

All testing performed to strict MIL-STD, IEEE, IBC, UBC, NIST, Bellcore standards/methods under our 10 CFR 50 Appendix B Quality Assurance Program



# CLARK

## Dynamic Test Laboratory, Inc.

A Division of Clark Testing Group

## Clark Dynamic Test Laboratory Vibration Testing



Vibration Testing



The test equipment at the Clark Dynamic Vibration Laboratory can satisfy the requirements of most military and commercial standards (such as MIL-STD-167/810) for vibration and impulse shock tests.



## Capabilities

### Calibration & Standards Laboratory

The Clark Dynamic Calibration & Standards Laboratory repairs and calibrates measurement and test equipment (MT&E) and maintains direct traceability to NIST Standards.

- Load Testing - #20, 000
- Gas Flow - 50 cu. ft. hr.
- Humidity
- Accelerometers
- Air Flow - 2,000 fpm
- Water Flow - 3 gpm
- Temp. - RTD
- Load Cells

Individual test tables are used to perform each test. Each specific test program dictates the required physical set-up and the necessary electrodynamic or hydraulic shaker requirements. Force requirements for electrodynamic shaker can be from 10 lbs. to 30,000 lbs. over a wide frequency range of 4 Hz to 3,000 Hz. Sinusoidal, random motion, actual time histories (computer and/or machine generated) and machine generated shock pulses are used to satisfy the numerous vibratory environmental standards (which simulate air, sea, rail and ground transportation, pipe vibration and life-cycle aging).

## Test Equipment

### Ling 175/240 Electrodynamic System

Frequency response: 5 Hz to 3,000 Hz

Force: Two (2) 10,000 lbs. Thrusters and One (1) up to 30,000 lbs.

Velocity: 70 ips

Displacement: 1.0 in DA

### C109 Electrodynamic Shaker System

Frequency response: 5 Hz to 30,000 Hz

Force: 1,000 lbs.

Displacement: 1.0 in DA

### C126 Electrodynamic Shaker System

Frequency response: 5 Hz to 5,000 Hz

Force: 12,000 lbs.

Displacement: 1.0 in DA

## Related Testing Services

The Clark Dynamic Test Lab is an independent, comprehensive lab that can provide custom test programs. Other testing services provided by Clark Dynamic include:

### Electrical Testing

Megger Insulation	High Voltage to 15,000V
Leak Detection Hi-Pot	Frequency Counter: $2.9 \times 10^{-8}$
Current to 100 Amps	Amplitude

### Field Testing

- Vibration Excitation: 50 – 1,000lbs. Shakers
- Data Acquisition: Pressure, Acceleration, Velocity & Displacement, Strain Gage Measurement
- Digital and Analog recording
- Analysis – Fast Fourier & Transient Capture

### Structure & Airborne Noise

- Sound Pressure Measurements
- Sound Power Measurements
- Structure borne Noise Measurements

### Corrosion & Salt Spray

- Salt Spray (fog) & Corrosion testing
- Qualifications to ASTM B117 to replace 811.1 Federal Test Method
- Sample Size: 47.5" (L) x 29.5" (W) x 33.5" (D)

### NEMA 250

- Cabinet & Enclosure Qualification



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