

Title (en)

Process for producing a functional high-energy material

Title (de)

Verfahren zur Herstellung eines funktionalen hochenergetischen Materials

Title (fr)

Procédé de production de matière à haute énergie fonctionnelle

Publication

EP 1164116 A1 20011219 (DE)

Application

EP 00810520 A 20000615

Priority

EP 00810520 A 20000615

Abstract (en)

In the production of a functional, high-energy material with laminar grains containing an energy-rich plasticizer (I) and polymeric desensitizer (II), (I) and (II) is diffused into the absorbent grains in the form of an aqueous emulsion. Independent claims are also included for: (a) functional high-energy material with laminar grains, obtained by introducing (I) and (II) into a green powder, which contains 5-20% of is a specified 2-nitroxyethyl-nitramine (IA) or dinitro-diazaalkane (IB) as (I) with respect to the green powder; (b) green grains for producing a functional high-energy material of this type.

Abstract (de)

Das Verfahren zur Herstellung von Treibladungspulver (TLP) mit schichtartigem Kornaufbau geht von einem Grünpulver aus, welches in wässriger Emulsion mit einem energetischen Weichmacher und einem polymeren Phlegmatisator imprägniert wird. TLP lassen sich so in industriellen Mengen herstellen, indem die gefährliche Direkt-Einarbeitung eines Sprengöls umgangen wird. Die so hergestellten TLP haben ähnliche Eigenschaften und einen ähnlichen Aufbau wie die vorbekannten TLP.

IPC 1-7

C06B 45/22; **C06B 21/00**

IPC 8 full level

C06B 21/00 (2006.01); **C06B 45/22** (2006.01)

CPC (source: EP US)

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Citation (search report)

- [E] EP 1031548 A1 20000830 - NITROCHEMIE GMBH [DE]
- [Y] US 2337943 A 19431228 - EARNEST SILK CHARLES
- [Y] US 2771351 A 19561120 - HOLMES RAYMOND S, et al
- [Y] US 2349048 A 19440516 - HARRY MACKEY BILL, et al
- [Y] US 5682009 A 19971028 - O'MEARA WILLIAM L [US], et al
- [Y] US 5520757 A 19960528 - LUTZ ROCCO G [US]
- [Y] US 3037891 A 19620605 - MAAG RAYMOND H
- [A] WO 0003960 A1 20000127 - ALLIANT TECHSYSTEMS INC [US]
- [Y] CHEMICAL ABSTRACTS, vol. 122, no. 24, 12 June 1995, Columbus, Ohio, US; abstract no. 294736u, R.V. CARTWRIGHT-: "Volatility of NENA and other energetic plasticizers determined by thermogravimetric analysis" page 233; XP000663789 & PROPELLANTS, EXPLOS., PYROTECH., vol. 20, no. 2, 1995, pages 51 - 57
- [A] CHEMICAL ABSTRACTS, vol. 125, no. 16, 14 October 1996, Columbus, Ohio, US; abstract no. 200005s, AN-FANG LU ET AL.: "Preliminary study of BuNENA gun propellants" page 283; XP000661099 & Int. Annu. Conf. ICT 1996, 27th(Energetic Materials), 51.1-51.11
- [A] CHEMICAL ABSTRACTS, vol. 129, no. 9, 31 August 1998, Columbus, Ohio, US; abstract no. 110942y, B. VOGELSANGER ET AL.: "EI-technology. The key for high-performasnce propulsion design" page 811; XP000789695 & Int. Annu. Conf. ICT 1998, 29th(Energetic Materials), 38.1-38.14, Fraunhofer-Institut fuer Chemische Technologie.
- [A] CHEMICAL ABSTRACTS, vol. 130, no. 8, 22 February 1999, Columbus, Ohio, US; abstract no. 97702u, G.K. GAUTUM ET AL.: "Study of energetic nitramine extruded double-base propellants." page 887; XP000861165 & DEF. SCI. J., vol. 48, no. 2, 1998, pages 235 - 243

Cited by

CN110963874A; CN109516890A; AU2011264361B2; EP1857429A1; WO2011153655A3; US8353994B2

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