

**SPEAKERS**



**Mr. B. R. Galgali** : Former Quality Head at Commercial Vehicle Business Unit, Tata Motors, Pune and has worked for 36 years. He has completed B.E. in Metallurgy from NVIT, Nagpur and also has ME by research. Throughout career, he worked as metallurgist and 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. Also he has contributed in the development of HSS & AHSS for auto body light weighting. Failure analysis & steel development have been the main focus areas in his career. He is currently the chairman of ASM Pune chapter & freelance consultant.



**Mr. Jayant V. Patankar**: Currently working in MPM Infosoft, Pune as Advisor (Technical Services). He has done Graduation from VRCE, Nagpur in 1966 and after that ME in Foundry Science & Engg from Indian Institute of Science, Bangalore in 1968. He has total experience of 48+ in Kishor Pump as executive director; Kores Ltd, Pune as General Manager (production & sales); Continental Castings Ltd., Nasik as Technical Director; and Goetze Ltd, Bangalore as Senior Manager. His main areas of working are Foundry operation of Cast, Ductile Iron & Steel Castings production. Special proficiency in gating & risering of castings & Process control.



**Mr. Sudhir Phansalkar**: Currently runs own business Saneesa Chemicals, Pune. Authority in NDT. Graduate from College of Engg Pune. Experience of over 4 decades out of which majority of experience in Tata Motors, Pune and Spicer India. He is Active with ASM International Pune chapter and has been instrumental in starting of training programs, finalizing the contents of training. He has also played vital role ASM Pune students activities.



**Mr. Udayan Pathak** : Currently working as Assistant General Manager – Materials Engineering, ERC Tata Motors, Pune. B. E (Metallurgy) from Visvesvaraya Regional College of Engineering (Now VNIT), Fellow, Institution of Engineers (India) and has over 25+ years of professional experience. Previously worked with John Deere, DGP Hinoday, Spicer India, Bharat Forge. Chairman, Public Relations Committee, ASM International Pune Chapter. Expert in Material forming and heat-treatment, Materials Selection & Testing, Technology Strategist. He has 1 International & 4 National Patents to his credit.



**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.



**Mr. Rahul Gupta** : Currently working as a Secretary, ASM International Pune chapter and runs own firm Gupta Foundry, Bhosari. ME - Met, from College of Engg Pune. Worked in Mukand Iron & Steel & Noduron Foundry (Now Maval Foundry). is now Partner in ND Gupta Enterprises - Heat-treatment unit and foundry for over 15 years, Practicing metallurgist for over 30 years in steel making, heat-treatment, surface treatment, and foundry.



**Mr. D. D. Kumbhar** : Currently working as a Technical Director at Pooja Casting, Chakan. He has done B.Sc. and D.Met. Also worked in Menon Piston Kolhapur and PHB engg, Agra. He has a total working experience of 25+ years in foundry, particularly in GDC, piston manufacturing and other special processes.



**Mr. Apshankar** : He has completed B Tech, Mechanical from Indian Institute of Technology, Kanpur and M Tech in Mechanical from IIT Bombay and specialized in Heat Transfer. He has setup his own firm Energy Systech in Pune. His specialization in Energy Conservation in furnaces and is an expert in product producing same. At present his focus is Aluminium casting industry through furnaces for melting, holding & Heat Treatment of castings. He is an active member of professional organizations like ASM Pune, GDC Tech Forum and Institute of Indian Foundrymen and currently holds responsible positions there.

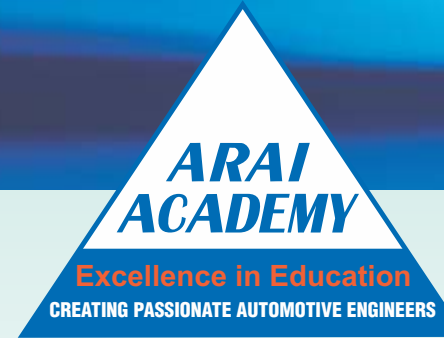


2 Day Proficiency Improvement Programme on  
**Foundry Technology**  
with Specific Focus on Automotive Casting  
at ARAI-Forging Industry Division  
11<sup>th</sup> to 12<sup>th</sup> June 2018 (Monday & Tuesday)

**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 8<sup>th</sup> June 2018 to:  
**Dr. K. C. Vora**, Sr. Dy. Director & Head, ARAI Academy  
ARAI-Forging Industry Division, B-16/1, MIDC Chakan, Taluka Khed, Dist Pune 410 501 (INDIA)  
Contact No: 02135-396695/ 6693 / 6691 / 6690  
Email: [training.pga@araiindia.com](mailto:training.pga@araiindia.com); [nadeshmukh.fid@araiindia.com](mailto:nadeshmukh.fid@araiindia.com); [patil.pga@araiindia.com](mailto:patil.pga@araiindia.com);  
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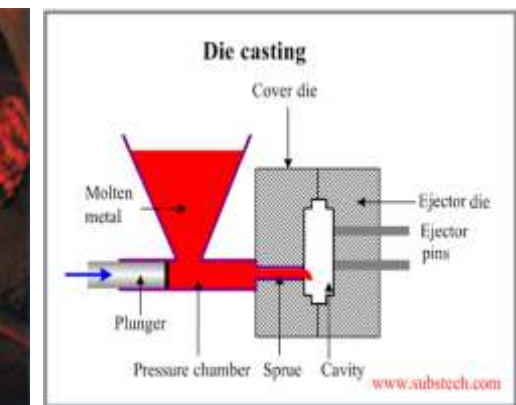
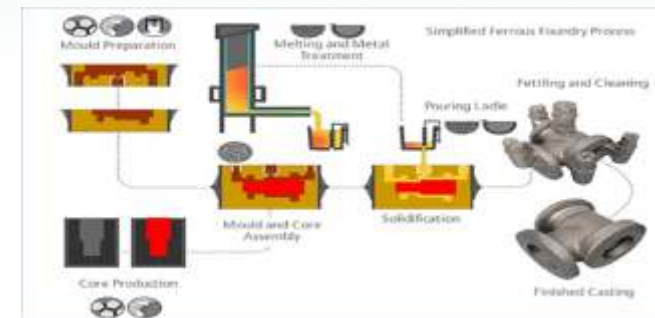
2015



2011



2 Day Proficiency Improvement Programme on  
**Foundry Technology**  
with Specific Focus on Automotive Casting



at  
**ARAI-Forging Industry Division**

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

**11<sup>th</sup> to 12<sup>th</sup> June 2018 (Monday & Tuesday)**

Jointly Organized by





## BACKGROUND & OBJECTIVES

Casting is the oldest manufacturing process and has inherent advantages of Design flexibility, high production rate and ability to produce large & complex shapes. Challenges to Indian Metal Casting Industries are high Cost of technology (Modern equipment's), Cost of energy and Environment pollutions. The focus is more on Quality (not on the Quantity), Right at first & every time, Waste reduction (improving the productivity), Defect prevention (not on defect rectification) and Reduction in lead time (design & produce). Due to globalisation, Indian foundry must understand changing global scenario, should witness new challenges to face new opportunities to grab.

This course introduces the process of metal casting and provides a broad picture of casting production from designer's perspective. It illustrates the technology, complexity involved, types of castings, casting design, process selection, methoding, casting tools & equipment's & quality assurance and key safety and environmental regulations & competitiveness. A detailed coverage of iron melting, solidifications & related processes, metallurgy of casting process & product and identifying casting defects & remedies will be discussed. Characterisation & properties of iron & aluminium alloys and their general applications along with decision making process will be discussed.

The speakers selected for each topic are experts in their field and bring along a rich experience of theory and its application, and has through understanding of Automotive industry requirements.

## 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:

- Understand Designer perspective of Sand & Die Casting theory.
- Understand the future global requirements of automotive casting.
- Understanding of methoding for sand & die casting process.
- Understand and interpret OE's requirements.
- Understand metallurgy of casting process and materials.
- Understand the FMEA (PFMEA & DFMEA) to make design & process right at first time & every time.
- Understand the casting defects, remedies for it and method to detect it.
- Decide the priority for taking actions to minimize waste/risks/mistakes etc.
- Know the important benefits of Casting Simulation & Resource Planning.
- Demonstrate independent learning ability necessary for conducting professional development.
- Become self-disciplined self-motivated, demonstrating personal responsibility in the pursuit of studies and professional practice.

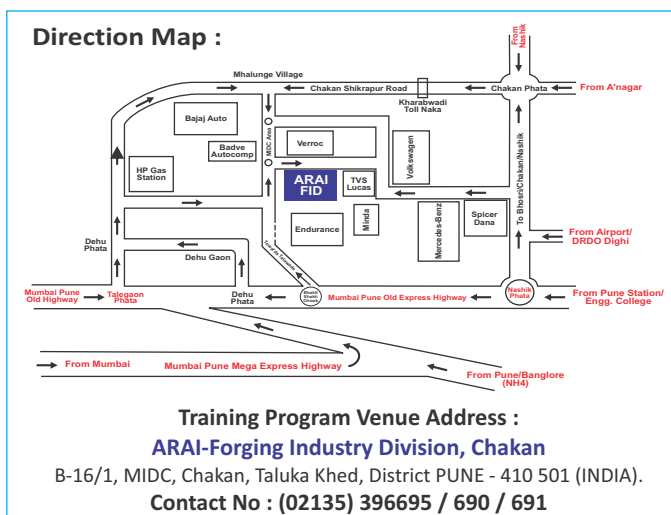
## PROGRAMME

### Day One

- 08.30 - Registration
- 09.00 - Introduction to Automotive Casting
- 10.00 - Types of Casting in Ferrous, Non-Ferrous Metals & Foundry Automation
- 11.30 - Metallurgy related to Casting Process, Metallurgical Properties of CI ( Grey, Ductile, CG
- 13.00 - Lunch
- 13.45 - Methoding, Casting Development Process, Process Defects & Remedies
- 16.00 - NDT for Casting Defect Detection
- 17.00 - Conclusion

### Day Two

- 08.30 - Melting and Processing of Al, Zn and MN Alloys ( Die Casting)
- 10.00 - Simulation Process and Foundry Resource Planning
- 11.30 - Aluminium Alloy Casting: Methoding of Die Casting
- 13.00 - Lunch Break
- 13.45 - DFMEA / PFMEA and CQI-27 from Buyer's Perspective
- 15.45 - Written Test
- 16.00 - Summary, Feedback, Valedictory Function & Certificate Distribution
- 16.30 - Conclusion



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

## WHO SHOULD ATTEND ?

This training is useful for all industry professionals, who needs to have comprehensive understanding of Casting / Foundry Technology (Sand & Die casting), its fundamentals, operations, quality assurance and product design & development and best practices followed in it. Also suitable for working professionals in the area of:

- Engineers working in Design Dept., Product Development, R&D, Inspection, Testing, Quality Assurance & CAE.
- Working in Engineering Industry in a techno commercial activity will benefit by attending this program.
- Vendor Development Engineers
- Small and Medium scale Entrepreneurs interested in understanding Foundry & Die Castings.
- Metallurgists / Materials Engineers
- Senior Scientists from Research Institutions / Laboratories
- Academicians from Institutions.
- Interested working professionals.

## MODE OF PAYMENT

At Par / Multicity cheque or demand draft in favour of

## The Automotive Research Association of India

payable at Pune.

**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 24,600 books, standards, project reports, seminar/conference proceedings and around 75,000 SAE technical papers. It also has 450 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 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

## REGISTRATION FEES

Category	Registration Fees (Rs.) (per participant)	Total Fees including Tax of 18% (Rs.) (per participant)
Industry Professionals	8,000.00	9,440.00
Teaching Faculty	6,000.00	7,080.00
Engineering College Students	4,000.00	4,720.00

Registration fees include:

- Breakfast
- Lunch
- Delegate Kit

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, at their site.

Please visit [www.araiindia.com](http://www.araiindia.com) or [academy.araiindia.com](http://academy.araiindia.com) for more information.

**About ASM International Pune Chapter:** ASM is a society dedicated to serving the materials science and

engineering profession. Through its network of 36,000 members worldwide, ASM provides authoritative information and knowledge on materials and processes, from the structural to the nano scale. As an engineering and scientific society, ASM International is led by members, guided by member needs and fuelled by member participation. ASM members share information and ideas through international conferences and expositions, seminars and local Chapter meetings, through publications like Advanced Materials & Processes and the renowned ASM Handbook series, and online through the ASM Community website. The Pune Chapter of ASM International was founded in the year 1991, which has been furthering the mission objectives through various activities. The chapter is very interactive with many societies, chapters and organizations, and also has a MOU with the ASM Detroit Chapter which is one of the oldest chapters. ASM Pune Chapter also supports two student chapters at the College of Engineering, Pune and Sinhgad Institute of Technology, Pune.

Please visit: [www.asmpune.org](http://www.asmpune.org) for more information.