

Title (en)

Method and apparatus for filling a drill string with a drilling fluid

Title (de)

Verfahren und Fülleinrichtung zum Auffüllen von Bohrzügen mit Bohrflüssigkeit

Title (fr)

Procédé et dispositif de remplissage d'un train de tiges de forage avec un fluide de forage

Publication

EP 1632640 A1 20060308 (DE)

Application

EP 05006234 A 20050322

Priority

DE 102004042956 A 20040902

Abstract (en)

An oil or gas drilling rig has a filling assembly to feed a drilling lubricant/coolant to a drill tip and comprising a cylinder (1) with a valve-controlled fluid inlet (3) and a piston chamber (5). The cylinder has an end-piece (2) with a link fitting to a drill rod drive. The cylinder further has a hollow cylindrical filling piston (9) delivering fluid to the drill string inside the chamber (5). The filling piston moves back and forth axially and has an outlet that is opened and closed by a piston valve (4) and regulates discharge of the drill fluid.

IPC 8 full level

E21B 21/10 (2006.01)

CPC (source: EP)

E21B 21/106 (2013.01)

Citation (search report)

- [A] US 6460620 B1 20021008 - LAFLEUR KARL K [US]
- [A] US 5971079 A 19991026 - MULLINS ALBERT AUGUSTUS [US]
- [A] US 4962819 A 19901016 - BAILEY THOMAS F [US], et al

Cited by

CN113898210A; GB2480402A; GB2480402B; US8002028B2; US8006753B2; US8381823B2; WO2010089572A1; US8316930B2; US7690422B2; US8047278B2; WO2009098474A1; WO2009098482A1; WO2009098473A3

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1632640 A1 20060308; EP 1632640 A9 20070627; EP 1632640 B1 20101215; AT E491860 T1 20110115; DE 102004042956 A1 20060420; DE 102004042956 B4 20130627; DE 202004020879 U1 20070111; DE 502005010668 D1 20110127

DOCDB simple family (application)

EP 05006234 A 20050322; AT 05006234 T 20050322; DE 102004042956 A 20040902; DE 202004020879 U 20040902; DE 502005010668 T 20050322