

Title (en)

STEP TUBE ROD, AND DRILLING MACHINE

Title (de)

ABGESTUFTES ROHR UND BOHRMASCHINE

Title (fr)

TIGE TUBULAIRE A ETAGES ET MACHINE DE FORAGE

Publication

EP 1382794 A4 20050720 (EN)

Application

EP 02720600 A 20020425

Priority

- JP 0204149 W 20020425
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- JP 2001130085 A 20010426

Abstract (en)

[origin: US2003132035A1] In the present invention, in a drill rod for a boring machine, a rod outside diameter is large so as to be approximately equal to a bore diameter, external threads are provided at one end and internal threads are provided at the other end, and at least one small-diameter portion is formed near an internally threaded portion. This step tube rod can reduce a bore bend. Also, for the boring machine using this step tube rod, the drill rod can be positioned easily, so that the connection and recovery work can be performed efficiently and safely.

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E21B 17/042

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CPC (source: EP KR US)

E21B 17/00 (2013.01 - KR); **E21B 17/0426** (2013.01 - EP US); **E21B 19/24** (2013.01 - EP US)

Citation (search report)

- [XY] WO 9300500 A2 19930107 - SHAW IND LTD [CA], et al
- [Y] US 5950739 A 19990914 - LAFONTAINE STEPHEN J [US]
- [X] US 4076436 A 19780228 - SLATOR DAMON T, et al
- [A] US 1895901 A 19330131 - SMITH HERMAN R
- See references of WO 02088511A1

Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

US 2003132035 A1 20030717; CA 2411253 A1 20021028; CN 1460145 A 20031203; EP 1382794 A1 20040121; EP 1382794 A4 20050720; JP WO2002088511 A1 20040819; KR 20040002377 A 20040107; WO 02088511 A1 20021107

DOCDB simple family (application)

US 27676302 A 20021119; CA 2411253 A 20020425; CN 02800916 A 20020425; EP 02720600 A 20020425; JP 0204149 W 20020425; JP 2002585777 A 20020425; KR 20027014169 A 20021022