



New connection on: : 09-08-2018 : 05:46:24 - Last disconnection on: : 08-08-2018 : 20:39:27

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] ANFO and ((waste+ or residual+) 3d oil)

Results in EPODOC 6

[SS 2] ..li



1/6 © EPODOC / EPO

PN - [MX2016017150](#) A 20170406

PR - WO2014PE00009 20140625

AP - MX20160017150 20140625

DT - I

CCI - [C06B31/285](#)

CQI - [C06B21/0008](#) ; [C06B21/0091](#)

PA - EXSA S A [PE]

TI - METHOD FOR PRODUCING AN **ANFO** EXPLOSIVE USING AMMONIUM NITRATE AND RESIDUAL OILS, AND PRODUCT THUS PRODUCED.

AB - The invention relates to a method for producing **ANFO** on the basis of filtration and purification of the residual oils of a mine in a filter truck especially designed and developed for this purpose, with the aim of completely replacing the diesel fuel 2 with said residual oils that have been previously treated in order to mix same with ammonium nitrate. The invention also relates to the product resulting from said method. The aim of the invention is to use the **residual oil** produced in mines in large quantities, as the only combustible agent in the production of **ANFO**, generating cost savings by entirely substituting the diesel 2 and additionally eliminating the existing risk inherent in the removal of the **residual oil** from the mine and the negative impact that it can generate in the environment if it is not used appropriately.

2/6 © EPODOC / EPO

PN - [US2017158577](#) A1 20170608

PR - WO2014PE00009 20140625

AP - US201415315648 20140625

DT - *; Rep

CCI - [C06B31/285](#)

CQI - [C06B21/0008](#) ; [C06B21/0091](#)

PA - EXSA S A [PE]

TI - Method for Producing an **ANFO** Explosive Using Ammonium Nitrate and Residual Oils and Product Thus Produced

AB - The present invention relates to a method for producing **ANFO** on the basis of filtration and purification of the residual oils of a mine in a filter truck especially designed and developed for this purpose, with the aim of completely replacing the diesel fuel 2 with said residual oils that have been previously treated in order to mix same with ammonium nitrate, as well as the product resulting from said method. The aim of this invention is to use the **residual oil** produced in mines in large quantities, as the only combustible agent in the production of **ANFO**, generating cost savings by completely substituting diesel 2 and additionally eliminating the existing risk inherent in the removal of the **residual oil** from the mine and the negative impact that it can generate in the environment if it is not used appropriately.

3/6 © EPODOC / EPO

PN - [AU2014398702](#) A1 20170112

PR - WO2014PE00009 20140625

AP - AU20140398702 20140625

DT - I

CCI - [C06B31/285](#)

CQI - [C06B21/0008](#) ; [C06B21/0091](#)

PA - EXSA S A

TI - Method for producing an **ANFO** explosive using ammonium nitrate and residual oils, and product thus produced

AB - The invention relates to a method for producing **ANFO** on the basis of filtration and purification of the residual oils of a mine in a filter truck especially designed and developed for this purpose, with the aim of completely replacing the diesel fuel 2 with said residual oils that have been previously treated in order to mix same with ammonium nitrate. The invention also relates to the product resulting from said method. The aim of the invention is to use the **residual oil** produced in mines in large quantities, as the only combustible agent in the production of **ANFO**, generating cost savings by entirely substituting the diesel 2 and additionally eliminating the existing risk inherent in the removal of the **residual oil** from the mine and the negative impact that it can generate in the environment if it is not used appropriately.

4/6 © EPODOC / EPO

PN - [CA2951834](#) A1 20151230

PR - WO2014PE00009 20140625

AP - CA20142951834 20140625

DT - I

CCI - [C06B31/285](#)

CQI - [C06B21/0008](#) ; [C06B21/0091](#)

PA - EXSA S A [PE]

TI - METHOD FOR PRODUCING AN **ANFO** EXPLOSIVE USING AMMONIUM NITRATE AND RESIDUAL OILS, AND PRODUCT THUS PRODUCED

AB - The invention relates to a method for producing **ANFO** on the basis of filtration and purification of the residual oils of a mine in a filter truck especially designed and developed for this purpose, with the aim of completely replacing the diesel fuel 2 with said residual oils that have been previously treated in order to mix same with ammonium nitrate. The invention also relates to the product resulting from said method. The aim of the invention is to use the **residual oil** produced in mines in large quantities, as the only combustible agent in the production of **ANFO**, generating cost savings by entirely substituting the diesel 2 and additionally eliminating the existing risk inherent in the removal of the **residual oil** from the mine and the negative impact that it can generate in the environment if it is not used appropriately.

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PN - [WO2015199556](#) A1 20151230

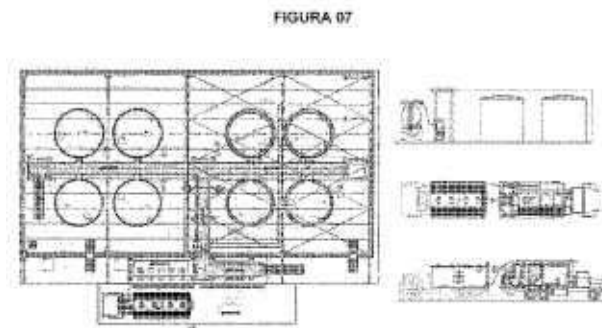
PR - WO2014PE00009 20140625

AP - WO2014PE00009 20140625

DT - **

CT - |ES| ISR (A1)
[US5397405](#) A 19950314
 [X] (SMITH SYDNEY O [CA], et al)
 [X] 1-4
 * , column 1, lines 44-46 *;
[XP055248359](#) A[X];
[US2007175511](#) A1 20070802
 [A] (DOERR KEVIN [US], et al)
 [A] 1-4
 * , paragraph [53]; figures 1-2 *;
[WO2008029339](#) A2 20080313
 [A] (AFRICAN EXPLOSIVES LTD
 [ZA], et al)
 [A] 1-4
 * , page 1, line 8-14; page 2, line
 11 *

CTNP - |ES| ISR (A1)
 [X] - RUHE, T. et al., "Thermal stability of ANFO made with recycled oil"., PROCEEDINGS OF THE ANNUAL CONFERENCE ON EXPLOSIVES AND BLASTING TECHNIQUE, (19990000), vol. 2, pages 263 - 272, XP055248359



[X] 1-4

* ; pag. 1-2; tables 1-2 *

- CCI - [C06B31/285](#)
- CQI - [C06B21/0008](#) ; [C06B21/0091](#)
- PA - EXSA S A [PE]
- TI - METHOD FOR PRODUCING
AN **ANFO** EXPLOSIVE USING
AMMONIUM NITRATE AND
RESIDUAL OILS, AND PRODUCT
THUS PRODUCED
- AB - The invention relates to a
method for producing **ANFO** on
the basis of filtration and
purification of the residual oils
of a mine in a filter truck
especially designed and
developed for this purpose, with
the aim of completely replacing
the diesel fuel 2 with said
residual oils that have been
previously treated in order to
mix same with ammonium
nitrate. The invention also
relates to the product resulting
from said method. The aim of the
invention is to use the **residual
oil** produced in mines in large
quantities, as the only
combustible agent in the
production of **ANFO**, generating
cost savings by entirely
substituting the diesel 2 and
additionally eliminating the
existing risk inherent in the
removal of the **residual oil** from
the mine and the negative impact
that it can generate in the
environment if it is not used
appropriately.

6/6 © EPODOC / EPO

- PN - [CN1227209](#) A 19990901
- PNFP - CN1098832C C 20030115
- PR - CN1998124310 19981028
- AP - CN1998124310 19981028
- DT - I

- PA - (A)
 ZHUNGER COAL INDUSTRYL CO [CN]
- (C)
 ZHUNGER COAL INDUSTRY CO [CN]
- TI - (A)
 Anfo explosive and its producing process
- (C)
 Anfo explosive and its produing process
- AB - (A)
 The **anfo** explosive consists of porous granular nitramine and flammable agent and the latter is **waste oil** or the mixture of **waste oil** and diesel **oil**.

[SS 2]