

Title (en)

AZIDE PROPELLANT COMPOSITIONS FOR EMERGENCY DEBALLASTING OF SUBMERSIBLE VESSELS.

Title (de)

AZIDHALTIGE TREIBSTOFFZUSAMMENSETZUNG ZUM ABLASSEN VON BALLAST IM NOTFALL FÜR UNTERSEEBOTE.

Title (fr)

COMPOSITIONS DE PROPULSEURS A AZOTURES UTILISEES POUR LE DEBALLASTAGE D'URGENCE DE VAISSEaux SUBMERSIBLES.

Publication

EP 0579781 A4 19941207 (EN)

Application

EP 92917352 A 19920410

Priority

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- US 9202978 W 19920410

Abstract (en)

[origin: WO9218443A1] Under emergency conditions such as loss of control or the means of propulsion, a submersible vessel may be deballasted with the use of a plurality of solid fueled gas generators each provided with a propellant composition comprising a blend of an alkali metal azide and an alkali metal nitrate, wherein the ratio of the azide to the nitrate ranges from above stoichiometric to an amount which will result in the production of no more than about 13-14 % by volume of hydrogen in the deballasting gas upon deflagration of the propellant. In an alternate embodiment, a deballasting propellant which forms no hydrogen gas comprises a substantially stoichiometric blend of an alkali metal azide and an alkali metal nitrate, combined with an additive formed of an inert silicon-containing material such as silicon dioxide and a metal oxide, wherein the metal component of the oxide melts at a sufficiently high temperature so as to remain substantially solid during deflagration of the propellant. The additive serves to bind molten particulates produced upon deflagration of the propellant into a solid clinker and thus to prevent this material from passing into the ballast tanks.

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Citation (search report)

- [A] FR 1593369 A 19700525
- [A] FR 1598530 A 19700706
- [A] FR 1571501 A 19690620
- [A] US 3947300 A 19760330 - PASSAUER HERMANN, et al
- [A] US 4931111 A 19900605 - POOLE DONALD R [US], et al
- [A] US 2981616 A 19610425 - BOYER MYRON H
- [A] DE 2217780 A1 19731025 - BATTELLE INSTITUT E V
- [A] FR 2193801 A1 19740222 - CANADIAN IND [CA]
- See references of WO 9218443A1

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