

SAEISS Online Lecture Series on Real Driving Emissions



Speaker :
Dr.P.A. Lakshminarayanan



6th & 7th March 2021



10.00 am to 01.00pm (Saturday&Sunday)

About the Course

1: WLTP, RDE and ISC with reference to Euro 6

Introduction - Emission Limits
Emission Control Strategies for Euro-6
Main Differences between the Two Test Procedures, NEDC and WLTP
From NEDC to WLTP: What will Change?
Classification of Vehicle Types
EU – NEW - Update RDE Package 4

2: WLTP, RDE and ISC • Euro 6

Powertrain Development Process
Introduction - Emission Limits
Emission Control Strategies for Euro-6
Current status in India
RDE LDV Regulation, RDE Regulation Overview
Main Differences between the Two Test Procedures, NEDC and WLTP
Indian Real Driving Cycle, IRDE
Classification of Vehicle Types

EU - NEW - Update RDE Package 4
Steps in Real Driving test
Boundary Conditions
Principle of the Moving Averaging Window (Work Based)
Euro VI steps, the applicable power threshold
Step C: Verification of overall trip dynamics using the MAW method,
Appendix 5 - Verification of overall trip dynamics using the MAW method (I)
Regulatory Standards
Not To Exceed (NTE) Limits
Trip Validity
Calculation of Final RDE Emission Results
Not-to-Exceed limits, Conformity Factor
ISC Requirements
The portable Emission measurement system
JRC Europe

Speaker Profile

Dr. P. A. Lakshminarayanan

Dr. P. A. Lakshminarayanan (Born 1950) studied at Indian Institute of Technology, Madras for his B. Tech, M.S. and Ph.D. degrees. He worked at Loughborough University of Technology and Kirloskar Oil Engines Ltd. for 5 and 20 years respectively, before moving to Ashok Leyland to head Engine R&D.; he was the Chief Technical Officer and Technical advisor at Simpson and Co. Ltd., from 2011 to 2018.

With his team, he has developed more than eight Diesel and CNG Engine platforms and 150 Engine types commercially successful

for efficiency and cost-effectiveness. Two Engine designs received prizes from the Institute of Directors (India). He is the co-author of 11 patents and three books (2008, 2011 and 2020). He has authored 53 research papers in journals and conferences of International repute. Four of them received the prizes for integrity and quality of contents from SAE (Arch Colwell Award, SAE-Intl.), he is elected to the fellowship of SAE-Intl., Indian National Academy of Engineers and International Society for Energy, Environment and Sustainability.



Who should attend?

Engineers, executives, Managers, R&D professionals, faculty, students with affinity to Automotive Engineering and interested in any field of product development like design, marketing, testing, manufacturing, CAD, Engineering Analysis



Course Fee

Non-SAEINDIA Member - Rs. 5,000 + GST

SAE INDIA Member - Rs. 3,600 + GST

Faculty - Rs. 2,000 + GST

Last Date of Registration : 05.03.2021



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Contact

Programme Executive

SAEINDIA Southern Section

Block-1, Modules: 29 & 30,

SIDCO Electronic Complex,

Thiru-Vi-Ka Industrial Estate,

Guindy, Chennai - 600032

Phone: 044-42188652-53

Email: manager@saeiss.org