



New connection on: : 24-07-2017 : 17:40:24 - Last disconnection on: : 21-07-2017 : 23:24:59

V 4.0.0.43847(LP,U,linux) (Rev:41675 2016-01-15 13:33:59 +0100#(D201706)) (RPM D201706)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] iron and oxid+ and nitrogen

Results in EPODOC 4.608

[SS 2] 1 and react+ and oxidant

Results in EPODOC 23

[SS 3] 2 and nitric and acid

Results in EPODOC 2

[SS 4] ..li



1/2 © EPODOC / EPO

PN - [RU2151736](#) C1 20000627

PR - RU19980118836 19981015

AP - RU19980118836 19981015

DT - I

PA - KARAVAEV MIKHAIL MIKHAJLOVICH; IVANOV JURIJ ANISIMOVICH

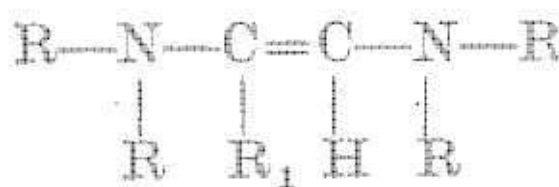
TI - **NITRIC ACID** PRODUCTION PROCESS

AB - industrial inorganic synthesis. SUBSTANCE: invention relates to production of **nitrogen oxides** and non-concentrated **nitric acid**. Molecular **nitrogen oxidation** process is accomplished with assistance of oxygen-**nitrogen** compounds on catalysts at 850-450 C and nearly atmospheric pressure. Resultant **nitrogen oxides** are absorbed at elevated pressure and **nitric acid** formed in absorption tower is partly used as **oxidant** for molecular **nitrogen** and fed into **reactor** together with stream of **nitrogen**- and oxygen-containing gas. Heat energy required for **nitrogen oxidation** process is supplied by exhausted gas flow containing **nitrogen oxidations** and heated outside heat carrier. As catalysts, employed are platinum alloys with platinum group metals or catalysts based

on **iron**, aluminum, zirconium, and cobalt **oxides** supplemented by other refractory **oxides**. Several beds of catalysts are possible. EFFECT: enhanced process efficiency, reduced cost, and diminished harmful emissions. 9 cl, 1 dwg, 2 tbl

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- PN - [GB836020](#) A 19600601
- PR - USX836020 19550729
- AP - GB19560023200 19560726
- DT - *
- CCI - [C06B43/00](#) ; [C06D5/08](#)
- IDT - 124BG2B3H; 124CA10B1C3D;
124CA10B1C5
- PA - PHILLIPS PETROLEUM CO
- TI - Diamino-1-alkenes and fast
burning fuels made therefrom
- AB - A fuel composition comprises a
1 : 2-diamino-1-alkene of the
formula $\langle \text{FORM:0836020/III/1} \rangle$
in which R is an alkyl, alkenyl,
cycloalkyl or cycloalkenyl group
and R₁ is a hydrogen atom or an
alkyl, alkenyl, cycloalkyl or
cycloalkenyl group, containing
not more than 8 carbon atoms,
the total number of carbon
atoms in the molecule not
exceeding 24, together with a
liquid hydrocarbon (e.g.
petroleum gasolene, C5-30
paraffins, cycloparaffins and
aromatic hydrocarbons) and/or
a C3-10 alkyl or alkenyl
mercaptan. The 1 : 2-diamino-1-
alkenes of the above formula or
the above fuel compositions
containing them and an **oxidant**
component (such as white or red
fuming **nitric acid**, nitrating **acid**,
hydrogen peroxide,
ozone, **nitrogen** tetroxide, with or
without chlorides and
naphthenates of **iron**, zinc or
cobalt) may be simultaneously
and separately injected into a
combustion chamber in such
proportions as to produce
spontaneous ignition, such



ignition being accompanied by the development of thrust. Specification 804,590 is referred to. ALSO: The invention comprises (1) 1:2-diamino-1-alkenes of the formula <FORM:0836020/IV (b)/1> in which R is an alkyl, alkenyl, cycloalkyl or cycloalkenyl group and R₁ is a hydrogen atom or an alkyl, alkenyl, cycloalkyl or cycloalkenyl group, containing not more than 8 carbon atoms, the total number of carbon atoms in the molecule not exceeding 24; and (2) the preparation of diamino-1-alkenes of the formula <FORM:0836020/IV (b)/2> in which R is an alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, alkaryl or aralkyl group and R₁ is a hydrogen atom or an alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, alkaryl or aralkyl group containing not more than 18 carbon atoms, n is 0, 1 or 2, the total number of carbon atoms in the molecule not exceeding 30, by **reacting** an amine of the formula R-NH-R with a haloaldehyde of the formula <FORM:0836020/IV (b)/3> in which one X is a halogen atom and the other is R₁ when n is 1 or 2 and X is a halogen atom when n is 0. Preferred methods for working up the products are described. Specification 804,590 is referred to.