



(11)

EP 2 360 133 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
17.09.2014 Bulletin 2014/38

(51) Int Cl.:
C06B 21/00 ^(2006.01) **C06B 47/14** ^(2006.01)
F42D 1/10 ^(2006.01)

(43) Date of publication A2:
24.08.2011 Bulletin 2011/34

(21) Application number: **11250151.5**

(22) Date of filing: **10.02.2011**

(84) Designated Contracting States:
**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**
Designated Extension States:
BA ME

(30) Priority: **11.02.2010 ZA 201001024**

(71) Applicant: **AEL MINING SERVICES LIMITED
2196 Johannesburg (ZA)**

(72) Inventors:
• **Wilson, Laurence Justin Pienaar
Midrand 1684 (ZA)**
• **Pienaar, André
Pretoria 0081 (ZA)**

(74) Representative: **Potter Clarkson LLP
The Belgrave Centre
Talbot Street
Nottingham, NG1 5GG (GB)**

(54) **Emulsion explosives**

(57) A method of producing an emulsion explosive for use in an underground mining operation is provided. The method includes feeding, by means of gravity, an emulsion explosive oxidizer from an oxidizer source to an underground oxidizer holding zone in a mine, while separately feeding, by means of gravity, an emulsion explosive fuel from a fuel source to an underground fuel holding zone in the mine. Oxidizer and fuel are withdrawn

from the oxidizer holding zone and the fuel holding zone respectively, and separately fed, under gravity, to an underground emulsion explosive production zone which is thus located at a lower level in the mine than the oxidizer holding zone and the fuel holding zone. An emulsion explosive is produced by admixing the fuel and the oxidizer in the emulsion explosive production zone.

EP 2 360 133 A3



EUROPEAN SEARCH REPORT

Application Number
EP 11 25 0151

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2007/086950 A2 (DYNO NOBEL INC [US]; HALANDER JOHN B [US]; NELSON CASEY L [US]; BONNER) 2 August 2007 (2007-08-02) * page 6, lines 2-6 * * page 7, line 32 - page 8, line 16; figure 1 *	1-15	INV. C06B21/00 C06B47/14 F42D1/10
X	----- ZA 9 807 085 A (AECI EXPLOSIVES LTD) 15 February 1999 (1999-02-15) * page 8, paragraph 3 * * page 10, paragraph 2 * -----	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			E21D E21F C06B F42D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 August 2014	Examiner Bellingacci, F
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

1
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 25 0151

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07-08-2014

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007086950 A2	02-08-2007	AU 2006336367 A1	02-08-2007
		BR PI0616974 A2	04-12-2012
		CA 2625077 A1	02-08-2007
		CN 101506420 A	12-08-2009
		EP 1941231 A2	09-07-2008
		ES 2435421 T3	19-12-2013
		HK 1135152 A1	23-08-2013
		JP 2009511404 A	19-03-2009
		KR 20080069596 A	28-07-2008
		MY 143629 A	15-06-2011
		PE 08582007 A1	14-10-2007
		TR 200802858 T1	21-06-2010
		US 2007277916 A1	06-12-2007
		US 2010296362 A1	25-11-2010
		WO 2007086950 A2	02-08-2007
		ZA 200803756 A	30-09-2009

ZA 9807085 A	15-02-1999	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82