

制过程中的试验量和返工次数。该方法已开发成为一个计算机软件,可提高设计效率,为设计者在确定设计方案时提供更多的指导。本文方法主要针对电容放电加载的火工品进行计算,对于目前越来越多的直流电流加载的火工品在模型上略有区别,可以仿照进行计算。

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## Firing Reliability Design of Hot Bridge-wire Electro-Explosive Device

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**Abstract:** A firing reliability design method for hot bridge-wire electro-explosive device was put forward. Firstly, the temperature rising model of bridge-wire and temperature distribution model of explosive were constructed; secondly, the critical firing energy of explosive was calculated based on energy-balance equation and selected parameters; finally, margin of firing reliability of initiator was calculated. If the margin can not meet the reliability requirement of product, parameters would be adjusted and margin of firing reliability would be calculated again. By using the method above and adjusting the design parameters, the critical firing voltage of an electro-explosive actuated device is 4.75 V and its margin is 1.2. The calculation result shows that the product can meet the reliability requirements.

**Key words:** military chemistry and pyrotechnics technique; hot bridge-wire electro-explosive device; sensitivity; bridge-wire; explosive; firing reliability

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### 更正

2008年第4期480页Scheme 1中的结构式应为如下所示。特此更正。

