

Title (en)

DRILL STRING ADAPTER AND METHOD FOR INGROUND SIGNAL COUPLING

Title (de)

BOHRSTRANGADAPTER UND VERFAHREN FÜR UNTERIRDISCHE SIGNALKOPPLUNG

Title (fr)

ADAPTATEUR POUR TRAIN DE TIGES ET PROCÉDÉ DE COUPLAGE DE SIGNAL SOUS TERRE

Publication

**EP 2678516 A4 20171122 (EN)**

Application

**EP 12748918 A 20120208**

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- US 201113035774 A 20110225
- US 2012024257 W 20120208

Abstract (en)

[origin: WO2012115778A2] A coupling adapter is insertable in at least one joint of a drill string as the drill string is extended from a drill rig. The coupling adapter includes an arrangement for receiving a data signal that is generated by an inground tool and for electromagnetically coupling the data signal onto at least a portion of the drill string that extends from the adapter to the drill rig such that at least some of the drill pipe sections cooperate as an electrical conductor for carrying the data signal to the drill rig. In another feature, a current transformer is resiliently supported to isolate the current transformer from mechanical shock and vibration that is produced by an inground operation that is performed using the drill string. In another feature, a drill string repeater is described.

IPC 8 full level

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CPC (source: EP US)

**E21B 17/003** (2013.01 - EP); **E21B 17/0283** (2020.05 - EP US); **E21B 47/12** (2013.01 - EP US)

Citation (search report)

- [Y] WO 8401439 A1 19840412 - MACLEOD LAB INC [US]
- [Y] US 5869968 A 19990209 - BROOKS ANDREW G [US], et al
- [A] US 2354887 A 19440801 - DANIEL SILVERMAN, et al
- [A] WO 2009086637 A1 20090716 - SCHLUMBERGER TECHNOLOGY CORP [US], et al
- [A] GB 2405420 A 20050302 - PREC DRILLING TECH SERV GROUP [CA]
- [A] US 2005218898 A1 20051006 - FREDETTE MARK A [US], et al

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DOCDB simple family (publication)

**WO 2012115778 A2 20120830; WO 2012115778 A3 20131024**; CN 103518034 A 20140115; CN 104040108 A 20140910; EP 2678516 A2 20140101; EP 2678516 A4 20171122; EP 2678517 A2 20140101; HK 1201898 A1 20150911; RU 2013138440 A 20150227; RU 2013138441 A 20150227; WO 2012115779 A2 20120830; WO 2012115779 A3 20131017

DOCDB simple family (application)

**US 2012024257 W 20120208**; CN 201280015145 A 20120208; CN 201280015241 A 20120208; EP 12748918 A 20120208; EP 12749614 A 20120208; HK 15102400 A 20150310; RU 2013138440 A 20120208; RU 2013138441 A 20120208; US 2012024261 W 20120208