

[1]石爽,曲仕茹,朱丽娟,等.基于老化失重率的炸药贮存可靠性研究[J].弹箭与制导学报,2011,6:120-122封三.

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基于老化失重率的炸药贮存可靠性研究(PDF)

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Title: The Research on Explosive Storage Reliability Based on Weight Loss Rate of Aging

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关键词: 恒加应力; 曲线拟合; 失重率

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摘要: 为获得某种硝胺类混合炸药常温下的贮存寿命, 采用恒加应力加速贮存的方法, 对炸药进行高温加速老化。建立数学模型, 对试验数据进行修正后, 用五种曲线对炸药失重率拟合, 并利用最小二乘法评估拟合效果。根据阿伦尼斯模型, 用一元线性回归的方法得出该混合炸药失重率随时间的变化规律, 再用F检验法检验, 线性回归效果显著。试验数据处理结果符合工程实践。

Abstract: For obtaining the shelf life of composite explosive in ambient temperature, the explosive aging acceleration in high temperature was conducted by the method of constant stress accelerated life. The experiment data was modified, and five kinds of curve fitting were made for weight loss rate fitting, and the effect was evaluated by the least square method. According to arrhenius model, the change rule of the explosive's weight loss rate with time was got. According to F test, the linear regression is OK. The result shows the method is effective.

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