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Application of PDADN in Screw Extruded Nitramine Modified Double-base Propellant

LIU Suo-en^{1,2}, ZHOU Wei-liang², PAN Bao¹, ZHAO Mei-ling¹, ZOU Wei-wei²

(1. Shanxi Xing'an Chemical Industry CO. LTD., Taiyuan 030008, China; 2. School of Chemistry and Engineering, NUST, Nanjing 210094, China)

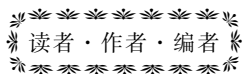
Abstract: In order to improve the comprehensive performance of nitramine double-base propellant, carried out application of pentaerythrite diazodinitrate (PDADN) in screw extruded nitramine modified double-base propellant was studied. The mechanical property, burning characteristics, chemical stability, mechanical sensitivity, energy characteristics and gas characteristic signal of propellants were measured. Results show that use of the new-type energetic material not only improves mechanical property of propellants, but also is beneficial for increasing propellant energy and decreasing characteristic signal of burning gas and burning temperature.

Key words: applied chemistry; pentaerythrite diazodinitrate; screw extruded; nitramine modified double-base propellant; application study

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“GTX 起爆药及其系列雷管技术”获得广西科学技术进步一等奖

广西金建华民爆器材有限责任公司和北京理工大学联合研制的“GTX 起爆药及其系列雷管技术”成果, 2012 年获得广西壮族自治区科学技术进步一等奖。该技术已在广西金建华民爆器材有限责任公司、长春吉阳工业集团有限公司生产使用两年多时间, 很好地解决了起爆药和雷管生产过程的安全和环境保护的问题, 累计生产各种雷管 1.5 亿多发, 全面满足了各种工程爆破使用要求, 社会效益和经济效益显著, 具有很好的推广应用前景。

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