

THE ENERGY POTENTIAL OF SOME HIGH-ENTHALPY N-OXIDES AS OXIDIZERS

D. B. Lempert^{1,2}, E. M. Dorofeenko¹, S. I. Soglasnova¹

¹Institute of Problems of Chemical Physics of Russian Academy of Sciences,
Russia, Moscow region, Chernogolovka, Academician Semenov Ave., 1, 142432

²Omsk State Technical University,
Russia, Omsk, Mira Ave., 11, 644050

The energy abilities of solid composite propellants based on a couple of new high-enthalpy N-oxides (furazano-terazine-dioxide and tetrazino-tetrazine-1,3,6,8-tetraoxide) have been considered, it is found that these two compounds show record energy characteristics — specific impulse up to 273 s (at pressure in the combustion chamber and at the nozzle section 4,0 and 0,1 MPa respectively) at the combustion temperature not higher than 3700 K. Formulations based on these two compounds are very powerful if any binder (an active binder or a hydrocarbon one) is used.

Keywords: high-enthalpy polyazotic compounds, solid composite propellants, specific impulse, oxidant, binder.

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LEMPERT David Borisovich, Candidate of Chemical Sciences, Head of Laboratory of Thermodynamics of High-Temperature Processes, IPCP RAS, Chernogolovka; Senior Researcher of Research Laboratory of Propulsion Systems for Microtraining of Small Spacecraft, OmSTU, Omsk.

AuthorID (RSCI): 43977; ORCID: 0000-0002-0219-1571
ResearcherID: J-7125-2018

DOROFEENKO Ekaterina Mikhaylovna, Researcher, IPCP RAS, Chernogolovka.

SOGLASNOVA Svetlana Ivanovna, Researcher, IPCP RAS, Chernogolovka.

Address for correspondence: lempert@icp.ac.ru

For citations

Lempert D. B., Dorofeenko E. M., Soglasnova S. I. The energy potential of some high-enthalpy N-oxides as oxidizers // Omsk Scientific Bulletin. Series Aviation-rocket and power engineering. 2018. Vol. 2, no. 3. P. 58–62. DOI: 10.25206/2588-0373-2018-2-3-58-62.

Received 25 May 2018.

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