



Department of Science & Technology

5th SUMMER SCHOOL IN TRIBOLOGY
Venue: liPM, Gurgaon: Duration: 24th – 28th June, 2013

Programme Schedule

24th June, 2013

INAUGURAL SESSION

- 09:30 – 10:30 hr. Inaugural Session-**
Chief Guest : Mr Anand Kumar,
Director Petrotech and Former President TSI ,
Guest of Honour : Mr Verghese Cherian,
ED liPM, Gurgaon
- 10:30 – 11:00 hr. Group Photograph & Hi Tea**
- 11:00 – 12:00 hr. Session 1**
Theme : Basics of Friction, Wear and Lubrication
Speaker: Prof. A. Sethuramiah, Former Prof. ITMMEC, IIT Delhi
- 12:00 – 13:00 hr. Session 2**
Theme: Wear of Material and Wear modelling
Speaker: Prof. A. Sethuramiah, Former Prof. ITMMEC, IIT Delhi
- 13:00 – 14:00 hr. Lunch Break**
- 14:00 – 15:00 hr. Session 3**
Theme: Fluid Film Lubrication & Hydrodynamic Bearings
Speaker: Prof. S C Sharma
- 15:00 – 16:00 hr. Session 4**
Theme: Lubricating Base Oils Types, their Production and Lubricant Formulation
Speaker: Dr. S S V Ramakumar
- 16:00 – 16:30 hr. Tea Break**
- 16:30 – 17:30 hr. Session 5**
Theme: Chemistry of Lubricants and Additives
Speaker: Dr. S S V Ramakumar



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1730-1830 Project work for participants

25th June, 2012

- 09:00 – 10:00 hr. Session 6**
Theme : Grease Rheology
Speaker: Dr. N K Pokhriyal
- 10:00 – 11:00 hr. Session 7**
Theme : Failure Analysis of Machine Elements (Gears and Bearings)
Speaker: Mar S R Durgkar
- 11:00 – 11:30 hr. Tea Break**
- 11:30 – 12:30 hr. Session 8**
Theme : Corrosion & Tribology
Speaker: Prof. V S Raja
- 12:30 – 13:30 hr. Lunch Break**
- 13:30 – 14:30 hr. Session 9**
Theme: Application of NDT in Tribology
Speaker: Dr C Kannan
- 14:30 – 15:30 hr. Session 10**
Theme: Tribology of Machine Design
Speaker: Prof Ram Turaga
- 15:30 – 16:00 hr. Tea Break**
- 16:00 – 17:00 hr. Session 11**
Theme: Condition Monitoring through Oil Analysis
Speaker: Mr. Deepak Sharma
- 17:00 – 1830 hr Project Work Presentaion**
All participants



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26th June, 2012

To proceed to IOCL (R&D) at Faridabad. To leave liPM early by
07:30 Hrs in two AC Buses.

- 09:30 – 10:30 hr. Session 12**
Theme : Tribo Testing and Performance Evaluation of Lubricants & Materials
Speaker: Mr Ajay Kumar
- 10:30 – 10:45 hr. Tea Break**
- 10:45 – 11:45 hr. Session 13**
Theme : Analytical Techniques for Tribology and Surface Characterisation
Speaker: Prof. M. S. Bobji
- 11:45 – 12:45 hr. Session 14**
Theme : Automotive Tribology
Speaker: Mr. Reji Mathai
- 12:45 – 1300 hr. IOCL (R&D) Film**
- 13:00 – 14:00 hr. Lunch Break**
- 14:00 – 17:00 hr. Laboratory Visit in 2 groups**
- 17:00 – 17:30 hr. Tea Break**
- 17:30 – 19:00 hr. To leave IOCL (R&D) for liPM Gurgaon at 18:00 hrs in two buses**



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27th June, 2012

- 09:00 – 10:00 hr. Session 15**
Theme : Bio Tribology
Speaker: Dr. A P Harsha
- 10:00 – 11:00 hr. Session 16**
Theme : Tribology of Rolling Element Bearings
Speaker: Dr Arindam Ghosh
- 11:00 – 11:30 hr. Tea Break**
- 11:30 – 12:30 hr. Session 17**
Theme : Gear Tribology
Speaker: Dr. Barun Chakrabarti
- 12:30 – 13:30 hr. Lunch Break**
- 13:30 – 14:30 hr. Session 18**
Theme : Wear Mechanisms and Mitigation of Wear by Tribology Based Design
Speaker: Prof. Satish Kailas
- 14:30 – 15:30 hr. Session 19**
Theme: Nano-mechanics/properties of Materials in Small Scales.
Speaker: Dr. Karolina Rzepiejewska-Malyska,
- 15:30 – 16:00 hr. Tea Break**
- 16:00 – 17:00 hr. Session 20**
Theme: Tribology of Manufacturing Operations
Speaker: Mr. Rajendra Mahapatra
- 1700 on wards Preparation time for the Exam on 28 June13**



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28th June, 2012

- 09:00 – 11:00 hr. Examination**
Examination with objective type questions (multiple-choice) based on the Topics covered during the program
- 11:00 – 11:30 hr. Tea Break**
- 11:30 – 13:00 hr. Concluding Session**
Mr Rajiv Tayal: Adviser (SERB) DST, and Chief Guest
Mr N Sethurathinam, Guest of Honour
ED (M&I) , IOC (Ref Divn)
Sh Amitabha Choudhury, DGM liPM
- 13:00 onwards Lunch Break and closure of the Program**