

Title (en)

TUNNEL BORING DEVICE AND SYSTEM FOR THE HYDRAULIC REMOVAL OF CUTTINGS, AND SYSTEM FOR PRODUCING A STABLE FLUID PRESSURE FOR A BORING FLUID IN THE REGION OF A CUTTING DISK OF THE TUNNEL BORING DEVICE

Title (de)

TUNNELBOHRVORRICHTUNG UND SYSTEM ZUM HYDRAULISCHEN ABFÖRDERN VON BOHRKLEIN SOWIE SYSTEM ZUM ERZEUGEN EINES STABILEN FLÜSSIGKEITSDRUCKS EINER BOHRLFLÜSSIGKEIT IM BEREICH EINES SCHNEIDRADES DER TUNNELBOHRVORRICHTUNG

Title (fr)

TUNNELIER ET SYSTÈME D'ÉVACUATION PAR VOIE HYDRAULIQUE DE DÉBLAIS DE FORAGE ET SYSTÈME POUR ÉTABLIR UNE PRESSION STABLE D'UN LIQUIDE DE FORAGE DANS LA ZONE D'UNE ROUE DE COUPE DUDIT TUNNELIER

Publication

EP 3400371 A1 20181114 (DE)

Application

EP 17701714 A 20170127

Priority

- DE 102016001032 A 20160201
- DE 102016001001 A 20160201
- EP 2017051816 W 20170127

Abstract (en)

[origin: WO2017133986A1] The invention relates to a tunnel boring device for creating a bore from a starting point to a target point in the ground, along a predefined boring line by advancing the tunnel boring device in order to create a tunnel or for laying a pipeline in the ground using a boring tool to break up the ground; having at least one feed line for supplying a boring fluid to the boring tool; having at least one section, arranged at the rear of the boring tool, for receiving the ground which has been broken up and is present in the form of cuttings, wherein the region of the boring tool and the at least one section are essentially filled with boring fluid, and the boring fluid is provided in the region of the boring tool and within the at least one section with a pressure that essentially corresponds to the pressure in the ground at the heading face; having at least one pump for removing, from the section, the boring fluid mixed with the cuttings; having at least one conveying line for removing, from the bore, the boring fluid mixed with cuttings, this line being connected to the delivery side of the at least one pump, and wherein the at least one pump is connected to the at least one section via at least one suction line. In that context, it is provided that the pump is a jet pump which is connected to a drive line via which a driving fluid is supplied to the jet pump; that the at least one pump is arranged outside the at least one section; and that the at least one suction line contains at least one shutoff valve with which the suction line can be shut off.

IPC 8 full level

E21D 9/13 (2006.01); **E21D 9/06** (2006.01)

CPC (source: EP RU US)

E21B 21/08 (2013.01 - EP RU US); **E21D 9/04** (2013.01 - US); **E21D 9/06** (2013.01 - EP); **E21D 9/087** (2013.01 - US);
E21D 9/13 (2013.01 - EP RU US); **E21B 7/046** (2013.01 - US); **E21D 9/06** (2013.01 - US)

Citation (search report)

See references of WO 2017133986A1

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)

WO 2017133986 A1 20170810; AU 2017214202 A1 20180802; AU 2017214202 B2 20190404; CA 3010425 A1 20170810;
CA 3010425 C 20200428; CN 108603406 A 20180928; CN 108603406 B 20200818; DK 3400371 T3 20200713; EP 3400371 A1 20181114;
EP 3400371 B1 20200408; ES 2805052 T3 20210210; PL 3400371 T3 20200921; PT 3400371 T 20200713; RU 2689100 C1 20190523;
US 11118454 B2 20210914; US 2019032430 A1 20190131

DOCDB simple family (application)

EP 2017051816 W 20170127; AU 2017214202 A 20170127; CA 3010425 A 20170127; CN 201780008539 A 20170127;
DK 17701714 T 20170127; EP 17701714 A 20170127; ES 17701714 T 20170127; PL 17701714 T 20170127; PT 17701714 T 20170127;
RU 2018130735 A 20170127; US 201716073565 A 20170127