



**Lightweight high impact  
military shock testing  
at competitive rates**

## Problem

- ▶ Shipboard equipment and systems must be able to withstand shocks produced by either nuclear or conventional weapons during wartime service.
- ▶ To ensure that safety and combat capability is not compromised, equipment used by or supplied to the Navy must conform to military standard 901D.
- ▶ Sending items offshore for testing can significantly add to a supplier's costs and failure to provide pre-tested items can adversely affect the chances of successfully concluding a sale.

## Solution

- ▶ IRL offers the most competitive value globally for shock testing at its Parnell premises in Auckland.
- ▶ Our MIL-STD-901D lightweight high impact shock testing machine can evaluate the ability of both off-the-shelf and custom-built equipment weighing up to 150kg to resist shock loading in three axes.
- ▶ Originally built for verifying equipment designed and manufactured by New Zealand suppliers to the ANZAC Frigate project in the 1990s, our machine has a strong track record of success.

## Benefit

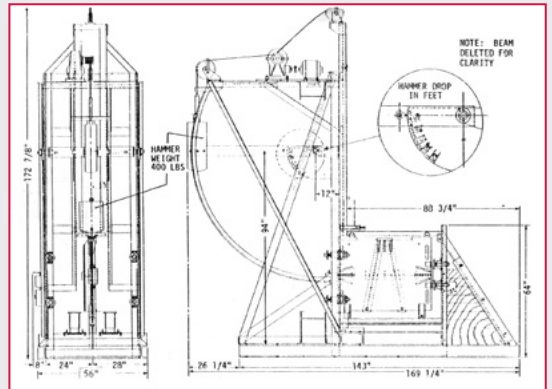
- ▶ IRL's testing programmes can highlight weaknesses in equipment design and mounting arrangements, and in most cases allow modifications to be made that meet acceptance criteria.
- ▶ IRL provides a comprehensive test report based on the requirements of the military standard and in accordance with the protocol established for the ANZAC Frigate project.
- ▶ This facility and the experience and expertise of the Defence Testing team at IRL provide the Navy and its suppliers with a cost-effective way to test in New Zealand for pre-qualification and qualification purposes.

## Examples of items tested:

- ▶ Emergency escape breathing apparatus stowage rack
- ▶ Flat screen monitors and mounting arms
- ▶ Computer mounting brackets
- ▶ Laptop computers with various mounting arrangements
- ▶ Power supplies with various mounting arrangements
- ▶ Data/media converters with various mounting arrangements
- ▶ Communications equipment
- ▶ Torpedo air charging panel enclosure
- ▶ Junction boxes.



Typical test set-up on shock machine.



Schematic drawing of shock machine.



IRL's Clive Stirling (left) and Tony Cooper (right) flank Commander Dave Fairweather in front of the MIL-STD 901D shock machine.

For all enquiries please contact the Industry Engagement team on 0508 CALL IRL (0508 225 5475). If calling from overseas phone +64 4 931 3000 or visit the *Contact Us* page on our website.

# www.irl.cri.nz

Industrial Research Limited, 69 Gracefield Road, PO Box 31-310, Lower Hutt 5040, New Zealand