

SPEAKERS



Mr. M. K. Chaudhari: Automotive Consultant to leading Automotive Companies and R&D Institutes. He has worked with TATA Motors as a Consultant to ERC and spent 35 years in ARAI as Department Head of R&D, Testing, Evaluation, Certification of vehicles & components and Engineering services. He was consultant to UNDP/UNIOD for two wheeler up gradation and setting up of R&D and Test Laboratories and Technology Centre's. Received "2004 SAE Environmental Excellence in Transportation Award - Mobile Energy and Emission" for Introduction of alternative fuels in India. He has four patents to his credit in Alternative fuel Technology. He was a part of various delegations sponsored by Govt./SIAM/World bank abroad in the field of emission/alternative fuel, automotive technology assessment and facility planning. Represented India in WP.29 GRPE (Working Party on Pollution and Energy) sessions since year 2002 and was a member of committees constituted by Govt of India (MoRTH/MOPNG/MNE/BIS/PCRA/DST/DSIR). He is Governing Board Member of SAEINDIA Western Section.



Mr. Sudipto Basu: Executive Director ECMA. He has 40 plus years of experience in Automotive Powertrain and Aftertreatment. He has done several engine and vehicle emission compliance projects at OEM also several catalyst developments for car, truck and bus applications. He has completed B Tech, Mechanical Engg from IIT Kanpur.



Dr. K. C. Vora: Sr. Dy. Director & Head Academy ARAI, Pune. He has his Ph.D. from IIT-Bombay. He has a vast industrial & academic experience of 30+ years. He has specialized in the field of Automotive Education, Technology Development, Knowledge Management, Engine R&D and Emission Controls. He was instrumental in starting ARAI Academy, which conducts Graduate, Post Graduate and Doctoral Courses in Automotive Engineering. He is the Advisor in various activities of SAEINDIA, under which he conducts series of students' activities like AWIM & BAJA SAEINDIA. He is Chairman of technical committee of FISITA 2018 & SIAT 2018.



Dr. Prasanna G Bhat: General Manager, Powertrain Engineering, ARAI, Pune. He has total experience of 25 years in the diesel/dual fuel/ gas engine development area. In ARAI, he is responsible for development, combustion optimization programs of diesel engines for various applications such as automotive, construction equipments, agricultural tractors, power generation set applications, etc. His expert areas are diesel combustion, fuel injection equipment, turbocharger, EGR, after treatment devices, etc. He is also responsible for the implementation of Diesel genset engine emission program as per CPCB guidelines affiliated to Ministry of Environment and Forests.



Mr. Nilesh Lende: Application Engineering Manager (India), Corning Environmental Technologies, Gurgaon, India. He has been in Corning since 2016. Mainly responsible for product application and development of Ceramic Substrates, Diesel particulate filter (DPF); Partial flow filters(PFF/POC) and Gasoline Particulate Filters (GPF) for meeting emission regulation requirements of Indian customer. Prior to Corning, he worked in Tata Motors (ERC-Engines) for 9 years as a Senior Manager (Design & Development) for developing engines for Commercial vehicle applications. He has been associated with industry for last 15 years.



Mr. Paresh Laddha: General Manager - Project Management, Emitec Emission Control Technologies India Pvt. Ltd. which is Continental - Emitec Group Company in Pune. He is a BE & MBA and responsible for project management for catalyst and filters & SCR exhaust after treatment systems for major global & local automotive OEM customers in India & Asian region.



Mr. N. V. Marathe: Sr. Dy. Director & Head, Powertrain Engineering, ARAI, Pune. He has worked extensively in design, performance up-gradation and emission reduction projects pertaining to engines of large varieties applicable to 3-wheeler, passenger car, utility vehicle, light & heavy commercial vehicle, tractor and genset. He specializes in the area of cylinder head and port design for diesel engines, valve train / crank train design and combustion tuning, specifically related to emission reduction. He, along with his team, is now developing in house, Euro 6 high performance diesel engine with common rail and optimum features



Ms. Dipali Shelke: System Engineering Manager, Tenneco Automotive India Ltd., Pune. She is lead designer for Euro IV, Euro V & Euro VI norms for on-highway exhaust aftertreatment systems for mid range & heavy duty engines. She is mechanical integrator for diesel oxidation catalyst (DOC), diesel particulate filter (DPF), decomposition reaction tube (DRT), selective catalytic reduction (SCR), ammonia slip catalyst (ASC / AMOX), Lean NoxTrap (LNT), DEF dosing system, supply modules, DEF tanks, sensors.

Besides, speakers from ARAI & other Industries are expected

3 Day Proficiency Improvement Programme on Engine Emission & Control at The Automotive Research Association of India, ARAI-FID, Pune 18th to 20th February 2019

REGISTRATION FORM

Name, Designation, Dept., Office No., Mobile No. & Email ID :	
Delegate - 1	
Delegate - 2	
Delegate - 3	
Company Name & Address	
Co-ordinator's Name, Designation, Contact No., Email ID	
100% Advance Payment Details	

Please email/post duly filled-in registration form on or before 15th February 2019.
Dr. K. C. Vora, Sr. Dy. Director & Head, ARAI Academy
 ARAI-Forging Industry Division, Chakan, B-16/1, MIDC Chakan, Taluka Khed, Dist Pune 410 501 (INDIA)
 Contact No: 02135-39 6695 / 6693 / 6691 / 6690 or 02135-630 795 / 793 / 791 / 790
 Email: training.pga@araiindia.com; nadeshmukh.pga@araiindia.com; patil.pga@araiindia.com; diwanji.pga@araiindia.com
 Please visit www.araiindia.com & academy.araiindia.com for more information.



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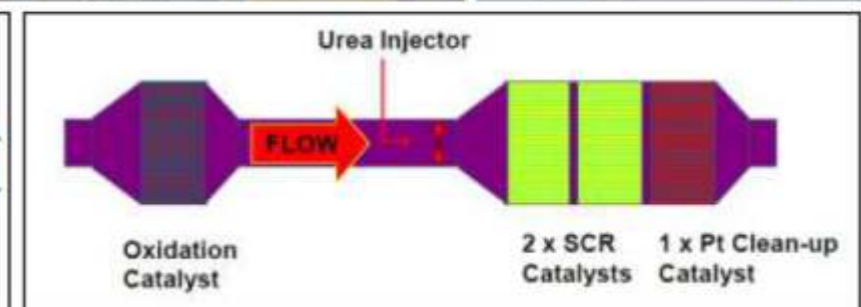
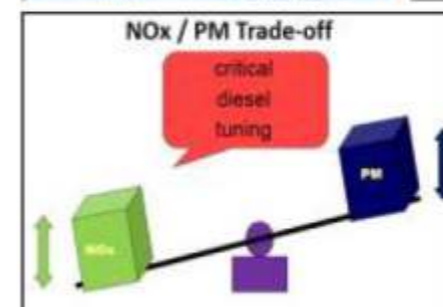
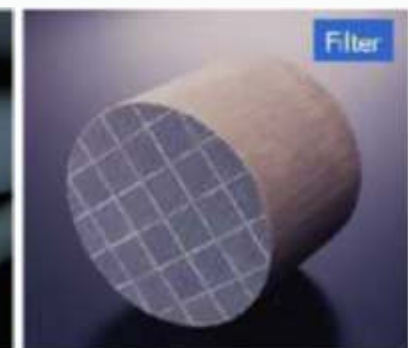
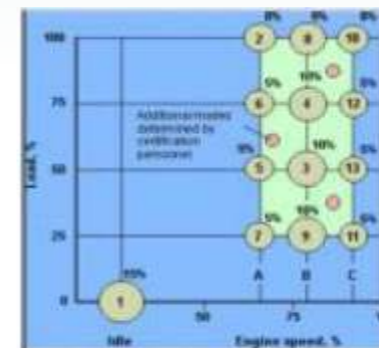


2011



3 Day Proficiency Improvement Programme on

Engine Emission & Control



at
The Automotive Research Association of India
 (ARAI-FID, Chakan, Pune)
 Plot No.B-16/1, MIDC, Chakan, Taluka: Khed, Dist: Pune 410 501.

18th to 20th February 2019 (Monday to Wednesday)



BACKGROUND & OBJECTIVES

In today's competitive world, the automotive industries have faced inevitable challenge of vehicles to confirm strict emission norms. For this, research institutes like ARAI, Engine & Emission Control Experts, After Treatment Device Manufacturers and OEMs have done extensive work in this direction. With BSVI norms being implemented by 2020, engineers should be updated with the latest technologies for engine emission measurement & control.

This programme has been designed for the automotive professional, to understand crucial role of powertrain, emission control devices and optimization in emission control.

INTENDED LEARNING OUTCOMES

On completion of the module, the delegates should be able to:

- Understand overview of Emission Scenario & Regulation.
- Understand SI & CI Combustion & Emission.
- Understand Emission from Gaseous Fuel Engines.
- Understand Emission Standards & Measurement Techniques for Vehicles.
- Understand Ceramic, Metallic and Silicon Carbide Substrates
- Understand Catalyst Technology.
- Understand Canning Technology.
- Understand PM & NOx Control Devices
- Lead multi-disciplinary teams.
- Demonstrate independent learning ability necessary for conducting professional development.

Note : ARAI reserves the right to change the dates, schedule, contents, speakers, venue etc. for the programme without any notice.

PROGRAMME

Day One

- 8.30 - Registration
- 9.30 - Inauguration & Welcome Address
- 10.00 - Overview of Emission Scenario
- 11.30 - Sources of Emission & Effect on Health
- 12.30 - Combustion & Control
- 13.15 - Lunch
- 14.00 - Combustion & Control (Contd.)
- 16.15 - Conclusion

Day Two

- 09.00 - Emission Standards & Measurement Techniques for Vehicles including 2 & 3 Wheelers
- 10.00 - CO2 Emission & Control
- 11.00 - Ceramic Substrates for After-treatment Devices
- 12.00 - Metallic Substrates for After-treatment Devices
- 13.00 - Lunch
- 14.00 - After-treatment Device Canning
- 15.00 - Catalyst Technology for Diesel After-treatment Devices
- 16.15 - Conclusion

Day Three

- 09.00 - Emission Standards & Measurement Techniques for Heavy Duty Engines, Tractors & Gensets
- 10.30 - NOx and NOx Control Devices
- 12.00 - Optimization of SCR System
- 13.00 - Lunch
- 14.00 - Real Driving Emission (RDE)
- 15.00 - Written Test
- 15.30 - Summary, Feedback & Certificate distribution
- 16.00 - Conclusion

Direction Map :

Training Program Venue Address :
ARAI-Forging Industry Division, Chakan
 B-16/1, MIDC, Chakan, Taluka Khed, District PUNE - 410 501 (INDIA).
Contact No : (02135) 396695 / 690 / 691

WHO SHOULD ATTEND ?

- Vehicle / Engine Manufacturers
- Organizations involved in Automotive Research, Design & Development and Testing & Certification
- After-treatment Device Manufacturers
- Emission Measurement & Control Engineers
- RTO / Environmentalists Engineering / Consulting Companies
- Professors / Engineering Students

REGISTRATION FEES

Category	Registration Fees (Rs.) (per participant)	Total Fees including Tax of 18% (Rs.) (per participant)
Engineers & Professionals	15,000.00	17,700.00
Teaching Faculty	9,000.00	10,620.00
Engineering College Students	6,000.00	7,080.00

Registration fees include:

- Breakfast
- Lunch
- Delegate Kit

MODE OF PAYMENT

At Par / Multicity cheque or demand draft in favour of
The Automotive Research Association of India

payable at Pune.

OR

Online Transaction: ARAI Account No: 04470200000280

IFS/ RTGS / NEFT Code : BARB0KARVER (0=ZERO)

ARAI, over five decades, has provided its design and development expertise to the Indian automotive industry, focusing on the testing and evaluation of components and systems to meet national and international standards. ARAI strives to achieve international recognition in these areas. In keeping with the globalization of economy and business, ARAI continues to enlarge its scope of services to meet the requirements of automotive industries around the world. In addition to utilizing state-of-the-art technology, laboratories and highly-trained personnel, ARAI recognizes the need to develop a new generation of engineers to meet the demands of the automotive industry, not just in India but across the globe.

ARAI ACADEMY is classified into three divisions:

LEARNING CENTRE has embarked upon a programme of building up human resources by commencing educational programme (Graduate, Post graduate & Doctoral) with specialization in Automotive Engineering. It has tied up with VIT University (Vellore), Veltech University (Chennai), College of Engineering (Pune), Christ University (Bangalore), University of Alabama (USA), Tennessee Tech University (USA), Loughborough University (UK) and University of Braunschweig (Germany).

KNOWLEDGE CENTRE: It has collection of around 25,000 books, standards, project reports, seminar/conference proceedings and around 1,50,000 SAE technical papers. It also has 500 eBooks. It subscribes to 35 national and international journals. It regularly publishes a monthly magazine 'Automotive Abstracts'. It also conducts literature / patent search for customer's projects.

TRAINING CENTRE: In line with Graduate, Post Graduate and Doctoral Programs conducted by various universities abroad, ARAI Academy has devised various Proficiency Improvement Programmes (PIPs & ePIPs), to be taught by ARAI, Academia & Industry Experts. PIP gives engineers, faculty and student's knowledge and technical expertise in a wide range of automotive disciplines. It helps in understanding system's view point for automotive design and manufacture, with specific skills in formulating automotive engineering solutions in terms of their function and performance, through optional modules.

Based on the present system in universities, credits are proposed for each module, so that the graduate engineers can attend various

modules and sum-up the credits required for Master's or Doctoral Programs. Participants also get chance to visit related laboratories of ARAI and get hands on experience. Certificates are issued on the basis of attendance & written test conducted at the end of the programme. We also conduct Training Programmes through WEBEX and Domain Training Programmes for Automotive Industry.

Please visit www.araiindia.com & academy.araiindia.com for more information.

About Emission Controls Manufacturers Association (ECMA) is a nonprofit association. The Association started its function from year 2002. Global Manufacturers of after-treatment systems in the field of Vehicular Pollution Control came together to create a platform in India to share their emission control technologies with the interest of public in large in line with the European and the American after-treatment Manufacturers Association. Accordingly, the eight leading organizations in the field of Emission Control Technology set out and established. It represents world's leading manufacturers of Emission Control equipment for Automotive and Non-Road engines in India. Our member companies have been operating worldwide and have rich experience and a proven track record in the development, testing and manufacturing of catalytic converters and catalyst /heat tubes for 2 - Wheelers/Cars/LCV's/HCV's manufacturers and Off-Road application like Generators (Petrol/Diesel). Members' technology is incorporated in the exhaust emission control system on all new cars and light / heavy commercial vehicles, as well as various two wheelers like scooters, motorcycles and mopeds in India.

ECMA's Vision : "We are Committed Collaboratively to Lead India towards Cleaner Air"

ECMA's Mission : We will work with the Industry, Government, Regulators, Oil Companies and Public at large to be a credible source of knowledge on emission control. We will strive to increase awareness of the need and to provide relevant technical solutions for emission control. We will achieve this through assimilation of technologies for emission control; providing and disseminating knowledge; enabling legislation, implementation and test procedures.

Please visit www.ecmaindia.in for more information.



Training Venue

The Automotive Research Association of India

ARAI-Forging Industry Division, Chakan