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## Office

## ADAMS ENGINEERING PROJECTS PVT LTD.

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# **Test Facility**

#### ADAMS ENGINEERING PROJECTS PVT LTD.

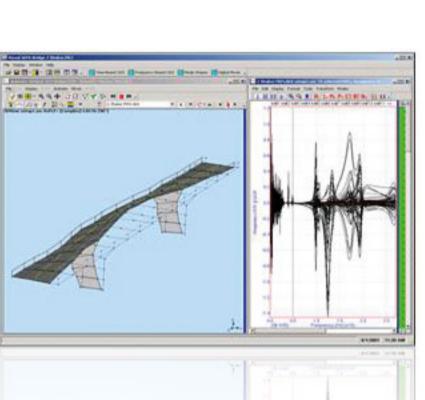
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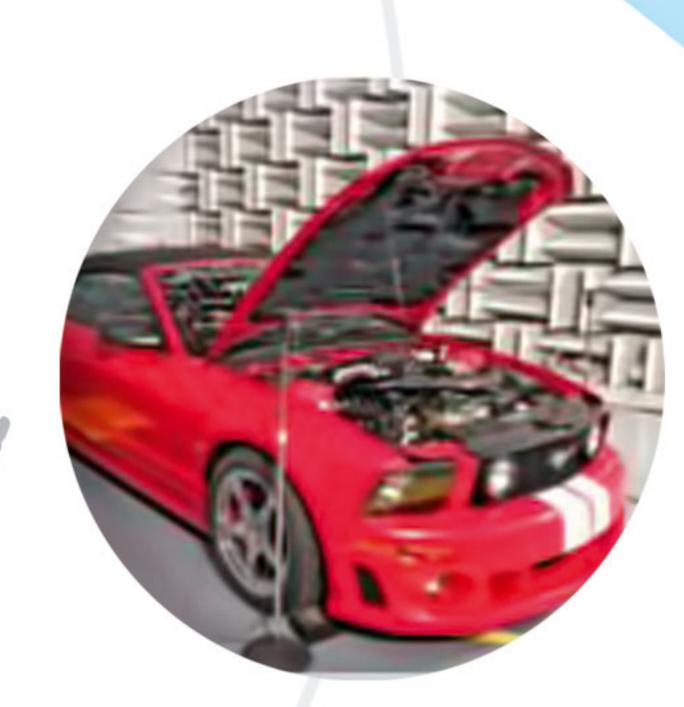




















Adams provides Engineering Services to leading Defense, Automotive, Mechanical Industries and ground vehicle companies in troubleshooting and design refinement projects, engineering innovative products and optimizing their development processes. We help customers in design and setting up test facilities by identifying the best system for their specific applications. We have the system capabilities to execute Engineering Services projects onsite and also at our own test facility

# **Engineering Services**

We offer a unique combination of engineering skills and application know-how to support our customers in optimizing systems for key functional performance attributes, including acoustics, NVH, durability, system dynamics and structural integrity. We enable our customers to analyze and optimize a design's real-life performance from the early concept stage onwards. Throughout the detailed design and engineering phase, our project teams excel at detecting weak spots, identifying root causes, and delivering valuable insight in time to affect design decisions. We quickly diagnose late-stage development problems and develop pragmatic solutions.

#### The Solutions offered

- On site Noise & Vibration measurement
  & analysis
- On site or off site Experimental Modal Testing and Operational Modal Testing
- Acoustic Testing and analysis, Noise Source Identification
- Vibration (Qualification / Environment) tests
- Modifications / Solutions to Noise and Vibration problems
- Calibration of Vibration Sensors
- Leasing of Hardware and sensors

#### **Product & Application Support**

As a system integrator, we assist our customers in choosing the most appropriate configuration for a certain application. We deliver, install and commission the system. Extensive training and seminar programs, including on-site services, help our clients' technical staff to gain and maintain their knowledge of the system and software capabilities for their specific applications. We support our customers with engineers who understand the hardware and software in the related engineering applications. Our hardware services include calibration and maintenance of the systems to optimize the accuracy of the system and to extend its lifetime. We offer a complete portfolio of professional services, including the design of test facilities, full management of a customer's installation, on site training and support, and continuous knowledge transfer. Our products are designed using the latest standards to combine speed of development with long-term maintainability and robustness.



# **Engineering Services & Analysis**

#### **Structural Dynamics**

- Modal Testing & analysis
- Operational Modal Analysis

## **Acoustic Testing and analysis**

- Noise Source identification
- Near Field Noise Source Identification
- Far Field Noise Source ranking
- Sound Quality Analysis
- Sound Intensity Mapping
- Surface Impedance Measurements
- Sound Pressure Level Measurements
- Octave Analysis
- Sound Power Measurements

## Signature Testing

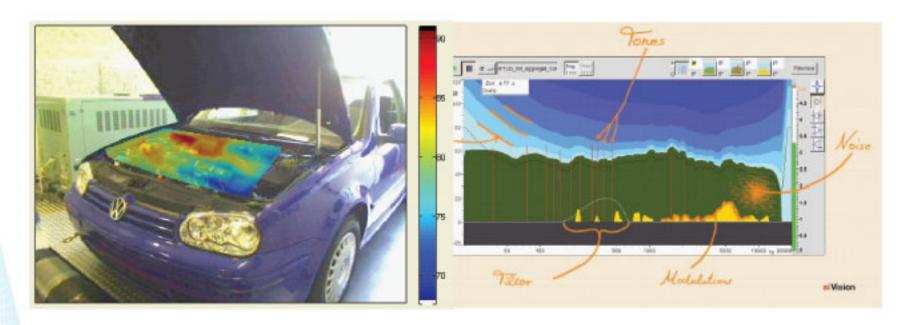
- Order Tracking
- Fixed Sampling
- Operational Deflection shape and Time Animation

# Modifications / Solutions to Noise and Vibration problems

We offer solutions to help our customer achieve the desired results by identifying the root causes and suggesting modifications. The results are reconfirmed after actual modifications and ensure that the product meets the required Noise and Vibration Levels.

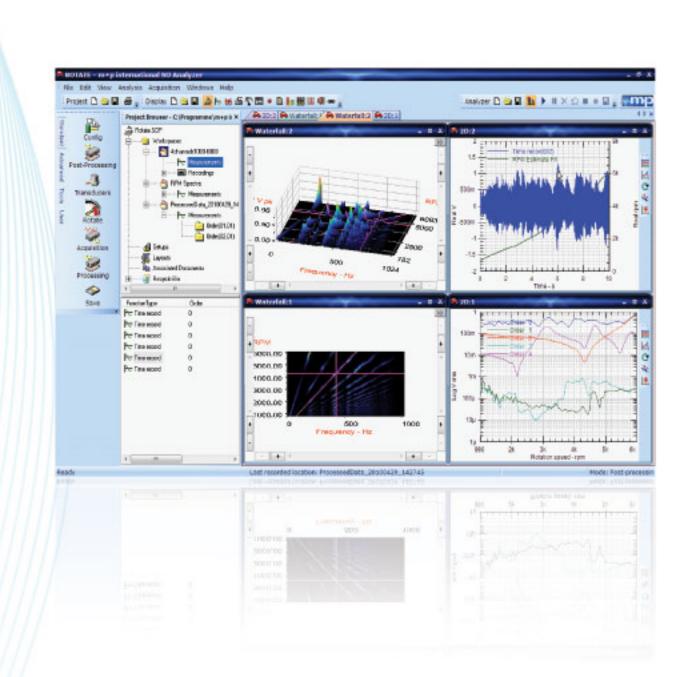






#### **Typical Applications**

- General vibration Measurements
- Natural Frequency Identifications
- o Operational Deflection shapes and Time Animation
- Road Load Data Collection
- Noise Source Identifications
- Rotating Machinery Analysis





# **Test Facility**

Adams Engineering Projects Private Limited offers Vibration Testing and Calibration Services which can help ensure that your design will survive its intended environment. Vibration durability testing of product and vibration analysis can optimize real life performance and helps reducing field return costs through improved product reliability.

Our team of experts can help in identifying and solving durability related problems and also help in design of fixtures for testing.

Our test center is located in Ambattur Industrial Estate, Chennai.

#### Solutions offered

- General Vibration Testing
- Durability Testing
- Resonance Search
- Road load Simulation
- Shock or Bump Testing
- Gun Fire Testing
- Transportation Vibration Simulation
- Multi Axis Testing
- Mixed Mode Testing (SOR, ROR...)
- Fixture Design & Validation

## **Accelerometer Calibration**

- Calibration of accelerometers up to 10 KHz
- As per ISO 16023 standards
- Traceability to NIST / PTB standard







# Vibration Test Facility

#### 35 kN Vibration Shaker

3500 Kgf LDS V875 shaker

Force: 3500Kgf Sine & Random

Bare Table Acceleration: 110g Pk

Max. Velocity: 1.8 m/s

Max. Displacement: 50.8mm

Armature Dia: 440 mm

Head Expander Dia: 640 mm

Slip Table: 750 mm x 750 mm Square

Frequency Range: 2 Hz – 3500 Hz

Armature Resonance > 2500 Hz

SPA 40K – 40 KVA Amplifier

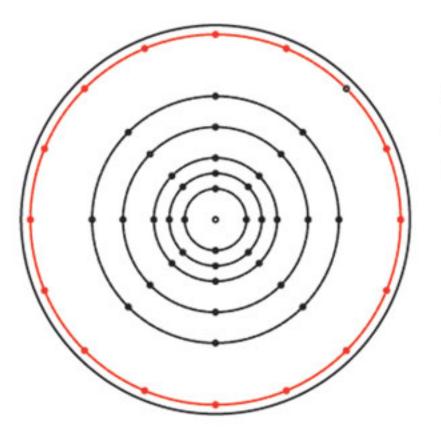
8 channel Vibration Controller

Sine, RSTD, Sine Notching, Sine Dwell

Random, Random Limiting,

Classical Shock, TTH, SRS

SOR, ROR, SOROR, LTH



HOLE DETAILS:

53 HOLES - M 8 X 1.25 - Pos Tol - Ø0.18

16 HOLES - EQUISPACED ON 609.6 PCD

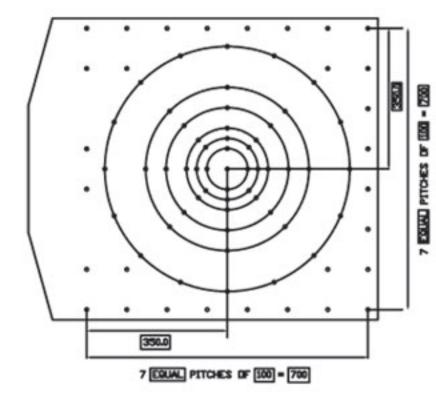
8 HOLES - EQUISPACED ON 406.4 PCD

8 HOLES - EQUISPACED ON 304.8 PCD 8 HOLES - EQUISPACED ON 203.2 PCD

8 HOLES - EQUISPACED ON 152.4 PCD

4 HOLES - EQUISPACED ON 101.6 PCD

1 HOLE POSITIONED IN CENTRE OF PATTERN



HOLE DETAILS

83 HOLES - M 8 X 1.25 - Pos Tol - Ø 0.18

30 HOLES - POSITIONED ON GRID AS SHOWN

16 HOLES - EQUISPACED ON 609.6 PCD

8 HOLES - EQUISPACED ON 406.4 PCD

8 HOLES - EQUISPACED ON 304.8 PCD

8 HOLES - EQUISPACED ON 203.2 PCD

8 HOLES - EQUISPACED ON 152.4 PCD 4 HOLES - EQUISPACED ON 101.6 PCD

1 HOLE POSITIONED IN CENTRE OF PATTERN









#### 10 kN Vibration Shaker

1000kgf SRV Shaker

Force: 1000Kgf Sine & Random Force

Bare Table Acceleration: 100g Pk

Max. Velocity: 1.8 m/s.

Max. Displacement: 50.8mm Pk to Pk

Armature Dia: 240mm

Slip Table : 450mm x 450mm Square

Frequency Range: 5 - 3000 Hz

Armature Resonance: > 2400 Hz

Slip Table Resonance : > 1650 Hz

DA10 - 10KVA Amplifier

8 channel Vibration Controller

Sine, RSTD, Sine Notching, sine Dwell

Random, Random Limiting, Classical
 Shock, TTH, SRS, SOR, ROR, SOROR, LTH.

