



(51) International Patent Classification:

C04B 28/02 (2006.01) *C09K 8/467* (2006.01)
C04B 20/02 (2006.01) *E21B 33/13* (2006.01)

(21) International Application Number:

PCT/US2013/026162

(22) International Filing Date:

14 February 2013 (14.02.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/399,913 17 February 2012 (17.02.2012) US

(71) Applicant: **HALLIBURTON ENERGY SERVICES, INC.** [US/US]; 10200 Bellaire Blvd., Houston, Texas 77072 (US).

(72) Inventors: **RODDY, Craig W.**; 2906 Timber Ridge Dr., Duncan, Oklahoma 73533 (US). **CHATTERJI, Jiten**; 2213 Scott Lane, Duncan, Oklahoma 73533 (US). **BRENNIS, Chad**; 4408 Medcalf Road, Marlow, Oklahoma 73055 (US). **JARRATT, Callie R.**; 2105 Townsend, Duncan, Oklahoma 73533 (US).

(74) Agent: **TUMEY, COREY S.**; P.O. Box 22188, Houston, Texas 77227-2188 (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, BN, BR, BW, BY, BZ, CA, CH, CL, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

31 October 2013

(54) Title: METHODS AND COMPOSITIONS COMPRISING CEMENT KILN DUST HAVING AN ALTERED PARTICLE SIZE

(57) Abstract: Methods and compositions are disclosed that comprise cement kiln dust having a mean particle size that has been altered. An embodiment discloses a subterranean treatment method comprising: introducing a treatment fluid into a subterranean formation, wherein the treatment fluid comprises cement kiln dust having a mean particle size that has been altered from its original size by grinding, separating, or a combination thereof. Another embodiment discloses a subterranean treatment method comprising: introducing a treatment fluid into a subterranean formation, wherein the treatment fluid comprises cement kiln dust having a mean particle size that has been reduced from its original size.



WO 2013/123207 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/026162

A. CLASSIFICATION OF SUBJECT MATTER
INV. C04B28/02 C04B20/02 C09K8/467 E21B33/13
ADD.
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)
C04B C09K 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 practicable, search terms used)
EPO-Internal, COMPENDEX, INSPEC, 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 2007/289744 A1 (BINGAMON ARLEN EARL [US] ET AL) 20 December 2007 (2007-12-20) claims 24-34; examples 1-3 -----	1-44
X	WO 2009/071962 A2 (HOLCIM TECHNOLOGY LTD [CH]; BINGAMON ARLEN EARL [US]; MORRICAL STEPHEN) 11 June 2009 (2009-06-11) claims 1-33; examples 1-3 -----	1-44
X	WO 2006/074946 A2 (BETHANI SOPHIA [GR]) 20 July 2006 (2006-07-20) claims 1-73; examples 1-8 -----	36-38, 42-44
X	US 2006/213397 A1 (BETHANI SOPHIA [GR]) 28 September 2006 (2006-09-28) claims 1-74; examples 1-8 -----	36-38, 42-44
	-/--	

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 application or patent 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 16 August 2013	Date of mailing of the international search report 26/08/2013
---	--

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 Burtan, M
--	-------------------------------------

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/026162

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 93/21122 A1 (AALBORG PORTLAND AS [DK]; BORGHOLM HANS ERIK [DK]; DAMTOFT JESPER SAND) 28 October 1993 (1993-10-28) claims 1-28; examples 1-7 -----	36-38, 42-44
X	US 2 871 133 A (PALONEN CARL V ET AL) 27 January 1959 (1959-01-27) claims 1-17 -----	36-38, 42-44

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2013/026162

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007289744 A1	20-12-2007	US 2007289744 A1 US 2008092780 A1	20-12-2007 24-04-2008

WO 2009071962 A2	11-06-2009	NONE	

WO 2006074946 A2	20-07-2006	CA 2637107 A1 EP 1841708 A2 JP 2008538347 A WO 2006074946 A2	20-07-2006 10-10-2007 23-10-2008 20-07-2006

US 2006213397 A1	28-09-2006	US 2006213397 A1 US 2010144949 A1	28-09-2006 10-06-2010

WO 9321122 A1	28-10-1993	AT 134597 T CA 2118029 A1 DE 69301658 D1 DE 69301658 T2 DK 0640062 T3 EP 0640062 A1 ES 2086228 T3 FI 944793 A GR 3019995 T3 GR 3031584 T3 NO 943854 A PL 172061 B1 US 5584926 A WO 9321122 A1 ZA 9302597 A	15-03-1996 28-10-1993 04-04-1996 14-11-1996 18-03-1996 01-03-1995 16-06-1996 12-10-1994 31-08-1996 31-01-2000 18-11-1994 31-07-1997 17-12-1996 28-10-1993 26-10-1993

US 2871133 A	27-01-1959	NONE	
