

SPEAKERS



Mr. B. R. Galgali: Consulting Metallurgist and Chairman of ASM Pune chapter. Former Quality Head at CVBU, Tata Motors LTD., Pune. He has completed B.E. in Metallurgy from VNIT, Nagpur and also has M.E. by Research. Successfully handled areas like metallurgical & materials engineering - raw materials, forging, casting, failure analysis, heat treatment, surface treatments, induction hardening. The significant contribution was in steel development specifically a micro-alloyed steels for critical applications like crankshafts, connecting rods etc. He has over 36 years of experience.



Mr. Rahul Gupta: Secretary of ASM International Pune Chapter and Partner in N D Gupta Enterprises. He has completed M.E. in Metallurgy, from College of Engg, Pune. Worked in Mukand Iron & Steel and Noduron Foundry (Now Maval Foundry). Practicing Metallurgist for Steel making, Heat-Treatment, Surface Treatment, and Foundry. He has over 30 Years of experience.



Mr. Udayan Pathak: FASM is Chairman, Public Relations Committee, ASM International Pune Chapter and Deputy General Manager, Engineering Research Centre (ERC), Tata Motors Limited. Alumnus of VNIT Nagpur, he has done BE (Met). His reach experience of more than 32 Years covers Steel, Castings, Forgings, Heat Treatment, Non-Conventional Materials, R&D Processes. He is 2009 Fellow of Institution of Engineers (I) – FIE and 2018 Class Fellow American Society of Materials – FASM. He has One International and Eight Indian Patents to his credit. He works closely with Technical Education Institutes for Industrial Perspective, Curriculum and Faculty upgradation programs.



Mr. D G Chivate: Consulting metallurgist. Coordinator for Students activities at Govt. Polytechnic, Pune for ASM Pune Chapter Graduate from College of Engineering Pune and over 4 decades of experience. Expert in forging and heat treatment. Former secretary of India National Council. He is presently a Faculty with Govt. Polytechnic Pune.



Mr. S. G. Kulkarni: Consulting Metallurgist. Chairman - Technical Program Committee of ASM Pune Chapter. Graduate in Metallurgy and Expert in Forging and Heat Treatment. He has over 4 decades of experience.



Mr. Vineet Marathe: Proprietor in Vinarc Engg. at Bhosari - an expert in welding technology. Currently EC member of ASM International Pune Chapter, Chairman of Indian Institute of Welding, Pune. He has completed M.E. - Metallurgy, from College of Engg Pune and a certified International Welding Engineer (IWE). He is active member of AWS (American Welding Society), IIW (Indian Institute of Welding) and ASM (American Society of Metals).



Mr. Nitin Datar: Senior General Manager – Heat Treatment & Metallurgical Laboratory, Carraro India Private Limited. He has completed B.E in Metallurgy from College of Engineering, Pune. He has worked in Mahindra and Mahindra - Tractor Division, Kandivali, Bharat Forge & Godrej GE Applications for 30 years. His responsibilities include achieve production targets, continuous improvements in systems with aim to absorb new technologies, support for New component development, Resource management, planning for capital and expense budget requirements, customer & supplier interactions, supplier development programs and training to subordinates.



Mr. Y. S. Gowaikar : Director - Metatech Equipments (India) Pvt. Ltd., Pune. A Metallurgist from College of Engineering, Pune having experience in building metallography machines, instruments and software for more than 30 years. He also has experience in standardizing metallography practices for various applications.

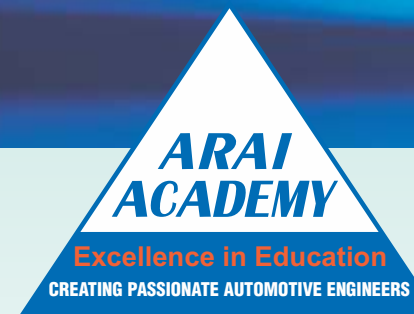
Besides, speakers from ARAI & other Industries are expected

**3 Day Proficiency Improvement Programme
Metallurgy for Non-Metallurgists
at The Automotive Research Association of India, ARAI-FID, Pune
29th to 31st May 2019 (Wednesday to Friday)**

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 27th May 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; tc.pga@araiindia.com
 Please visit www.araiindia.com & academy.araiindia.com for more information.



2015



2011

3 Day Proficiency Improvement Programme on

Metallurgy for Non-Metallurgists

Training Delivered by ARAI & Industry Experts

Repeat on Demand



at
The Automotive Research Association of India

(ARAI-FID, Chakan, Pune)
 Plot No.B-16/1, MIDC, Chakan, Taluka: Khed, Dist: Pune 410 501.

29th to 31st May 2019 (Wednesday to Friday)

Jointly organized by



BACKGROUND & OBJECTIVES

In today's times of Globalization it is essential to widen the knowledge base of Individuals. Metallurgy is a vital basis of every major engineering field, it contributes to all engineering applications where a materials are used and is a full gamut of engineering product/process design. It focus is on translating complex principles & procedures into easy to understand terms that will enable participants to gain understanding of fundamental of metallurgy; bridging the gap between theory and practice. This training provides concise knowledge of metallurgy with a focus on industry applications for working professionals/ engineers (design, maintenance, manufacturing, service, sales, and purchase dept). As such it is essential to have an understanding of what metals are, how they behave, and why they behave differently than ceramics, glass, and plastics. This will help to obtain optimum properties for a given condition, to save money and enhance customer satisfaction. It is also important to understand how they can be made stronger or more corrosion resistant, how they can be shaped by casting, forging, forming, machining, or welding, and how these processes can alter properties. This ASM course provides an important knowledge who are not metallurgists, and it covers up metallurgy from history of metals to its fabrication into usable products. The course is designed for participants having no prior metallurgical training & has basic understanding of simple chemistry and physics.

INTENDED LEARNING OUTCOMES

- On the completion of program, participants will be able to implement techniques & standard practices related to their work and will be able to:
- Learn basic principles of Metallurgical & knowledge useful in Industry.
 - Understand what is an ore, metal & alloy, outline availability of metals.
 - Understand how steel is made & its impact on the properties.
 - Understanding basic crystal structure, process of solidification, and phase diagrams.
 - Understand tensile, hardness, fatigue testing, and define strength of metals.
 - Define steel & distinguish between various grades of steels & cast irons.
 - Understand basic heat treatment process & their applications.
 - Understand metallography, NDT and its application.
 - Understand various welding processes & metallurgical aspects of welding.
 - Understand failure analysis procedure.
 - Understand corrosion & methods of prevention.
 - Demonstrate independent learning ability that is necessary for seeking personal development.
 - Become self-disciplined, demonstrating personal responsibility in the pursuit of studies and professional practice.

PROGRAMME

Day One

- 09.00 - Registration
- 09.30 - Inauguration & Welcome Address
- 10.00 - History of Metals
- 11.30 - Tea break
- 11.45 - Making of Steels and Metal Forming
- 13.30 - Lunch
- 14.15 - Steel and Cast Iron
- 15.00 - Tea Break
- 15.15 - Strengthening Mechanisms
- 16.15 - Conclusion

Day Two

- 09.00 - Heat - Treatment of Steels & Case Hardening
- 11.15 - Tea break
- 11.30 - Solidification of Metals
- 12.30 - Non-Ferrous Metals & Their Applications
- 13.30 - Lunch
- 14.15 - Non Destructive Testing
- 15.15 - Tea Break
- 15.30 - Testing of Mechanical Properties
- 16.15 - Conclusion

Day Three

- 09.00 - Corrosion & It's Prevention
- 10.30 - Tea Break
- 10.45 - Metallography Theory and Practice
- 12.00 - Quality Control & Failure Analysis
- 13.30 - Lunch
- 14.15 - Joining of Metals
- 15.30 - Tea Break
- 15.45 - Written test, Summary, Feedback, Valedictory Function & Certificate Distribution
- 16.15 - 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 ?

This training is useful for all industry professionals, who needs to have comprehensive understanding of metallurgy and working in area of:

- Design Dept., Product Design & Development, R&D, Service Engineers, Inspection, Testing, Quality Control, Assurance & Improvement, CAE and Metallurgy & techno commercial activity will benefit by attending this program.
- Manufacturing Shop Floor, Shift engineer / manager
- Sales, Business Development & Marketing
- Purchase, Vendor development & Supply chain
- Also working engineers / managers working as Supervisors, Engineers, Technicians, Graduate / Diploma Engineers and Executives, who need to work & analyse materials data & quality issues.
- This Program will be especially beneficial to SMEs who play a key role in today's era of globalization.

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 : BARBOKARVER (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 40 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

REGISTRATION FEES

Category	Registration Fees (Rs.) (per participant)	Total Fees including Tax of 18% (Rs.) (per participant)
Engineers & Professionals	10,000.00	11,800.00
Teaching Faculty	8,000.00	9,440.00
Engineering College Students	5,000.00	5,900.00

Registration fees include:

- Breakfast
- Lunch
- Delegate Kit

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 ASM As an engineering and scientific society, ASM International is led by members, guided by member needs and fueled by member participation, ASM members share information through international conferences and expositions, and local Chapter meetings, through publications like Advanced Materials & Processing and the Renowned ASM Handbook series, and online through the ASM Community website.

Please Visit www.asmpunechapter.com

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



Training Venue

The Automotive Research Association of India

ARAI-Forging Industry Division, Chakan