

Title (en)

CONTROL OF OILFIELD TOOLS USING MULTIPLE MAGNETIC SIGNALS

Title (de)

STEUERUNG VON ERDÖLFÖRDERUNGSWERKZEUGEN ANHAND MEHRERER MAGNETISCHER SIGNALE

Title (fr)

COMMANDE D'OUTILS DE CHAMP PÉTROLIFÈRE À L'AIDE DE MULTIPLES SIGNAUX MAGNÉTIQUES

Publication

**EP 3119988 A4 20171101 (EN)**

Application

**EP 14891851 A 20140515**

Priority

US 2014038217 W 20140515

Abstract (en)

[origin: WO2015174990A1] A system and method for magnetically communicating with downhole tools. One or more magnetic sources are used to generate multiple magnetic signals with each signal corresponding to a different function of the downhole tool. The signals may be based on various signal characteristics including pulses, frequencies, particular signal strengths, durations, or any combination of measurable signal characteristics.

IPC 8 full level

**E21B 47/12** (2012.01); **E21B 21/10** (2006.01); **E21B 47/13** (2012.01); **E21B 47/18** (2012.01)

CPC (source: EP US)

**E21B 21/10** (2013.01 - EP US); **E21B 33/12** (2013.01 - US); **E21B 34/06** (2013.01 - US); **E21B 47/13** (2020.05 - EP US); **E21B 47/138** (2020.05 - EP US); **E21B 2200/06** (2020.05 - EP US)

Citation (search report)

- [XY] US 2011232917 A1 20110929 - SKINNER NEAL G [US], et al
- [XY] US 2009308588 A1 20091217 - HOWELL MATTHEW [US], et al
- [X] US 2013048290 A1 20130228 - HOWELL MATTHEW TODD [US], et al
- [XY] WO 2006048616 A1 20060511 - CAMCON LTD [GB], et al
- See references of WO 2015174990A1

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

DOCDB simple family (publication)

**WO 2015174990 A1 20151119**; AR 100400 A1 20161005; AU 2014394068 A1 20161006; AU 2014394068 B2 20170511; CA 2943354 A1 20151119; DK 3119988 T3 20190715; EP 3119988 A1 20170125; EP 3119988 A4 20171101; EP 3119988 B1 20190522; EP 3119988 B8 20190703; MX 2016013294 A 20170118; MX 369391 B 20191107; US 2016177673 A1 20160623

DOCDB simple family (application)

**US 2014038217 W 20140515**; AR P150101435 A 20150511; AU 2014394068 A 20140515; CA 2943354 A 20140515; DK 14891851 T 20140515; EP 14891851 A 20140515; MX 2016013294 A 20140515; US 201414786755 A 20140515