

低功耗爆炸冲击波应变测试系统

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摘要：

为了改进或加固弹性材料的结构，以便给在高温高压高冲击环境下工作的测试仪提供良好的机械结构，设计了基于直角应变花的低功耗应变存储式测试系统；进行了爆炸冲击波对弹性材料造成的应变的实际测试，对实验数据进行了分析和处理。得出本次设计的应变测试系统，能够应用于环境条件比较差的爆炸试验中，在可靠可信、低功耗的基础上能得到较好的实验数据。

关键词：测试计量仪器；应变；动态存储；爆炸冲击波；直角应变花；低功耗

Low-Power Blast Shock Wave Strain Test System

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Abstract:

In order to improve or reinforce the structure of elastic material, so that it could provide a better mechanical structure for the testers which should work under high temperature high pressure and high impact environment, a low-power strain storage test system based on right angle strain rosette was designed; experimental tests for strain of elastic material caused by blast shock wave were done and experimental data was analyzed and processed. The strain measurement system can be used in the explosion test of relatively poor environmental conditions, and get good experimental data on the basis of credible reliable and low power consumption design.

Keywords: measuring and testing instruments ; strain ; dynamic storage ; blast shock wave ; right angle strain rosette ; low-power

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