## Effect of Performance with Eliminated-flame Additive on Nitramine Modified Double Base Propellant

LI Jun-qiang, LI Xiao-jiang, LIU Peng, QI Xiao-fei, LIU Fang-li

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

Abstract: Four traditional eliminated-flame additives (LiF, KA, C<sub>4</sub>O<sub>6</sub>H<sub>4</sub>K<sub>2</sub> and KD) were adopted in grain cast propellant, and its effects on the combustion performance and characteristic signal of the propellant were studied. The motor experiment results show that KA and KD suppress after burning. More than 80% flame area were reduced. Burning rate of propellant is increased with the eliminated-flame additives. Results show IR and visible light permeation rate of grain cast propellant is slightly reduced, and laser permeation rate is increased.

Key words: applied chemistry; solid propellant; eliminated-flame additive; characteristic signal; after burning; suppression Document code: A CLC number: TJ55; V512; O69 **DOI**: 10.3969/j. issn. 1006-9941. 2010. 03. 012

读者・作者・编者 #

## 北京理工大学"GTX 起爆药技术"通过科技成果鉴定

2010年5月15日国家国防科技工业局在北京主持召开了北京理工大学"十一五"国防预研成果"GTX 起爆药技术"鉴 定会。中国工程物理研究院董海山院士任鉴定委员会主任,国家民用爆破器材产品质量监督检验中心蒋荣光研究员和兵 器工业安全技术研究所魏新熙研高工任副主任,来自火工品和民爆器材领域的科研和生产单位的30多位专家和代表听取 了项目技术总结报告、委托检测报告、知识产权状况报告、查新报告、现场测试报告和用户使用情况报告,对该成果进行了 认真审查和评议,一致同意该成果通过鉴定。认为该项目发明了高能环保型 GTX 起爆药及其晶形控制工艺技术、形成了 www.energetic-materials.or 自主知识产权,实现了起爆药向安全环保发展的技术突破,研究成果总体技术达到了国际领先水平。该成果具有显著的社 会效益和经济效益,具有良好的推广应用前景。

(北京理工大学 张同来供稿)