

## 温压炸药爆温无线存储测试系统设计

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摘要：

温压炸药爆轰时间长、爆炸温度高且伴随爆炸破坏作用，使其爆炸温度测试较困难。为有效评估温压弹药的热毁伤效应，将存储测试技术应用到爆炸瞬态高温测试中，并结合无线传感网络技术，在确保参试人员的安全前提下，可远程监控测试仪器状态进行智能化测试。同时对测试系统进行可溯源性动态校准，确保测试精度。测试装置成功应用于小当量温压弹药的实爆现场测试，试验结果表明所设计的系统操作简单、使用安全，具有良好的应用前景。

关键词：温压炸药；存储测试；无线传感网络；动态校准；现场测试

## Design of Thermal-Baric Explosive Explosion Temperature Measuring System Based on Wireless and Memory Test Technology

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**Abstract:**

Detonating time of thermal-baric explosive is long, the explosion temperature is high and the accompanying explosion damage is serious. These make the explosion temperature test difficult. To effectively evaluate thermal damage effect of temperature pressure ammunition, storage technology is applied in the explosive transient high temperature test. Wireless sensor network technology is combined with it to remote monitor status of test equipment as intelligent test. This can ensure the safety of the experimenters. To ensure the accuracy, dynamic calibration experiment of the test system was made. The test system device is successfully applied in real field test of small equivalent thermal-baric explosive. Experimental results showed that the designed system operation is simple, the use of it is safe, and the application prospect is perfect.

**Keywords:** thermal-baric explosive; storage test; wireless sensor network; dynamic calibration; field experiment

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