Indian Institute of Technology Bombay

Department of Mechanical Engineering

Central Facility – Microsystems Analyser-Laser Doppler Vibrometer(LDV)

Registration Process

Internal Users

Users within IIT Bombay can apply from *http://drona.ircc.iitb.ac.in*. The form should be completely filled up online and all the sample details must be provided in the requisition form. Users need to be present at the time of analysis on the allotted appointment date/time. If a user wishes to change his/her time slot, an email should be sent immediately to ldv@iitb.ac.in requesting change in appointment.

External Users

1. **Academic Institutions**: You can come personally or send a letter from the Guide/HoD on the Institution's Original Letter Head stating that the analysis is for research purpose, to qualify for academic concession along with the Registration Form and Demand draft. The letter should be addressed to The Convener, Microsystems Analyser-Laser Doppler Vibrometer, central facility, Department of Mechanical Engineering, IIT Bombay, Powai, Mumbai -400076.

2. **National R & D Lab's:** You can come personally or send a letter signed by an authorized signatory of your Institution on Original Letter Head stating that the analysis is for research purpose along with the Registration Form and Demand draft. The letter should be addressed to The Convener, Microsystems Analyser-Laser Doppler Vibrometer central facility, Department of Mechanical Engineering, IIT Bombay, Powai, Mumbai -400076.

3. **Industry& Non-Government Agencies**: You can come personally or send a letter signed by an authorized signatory of your Institution on Original Letter Head stating that the analysis is for research purpose along with the Registration Form and Demand draft. The letter should be addressed to The Convener, Microsystems Analyser-Laser Doppler Vibrometer central facility, Department of Mechanical Engineering, IIT Bombay, Powai, Mumbai -400076.

Important Note

All users in categories 1,2,3 are requested to mention in your request letter that "We agree to acknowledge the MicroSystems Analyser-Laser Doppler Vibrometer , Central

Facility of IIT Bombay" when the data from the Suman Mashruwala Advanced Micro-engineering lab is used in our papers/reports/thesis".

The information on such acknowledgements with appropriate reference should be communicated to BDS lab via email *ldv@iitb.ac.in* . Kindly send the complete publication reference (Name of authors/ paper title/ Journal name/volume number/page number /date of issue of the publication etc)

Charges for external users per sample

18% GST will be applicable over the below mentioned charges.

Scheme-1 Per sample basis		
Universities	National Labs	Industry
Rs 200	Rs 400	Rs 800

Scheme-2 Per slot basis(1 slot=2 hours, max 4 samples per slot)		
Universities	National Labs	Industry
Rs 400	Rs 800	Rs 1400

- 3 types of experiments are possible in this facility-White Light Interferometry for surface topography, Out of Plane Vibrations & In plane vibration characteristics measurement.
- **Scheme 1 will be applicable for White light Interferometry & Scheme 2 will be applicable for in-plane and out of plane measurements.**

General instructions to the users:

Payment Mode: Payment should be made in advance by a Demand Draft (DD) drawn in favour of "The Registrar, IIT Bombay, P and C Account". The same should be sent to The Convener, Microsystems Analyser-Laser Doppler Vibrometer central facility, Department of Mechanical Engineering, IIT Bombay, Powai, Mumbai - 400076.

Appointment: The users will be informed about their date and time-slot by email. If the day and time-slot is not suitable for you, an email request should be sent immediately for an alternate slot.

Sample Submission: Samples are to be submitted at the time of registration or brought along on the date of your appointment for your sample analysis.

Results:

- After the sample analysis is complete the results will be provided in a CD which user has to bring.
- The experimental data provided is only for research / development purposes. These cannot be used as certificates in legal disputes.
- Samples will not be analysed till payment is received.

Instruction for sample preparation

- The sample surface to be analysed should be at least partially reflective to get satisfactory results
- The devices can have two possibilities: A. Built in excitation B. External excitation. In case A the signal generator in the MSA system can be used for giving excitation upto 10 v. Users are encouraged to prepare samples for option A preferably to have better results. In case B, a piezo actuator available in the lab can be used upto 10 MHz frequency. However amplitudes in this case would be very low.
- Any query related to your analysis can be emailed to ldv@iitb.ac.in or **gandhi@iitb.ac.in**