

Title (en)

APPARATUSES AND METHODS FOR SUPPLYING ELECTRICAL POWER TO AN ELECTROCRUSHING DRILL

Title (de)

VORRICHTUNGEN UND VERFAHREN ZUR VERSORGUNG EINES ELEKTROZERKLEINERUNGSBOHRERS MIT STROM

Title (fr)

APPAREILS ET PROCÉDÉS PERMETTANT DE FOURNIR DE L'ÉNERGIE ÉLECTRIQUE À UN DISPOSITIF DE FORAGE PAR ÉLECTROCONCASSAGE

Publication

EP 3508683 A1 20190710 (EN)

Application

EP 19157771 A 20130705

Priority

- US 201261668304 P 20120705
- US 201261738837 P 20121218
- US 201261739172 P 20121219
- EP 13812863 A 20130705
- US 2013049466 W 20130705

Abstract (en)

Methods and apparatuses for directly charging capacitors in a down-hole pulsed power system used for electrocrushing drilling. An above ground power supply is directly connected to the capacitors. The power supply can be a switching power supply, a DC supply, or an AC supply. Capacitor voltage is monitored and controlled. The system reduces noise caused by coupling control signal cables and the power cable, and does not have the ground swing control problems of other charging schemes. The power may alternatively be provided by microwave transmission.

IPC 8 full level

E21B 7/15 (2006.01); **E21B 17/00** (2006.01)

CPC (source: EP US)

E21B 7/15 (2013.01 - EP US); **E21B 17/003** (2013.01 - EP US); **E21B 41/0085** (2013.01 - EP)

Citation (applicant)

- US 201213346452 A 20120109
- US 50297709 A 20090714
- US 47934606 A 20060629
- US 7559378 B2 20090714 - MOENY WILLIAM M [US]
- US 7527108 B2 20090505 - MOENY WILLIAM M [US]
- US 7416032 B2 20080826 - MOENY WILLIAM M [US], et al
- US 7530406 B2 20090512 - MOENY WILLIAM M [US], et al
- US 35090404 P
- US 201213466296 A 20120508
- US 19886808 A 20080826
- US 20857905 A 20050819
- US 20876605 A 20050819
- US 7384009 B2 20080610 - MOENY WILLIAM M [US]
- US 20876605 A 20050819
- US 5896938 A 19990427 - MOENY WILLIAM M [US], et al
- US 6215734 B1 20010410 - MOENY WILLIAM M [US], et al
- MARTIN, T. H.; A. H. GUENTHER; M KRISTIANSEN: "J. C. Martin on Pulsed Power", 1996, LERRIURI PRESS

Citation (search report)

- [A] US 2012043075 A1 20120223 - ABRAMOVA ANNA VLADIMIROVNA [RU], et al
- [A] US 2009050371 A1 20090226 - MOENY WILLIAM M [US]
- [A] US 2006243486 A1 20061102 - MOENY WILLIAM M [US]
- [A] US 2009133929 A1 20090528 - RODLAND ARILD [NO]

Cited by

US11536090B2; WO2022132292A1; WO2023249811A1

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)

US 2014008968 A1 20140109; AU 2013286589 A1 20150226; BR 112015000141 A2 20170627; BR 112015000141 B1 20220614; CA 2877788 A1 20140109; EP 2870316 A1 20150513; EP 2870316 A4 20160525; EP 2870316 B1 20191120; EP 3508683 A1 20190710; EP 3508683 B1 20201111; EP 3656970 A1 20200527; EP 3656970 B1 20220406; WO 2014008483 A1 20140109; ZA 201500803 B 20160330

DOCDB simple family (application)

US 201313935995 A 20130705; AU 2013286589 A 20130705; BR 112015000141 A 20130705; CA 2877788 A 20130705; EP 13812863 A 20130705; EP 19157771 A 20130705; EP 20151105 A 20130705; US 2013049466 W 20130705; ZA 201500803 A 20150204