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Migration of Polymer Deterrent in Two Kinds of Propellants

LIU Shao-wu, LIU Bo, ZHENG Shuang, WANG Qiong-lin, PAN Qing, ZHANG Yuan-bo, HAN Bing, WEI Lun

(Xi'an Modern Chemistry Research Institute, Xi'an 710065, China)

Abstract: Two kinds of desensitized propellants 1,5-diazido-3-nitrazapentane (DIANP) propellant and high-energy nitramine propellant) were desensitized with polymer deterrent NA in water medium. The migrations of NA deterrent in two kinds of propellants were investigated by accelerated aging tests, closed-bomb tests and interior ballistic tests respectively. The concentration profiles of deterrent NA in two kinds of propellants before and after long-term storage were studied by FTIR microspectroscopy. Results show that there are not significant changes in the explosion heat, *p-t* curves, interior ballistic and the concentration profiles. The migration ability of NA deterrent is weak in DIANP and nitramine propellants. The propellants desensitized by polyester NA should be stable in the interior ballistic.

Key words: physical chemistry; DIANP propellant; nitramine propellant; deterrent; migration; concentration profile

CLC number: TJ55; O64

Document code: A

DOI: 10.3969/j.issn.1006-9941.2010.06.006



2010 年火炸药技术学术研讨会在广西桂林召开

2010 年 11 月 4 日 ~7 日, “2010 年火炸药技术学术研讨会”在广西桂林隆重召开。

本次研讨会由总装备部火炸药技术专业组、火炸药燃烧国防科技重点实验室和中国兵工学会火炸药专业委员会共同主办, 并由总装备部火炸药技术专业组承办。

本次研讨会的主题是: 立足火炸药军事需求, 实践“继承、创新、跨越”。会议邀请了火炸药行业及相关专业的专家、学者作了专题报告, 来自相关高校、科研院所、部队、工厂等 30 余家单位的 150 余位科技工作者参加了学术交流。

本次研讨会得到了总装备部、国家国防科技工业局、中国兵器工业集团公司、中国兵工学会的关怀和支持, 也得到了国内相关行业的科研院所、部队、厂矿的大力支持。大会共收到各类学术论文 236 篇, 其中炸药及应用技术论文 82 篇, 发射药及装药技术论文 29 篇, 推进剂及应用技术论文 78 篇, 分析测试技术论文 47 篇。本次研讨会的召开为火炸药行业的科技工作者搭建了一个交流和学习的平台, 增进了相关单位的合作与交流, 有力地推动了火炸药技术创新体系的构建和火炸药跨越式的发展。

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