

基于ICP传感器的存储式冲击波超压测试系统

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摘要:

针对冲击波超压测试方法不足的现状, 采用存储测试原理进行了冲击波超压测试系统设计。对比了不同类型压力传感器并配套设计了驱动电路和信号调理电路。采用单片机和CPLD进行数字逻辑电路的集成设计, 提高测试系统的智能化。多次实弹测试试验, 验证了其可靠性和有效性。文中给出了某型弹的冲击波超压测试曲线、正压持续时间和冲量数据。

关键词: 存储测试; 冲击波; 超压; 冲量; ICP传感器

A Stored Overpressure Measurement System Based on ICP Sensor for Shock Wave

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Abstract:

Considering the deficiency of measuring method for shock wave, an overpressure measurement system is designed by apply pressure sensor with excellent performance is selected as the sensing component based on the performance comparison bet excitation circuit and signal conditioning circuit are designed seriously. The digital logic circuit is performed by using a micro improves the intelligence and reliability of the system with a reduction in size. After calibration, the reliability and validity of applying it to actual measurement experiments. The measurement results for a certain bomb are also given in this paper, incl and impulse.

Keywords: storage measurement; shock wave; overpressure; impulse; ICP sensor

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