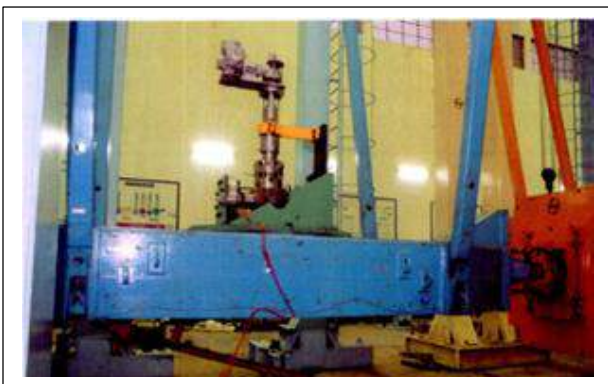


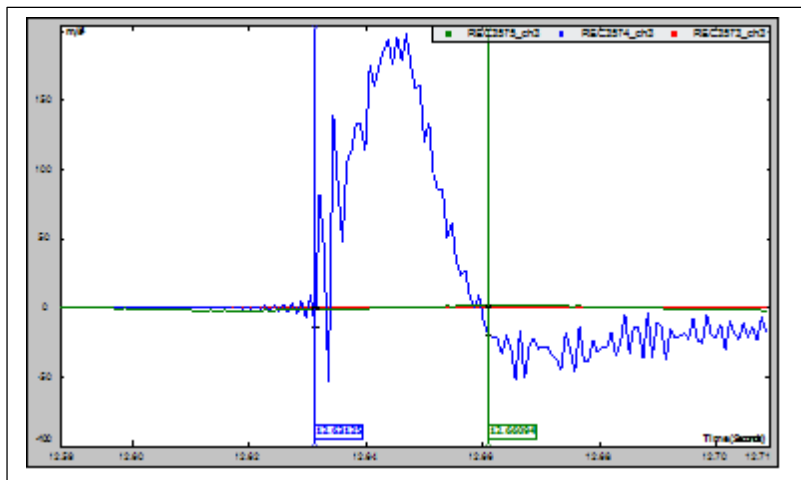
1. Shock Testing and Response Measurement
2. Dynamic Response Testing of Control Valves.
3. Calibration of 16" multipath insertion type USFM & 8" mass flow meter at WFL
4. Certification of water meter test facility of New Tirupur Area Development Corporation
5. Calibration of 800 mm Ultrasonic Flow meter & 800 mm EMF at LWFL

## 1. SHOCK TESTING AND RESPONSE MEASUREMENT

Main Stream Isolation Valve (MSIV) for a client was tested with Instrumentation support from Fluid Control Research Institute. The valve was subjected to two different shock loads each three times in three mutually perpendicular directions at a shock test facility. Trial runs were conducted with actual product and with reduced height. First the process of finalizing the shaper thickness was initiated by various shaper thicknesses and is finalized. Further the height of the drop was optimized by varying the drop height. During testing, shock response was monitored at one location on the fixture and at various locations on the valve.

Post completion of tests in all three directions at two amplitude levels, the valve was inspected for its structure integrity and pressure withholding capability.





Shock response curve

## 2. Dynamic Response Testing of Control Valves.

FCRI carried out Dynamic Response Testing on pneumatic actuated Control Valves for an application in Oil Industry. Tests were conducted as per ISA S26 (Dynamic Response/ Sinusoid Frequency Response Test) and ISA 75.25 (Step Response Test and Multi-Step Response Test) on Five numbers of Control Valves. Tests were witnessed by client and third-party inspector.



### 3. Calibration of 16" multipath insertion type USFM & 8" mass flow meter at WFL

Calibration of 16" multipath insertion type ultrasonic flow meters & calibration of 8" mass flow meters (flow and density) were completed at Water Flow Laboratory



Calibration of 16" multipath insertion type USFM at WFL



Calibration of 8" mass flow meter at WFL

### 4. Certification of water meter test facility of New Tirupur Area Development Corporation

The water meter test facility of NTADCL Tirupur, was assessed and certified for its compliance as per IS 6784 and ISO 4064:1999 standards. The facility can perform routine testing of 15 mm to 100 mm water meters. The references, a 200 litre and a 2000 litre SS volume tanks, were calibrated on-site using 1" inch coriolis mass flow meter as per Section 6.5 API MPMS 4.4 Tank provers. The test bench were certified based on the compliance with IS/ISO standard and also by witnessing the testing of water meters





On-site calibration of reference volume tanks and certification of water meter test facility of NTADCL at Tirupur, Tamilnadu.

## 5. Calibration of 800 mm Ultrasonic Flow meter & 800 mm EMF at LWFL

The Calibration of 800 mm Ultrasonic Flow meter and Calibration of 800 mm Electro Magnetic Flow meter(EMF) were completed at Large Water Flow Laboratory of FCRI



Calibration of 800 mm ultrasonic mass flow meter at LWFL

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