

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 April 2009 (02.04.2009)

PCT

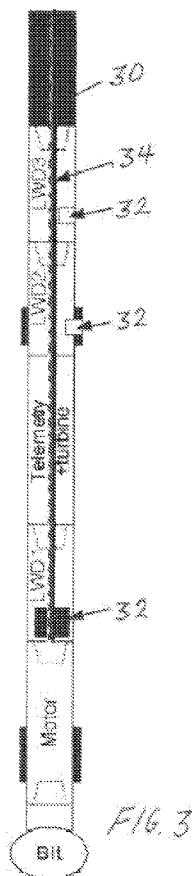
(10) International Publication Number
WO 2009/042494 A3

- (51) International Patent Classification:
E21B 17/02 (2006.01)
- (21) International Application Number:
PCT/US2008/076866
- (22) International Filing Date:
18 September 2008 (18.09.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/975,600 27 September 2007 (27.09.2007) US
- (71) Applicant (for CA only): SCHLUMBERGER CANADA LIMITED [CA/CA]; 525 3rd Avenue SW, Calgary Alberta, T2P0G4 (CA).
- (71) Applicant (for AL, AU, AZ, BG, CO, CZ, DE, DK, GR, HU, ID, IE, IL, IT, KZ, LT, MX, MY, NO, NZ, OM, PL, RO, RU, SI, SK, TM, TN, TR, TT, UA, UZ, ZA only): SCHLUMBERGER TECHNOLOGY B.V. [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL).
- (71) Applicant (for all designated States except AL, AU, AZ, BG, CA, CO, CZ, DE, DK, FR, GB, GR, HU, ID, IE, IL, IT, JP, KZ, LT, MX, MY, NL, NO, NZ, OM, PL, RO, RU, SI, SK, TM, TN, TR, TT, UA, US, UZ, ZA): PRAD RESEARCH AND DEVELOPMENT LIMITED; PO Box 71, Craigmuir Chambers, Road Town Tortola (VG).
- (71) Applicant (for FR only): SERVICES PETROLIERS SCHLUMBERGER [FR/FR]; 42, Rue Saint-Dominique, F-75007 Paris (FR).
- (71) Applicant (for GB, JP, NL only): SCHLUMBERGER HOLDINGS LIMITED; PO Box 71, Craigmuir Chambers, Roadtown Tortola (VG).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PATTERSON, Albert, E., II [US/US]; 609 Ironwood Court, Richmond, TX 77469 (US). LONGFIELD, Colin [US/US]; 5615 Briarbend Drive, Houston, TX 77096 (US). SARHAD, Shardul, J. [US/US]; 10500 Fountain Lake Drive #1513, Stafford, TX 77477 (US). FISSELER, Patrick, J.

[Continued on next page]

(54) Title: MODULAR POWER SOURCE FOR SUBSURFACE SYSTEMS

(57) Abstract: An electrical power system comprising a support configured for interconnection within a subsurface drillstring, an electrical power unit coupled to the support, and a conductive link configured to distribute electrical power from the electrical power unit to at least one component coupled to the electrical power system within the subsurface drillstring.



WO 2009/042494 A3



[US/US]; 2122 Plantation Bend Drive, Sugar Land, TX 77478 (US).

- (74) **Agents:** ECHOLS, Brigitte et al.; Schlumberger Technology Corporation, 200 Gillingham Lane MD 200-9, Sugar Land, TX 77478 (US).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- *with international search report*
 - *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- (88) **Date of publication of the international search report:**
22 May 2009

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/076866

A. CLASSIFICATION OF SUBJECT MATTER
INV. E21B17/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/283606 A1 (PARTOUCHE ASHERS [US] ET AL) 21 December 2006 (2006-12-21) paragraphs [0048], [0049], [0051] figures 1-3	1-21
A	US 4 936 139 A (ZIMMERMAN THOMAS H [US] ET AL) 26 June 1990 (1990-06-26) figure 1	1, 11, 21

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

31 March 2009

Date of mailing of the international search report

09/04/2009

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Schouten, Adri

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/076866

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006283606	A1	21-12-2006	
		CA 2549113 A1	15-12-2006
		CN 1880723 A	20-12-2006
		CN 101240694 A	13-08-2008
		DE 102006027545 A1	11-01-2007
		FR 2887286 A1	22-12-2006
		FR 2914005 A1	26-09-2008
		GB 2427214 A	20-12-2006
		GB 2444372 A	04-06-2008
		US 2008245570 A1	09-10-2008
<hr/>			
US 4936139	A	26-06-1990	NONE
<hr/>			