

# Analysis of Structures and Equipment for Shock Loads

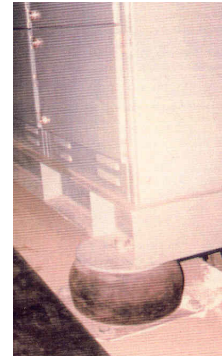
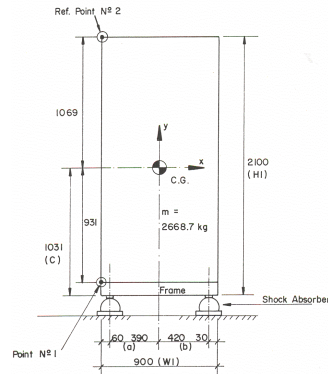
Design of structures and equipment to resist the effects of weapons-induced shock loads

## DESCRIPTION

The structural and architectural design as well as the design of technical equipment to resist the effects of shock due to conventional or nuclear weapons effects has been a long-standing field of expertise at Heierli Consulting Engineers (HCE).

HCE has been involved in research and development related to the evaluation of shock parameters for use in a number of different technical design directives.

HCE has also developed it's own software to analyse the response of structural members and technical equipment and services.

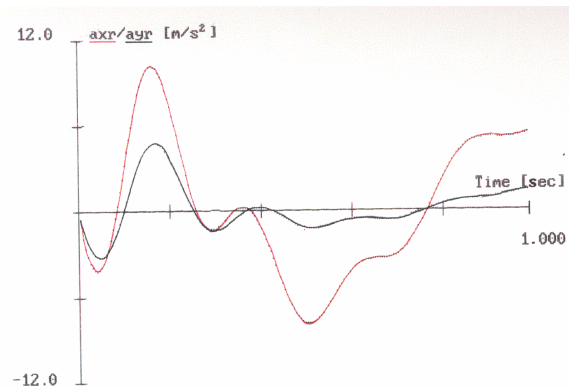


**Design of emergency switch board  
for pre-determined shock parameters**

## SHOCK RESPONSE ANALYSIS FOR TECHNICAL EQUIPMENT & STRUCTURAL ELEMENTS

### Development of Design Approach

- Analysis of shock response for vital technical equipment surviving the effects of shock with pre-determined allowable accelerations, and displacements
- Design of support details

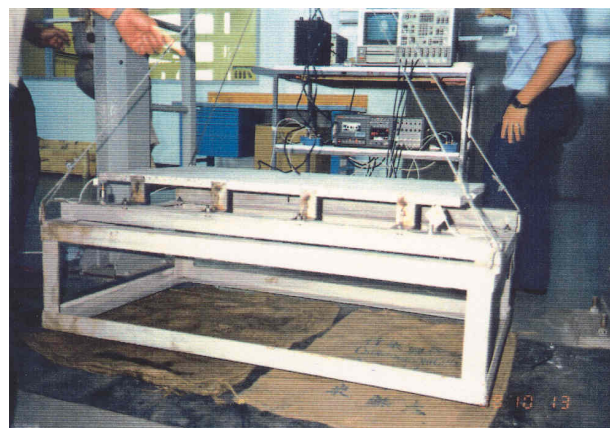


**Analysis of shock response**

## SHOCK TEST PROCEDURES FOR EQUIPMENT AND ARCHITECTURAL FINISHES

### Development of Material and Equipment Classification and Standard Test Procedures

- Classification of material and equipment with respect to shock design requirements
- Development of simplified test procedures for technical equipment and architectural finishes
- Conduction of shock tests
- Development of test acceptance criteria



**Drop test to verify the resistance of granite  
panels to shock loads.**