

# INLINE

with Hoffer Flow Controls

## How Tough is a Hoffer Flowmeter?

Hoffer Flow Controls is proud to announce the successful conclusion to extensive Shock and Vibration Testing conducted on our HO2 & 4-inch Flowmeters and our HIT-2A Totalizers. Hoffer Flow Controls is the only Military Shock and Vibe qualified provider of Turbine Flowmeters in the world.

Northrup Grumman Newport News Shipbuilding performed the tests in accordance with MIL-S-901D "Shock Tests, H.I. (High Impact) Shipboard Machinery Equipment" and MIL-STD-167-1, Mechanical Vibrations of Shipboard Equipment.

What is "Shock Tested?" HO Flowmeters and Hit-2A Totalizers, while operating under 160 psig, were subjected to tests designed to simulate an explosion in the water as close as 20 feet from the "hull" of a ship. The equipment was "hard mounted" to a frame and a 400-pound hammer was dropped nine times to impact with that frame. The Shock Test was then repeated for each side of the equipment.

### Shock Test Report No. 03005324 TEST RESULTS:

"Both the 2" and 4" Flowmeter assemblies successfully passed the nine shock blow test with no functional degradation or material deformation. Nothing came adrift throughout the shock test and no

potential hazard was ever observed. The initial internal pressure of 160 psig was maintained throughout

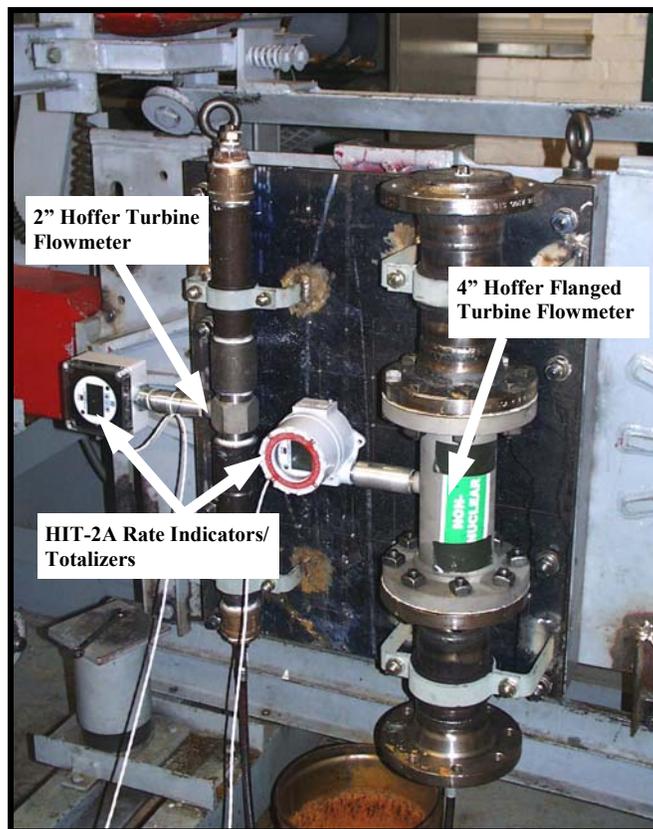


Photo provided of Shock Testing of Hoffer turbine flowmeter and HIT-2A electronics.

testing, with no indication of leakage. The post-shock test visual inspection revealed no irregularities."

What is "Vibration Tested?" HO Flowmeters and Hit-2A Totalizers, while operating under 160 psig, were subjected to tests designed to simulate mechanical vibrations originating from those of 1) environment 2) those arising from internal excitation, or 3) those associated with reciprocating

machinery and propulsion systems / shafting. Once again the Flowmeters and Hit-2A's were hard mounted on a frame and mechanically shaken. The tests were conducted with variable frequencies from 4 to 33 Hz. That's 2000 cycles per min. with duration of over 6 hours!

### Vibration Test Report No. 05004086 TEST RESULTS:

"Both the 2" and 4" turbine flowmeter assemblies operated properly throughout environmental vibration testing, indicating the proper flow rate throughout. No functional degradation or material deformation was observed during testing or during the post test visual inspection. Operational testing performed at the conclusion of all vibration testing demonstrated that the item functioned properly."

"Comparing the manufacturer's pre and post-shock test calibration data demonstrates that within reasonable measurement error, the shock and vibe test had no detrimental effect on the calibration of either Flowmeter."

**How Tough is a Hoffer Flowmeter? Tough enough for the United States Military! Oh, Yes! Experience a Hoffer meter for yourself. Call us today.**