

Title (en)
EXPANDABLE ROCK BOLT WITH INDICATOR OF CLAMPING

Title (de)
EXPANDIERBARER GEBIRGSANKER MIT KLEMMINDIKATOR

Title (fr)
BOULON D'ANCRAGE EXTENSIBLE AVEC INDICATEUR DE SERRAGE

Publication
EP 3449097 A1 20190306 (EN)

Application
EP 16791668 A 20160926

Priority

- CZ 2016244 A 20160428
- IB 2016001480 W 20160926

Abstract (en)
[origin: WO2017187219A1] An expandable rock bolt which is formed with a expansion body (2) whose transversal cross section has a deformed shape which forms on the surface at least one lengthwise groove (21) whose ends are procured with caps (3) with a filling component on an inlet side and an end component on an outlet side, where the essence of the invention is that it is equipped with at least one indicator (5) of clamping which is formed with a hollow tube (51) which is made of elastically compressible material and which is placed on the wall of the expansion body (2) along which is the indicator (5) taken out on the visible side for the staff whereas at least in a part of an internal cavity (512) of the tube (51) of the indicator (5) is placed indication medium.

IPC 8 full level
E21D 21/00 (2006.01)

CPC (source: EP RU US)
E21D 21/00 (2013.01 - RU); **E21D 21/0073** (2016.01 - EP US); **E21D 21/0093** (2013.01 - EP US)

Citation (search report)
See references of WO 2017187219A1

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 2017187219 A1 20171102; AU 2016404403 A1 20180809; BR 112018015591 A2 20181226; BR 112018015591 B1 20220830; CA 3013035 A1 20171102; CA 3013035 C 20210126; CZ 2016244 A3 20170628; CZ 306774 B6 20170628; EP 3449097 A1 20190306; MX 2018013018 A 20191107; PE 20181871 A1 20181205; RU 2703014 C1 20191015; US 2019162068 A1 20190530; ZA 201804755 B 20190424

DOCDB simple family (application)
IB 2016001480 W 20160926; AU 2016404403 A 20160926; BR 112018015591 A 20160926; CA 3013035 A 20160926; CZ 2016244 A 20160428; EP 16791668 A 20160926; MX 2018013018 A 20160926; PE 2018002053 A 20160926; RU 2018138940 A 20160926; US 201616097560 A 20160926; ZA 201804755 A 20180716