20190815;  
CL 2021000465 A 20210224; CN 201980055325 A 20190815; EP 2019071966 W 20190815; JP 2021510736 A 20190815;  
KR 20217005480 A 20190815; MX 2021002224 A 20190815; PE 2021000137 A 20190815; PL 18191621 T 20180830;  
US 201917271143 A 20190815; ZA 202100662 A 20210129