

AM&M EXPO 2014 28 – 30 April 2014

Venue : ARAI-Forging Industry Division Chakan, Pune, India.

Organised by



THE AUTOMOTIVE RESEARCH ASSOCIATION OF INDIA

In association with

SAEINDIA The Engineering Society For Advancing Mobility Land See Advancing Mobility Land See Advancing Mobility Land See Advancing Mobility Concepts SOCIETY OF AUTOMOTIVE ENGINEERS INDIA

Co-organisers







VEL TECH Dr.RR & Dr.SR TECHNICAL UNIVERSITY





ASSOCIATION OF INDIAN FORGING INDUSTRY

Sponsors















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INAUGURAL SESSION

Dr. Anil Kakodkar, Chief Guest
Chairman, TIFAC
DAE Homi Bhabha Chair Professor at BARC
Former Secretary to the Government of India, Department of Atomic Energy
Recipient of Padma Shri (1998), Padma Bhushan (1999) & Padma Vibhushan (2009) Awards

VALEDICTORY FUNCTION

Dr. Kantilal H. Sancheti

Inventor of India's First Indigenous Knee Implant - The Indus Knee
Founder of Maharashtra's First Orthopaedic Dedicated Specialty Hospital
Recipient of Padma Shri (1991), Padma Bhushan (2001) & Padma Vibhushan (2012) Awards

INDUSTRIAL VISIT

Volkswagen India Private Limited Chakan, Pune Mahindra Heavy Engines Private Limited Chakan, Pune

THEME PAVILION BY IIT KANPUR

The Materials Pavilion put up by IIT-K provides a glimpse into the past, present and future of automobile industry. The pavilion has a poster-session dedicated to the theme of "Evolution of Automobile Technologies" which brings out the various technologies related to automobiles that evolved over past century. Pavilion also highlights the current research being conducted on various automotive technologies. The research ranges from current technologies in engines, to future lightweight, high-strength, high impact-resistance materials. Several working models such as two-stroke engines, BIW of a car, remote controlled helicopters, (Team Autobirdz, SIDBI) and a few lightweight high performance materials are also on display.

IIT-K has been a hub of automotive research for past several decades. Some of the important books on automotive technologies that have come from IIT-K have been have been put on display in the pavilion. A part of the credit for high-quality research also goes to the hands-on education that is imparted right from the undergraduate level. Some of the working models prepared by second year students, as part of their lab-work, are a testament to this.

Materials Pavilion is also hosting a competition on "Artistic Micrography" and "Evolution of Automobile Technologies". Students and researchers from across the country can participate in these competitions and win prizes. "Artistic Micrography" will highlight how art can be blended with science through various interesting real micrographs.

NATIONWIDE CONTEST FOR STUDENTS

Artistic Micrography

Poster Presentation on Automotive Evolution

CONFERENCE SCHEDULE

Time	Day-1: 28 th April 2014, Monday		
0900 onwards	Registration		
0930 to 1000	Welcome Tea		
1000 to 1100	Inauguration Chief Guest: Dr. Anil Kakodkar, Chairman - TIFAC, DAE Homi Bhab	ha Chair Professor, BARC	
1100 to 1130	Visit to Expo		
1130 to 1245	Plenary Session 1: Session Chair: Dr. Mohan Godse, Sr. Vice President (R&D) - En	durance Technologies Pvt. Ltd.	
1130 to 1200	Plenary Address-1 Dr. Indranil Manna, Director, Indian Institute of Technology-K	anpur	
1200 to 1230	Plenary Address-2 Dr. David Schutt, Chief Executive Officer, SAE International		
1230 to 1245	Question and Answer Session		
1245 to 1345	Lunch		
	Session A1: Steels and Ferrous Alloys-1	Session B1: Engineering Plastics and Composites	
	Session Chair: Dr. Vinod Kumar, Assistant General Manager, Steel Authority of India Ltd.	Session Chair: Dr. Nileshkumar Kukalyekar, Technical Product Manager, DSM Engineering Plastics Pvt. Ltd.	
1345 to 1515	Keynote: Dr. R. K. Ray, R&D Division, Tata Steels Ltd; Role of Crystallographic Texture in Automotive Steel	Technical Talk: V. Kannan, Reliance Industries Ltd. Polypropylene & Its Composites in Automotive Industry	
	Niobium Metallurgy in Advanced High Strength Steels for Automotive Light-Weighting; Dr. Jian Bian, Dr. Jitendra Patel; 1. CBMM Technology Suisse S.A, Niobium Tech Asia, Singapore 2. CBMM Technology Suisse S.A, International Metallurgy Ltd., UK	Light Weight, High Flow, High Modulus Colored Polypropylene Compound with Good Gloss for Automotive Interior and Exterior Applications; <i>Mahto Kuldeepak, Balaji K.V., Zainulabedin A.;</i> Mahindra and Mahindra Ltd.	
	Introduction of High Strength Steel for Commercial Vehicles – Light Weighing of Vehicles; Mr. Satyajit Mohapatra, Ms. Sumitra Das; Essar Steel India Ltd.	Material Charactrization of Polymers Using CAE & Correlation With Tests; Saurabh Shaha, Kedar Hendre; Tata Technologies Ltd.	
	Case Study: Effect of Core Hardness on Impact Strength of the Crown Wheel Material; Yathish Rao; AAM Services India Pvt Ltd.	A Lightweighting Solution for Converting Aluminum Bracket to Plastic Using Long Fiber Thermoplastic Technology; Saral Bhanshali; Indore Composite Pvt Ltd.	
	Sliding Wear Behavior of Compacted Graphite Iron Cylinder Liner Material; V.S. Sreenivasan, S. Dhanasekaran, Samir Sharma & M. Sathya Prasad; Ashok Leyland Ltd.	Experimental and Numerical Analysis on Influence of Embedded Optical Fibre on Advanced Composites of Structural Health Monitoring of Passenger Car; Santosh Bhoomaraddi, Arun L R; The Oxford College of Engineering-Bangalore	
1515 to 1530	Tea		
	Session A2: Advanced Manufacturing-1	Session B2: Light-weight Materials-1	
1530 to 1645	Session Chair: Dr. Nagesh Kini, Principal Scientist and Head, Thermax Ltd.	Session Chair: Dr. Palla Sivaprasad, General Manager, Sandvik Group R&D	
	Keynote: Dr. Anish Upadhyaya, Head, ACMS, Indian Institute of Technology- Kanpur; Recent Advances in Powder Metallurgical Processing for Automotive Application	Keynote: Dr. In-Ho Jung, Associate Professor, McGill University, Montreal, Canada Thermodynamic and Kinetic Simulation for Light Alloy Design	
	Development of High Strength Hot Rolled Coils for Automotive Sector in Underpowered Mill at Rourkela Steel Plant; A. K. Bhakata, Ramen Dattaa, B. K. Jha, M. K. Pradhan and C. Muthuswamy; Steel Authority of India Ltd. Ranchi	Optimizing the Strength and Ductility of Al-6061 Alloy by Various Post-Rolling Ageing Treatments; Sumeet Mishra, Piyush Priyadarshi, Prasad Phale, Suhail Mulla, Kaustubh Kulkarni, N. P. Gurao; 1. Indian Institute of Technology Kanpur 2. The Automotive Research Association of India	
	Light Weighting Through Tube Hydroforming; Ingrid Rasquinha, Santosh Tayade; Electropneumatics & Hydraulics (India) Pvt. Ltd.	Augmenting Lightweighting Horizon in Automotive; G Raghvendra, Deodatta Shende, Udayan Pathak; Tata Motors Ltd.	
	Licetropheumatics & Trydraumes (mala) 17th Eta.	,	
	Influence of Rake Angle and Cutting Speed on Residual Stresses Developed in the Cutting Tool During Orthogonal Cutting; Santosh P.Rahane, Prof. V.D. Wakchuare, S.M.Mulla; 1.Amrutvahini College of Engineering, Sangamner 2. The Automotive Research Association of India	An Experimental Analysis of Ultrasonic Vibration Assisted Tapping of Ti-6Al-4VR & D; Swapnil Pawar, Sandip Patil, Dr. Suhas Joshi, Dr. Rajkumar Singh; Kalyani Centre For Technology And Innovation; Bharat Forge Ltd.	
	Influence of Rake Angle and Cutting Speed on Residual Stresses Developed in the Cutting Tool During Orthogonal Cutting; Santosh P.Rahane, Prof. V.D. Wakchuare, S.M.Mulla; 1.Amrutvahini College of Engineering, Sangamner 2.	Swapnil Pawar, Sandip Patil, Dr. Suhas Joshi, Dr. Rajkumar Singh; Kalyani Centre For	
1645 to 1800	Influence of Rake Angle and Cutting Speed on Residual Stresses Developed in the Cutting Tool During Orthogonal Cutting; Santosh P.Rahane, Prof. V.D. Wakchuare, S.M.Mulla; 1.Amrutvahini College of Engineering, Sangamner 2.	Swapnil Pawar, Sandip Patil, Dr. Suhas Joshi, Dr. Rajkumar Singh; Kalyani Centre For Technology And Innovation; Bharat Forge Ltd. Technical Talk: Recent Advances in Aluminum Technology for Light-Weighting; Dr. V.	

Mines, USA Effect of Aluminum on Vanadium Microalloyed Forging Steels Keynote 2: Dr. Omkar Nath Mohanty, Director, RSB Metaltech (P) Ltd. Advanced Steels for Automotive: Focus on Forging Grades New Generation of Forging Steels for Cyclic Loaded Safety Components with Improved Fatigue Properties; Lars Elek, Christian Fischer, Tobias Melz, Rainer Wagener, Vera Wirths, Wolfgang Bleck; 1. Institute For System Reliability and Machine Acoustics SZM, Technische Universität Darmstadt-Germany, 2.Fraunhofer Institute For Structural Durability And System Reliability Lbf, Darmstadt-Germany Development of Tubular Stabilizer Bar for Commercial Vehicle Using Kanpur; From Virtual to the Real: Role of Computations in Structural Design Numerical Failure Investigation for feasibility of Advanced Composite Automotive Engine Mounts Subjected to Dynamic Loads; Raju, Sanjay Jaiswal, Abhishek Singh 1. Quest Global Engineering, Bangalore 2. Department of Mechanical Engineering, New Horizon College of Engineering, Bangalore Application and Assessment of Bonora Damage Model for Geometry Transferability Mesh Sensitivity and Plasticity Effects Using MSC Marc; Srikanth.R; MSC Software Corporation India Pvt. Ltd.	Time	Day-2: 29 th April 2014, Tuesday		
Plenary Session 2: Session Chair: Dr. Sanjay Arole, D.G.M.(QA - Central Laboratory), Volkswagen India Pvt. Ltd. 1000 to 1030 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory 1030 to 1100 Plenary Address-3 Dr. Amol Gokhale, Director, Non-Ferrous Technology Development Center 1040 to 1115 Tea	0900 onwards	Registration		
1000 to 1030 Plenary Address-3 Dr. Amol Gokhale, Director, Defence Metallurgical Research Laboratory	0930 to 1000	Tea		
Plenary Address-4 Dr. K. Balasubramanian, Director, Non-Ferrous Technology Development Center Tea Session A3: Steels and Ferrous Alloys-2 Session Chair: Dr. K.N. Kulkarni, Assistant Professor, Indian Institute of Technology-Kanpur Keynote 1: Dr. Chester Van Tyne, FIERF Professor, Colorado School of Mines, USA Effect of Aluminum on Vanadium Microalloyed Forging Steels Keynote 2: Dr. Omkar Nath Mohanty, Director, RSB Metaltech (P) Ltd. Advanced Steels for Automotive: Focus on Forging Grades New Generation of Forging Steels for Cyclic Loaded Safety Components with Improved Fatigue Properties; Lars Elek, Christian Fischer, Tobias Melz, Rainer Wagener, Vera Wirths, Wolfgang Bleck; 1. Institute For System Reliability and Machine Acoustics SZM, Technische Universität Darmstadt-Germany, 2.Fraunhofer Institute For Structural Durability And System Reliability Lbf, Darmstadt-Germany Development of Tubular Stabilizer Bar for Commercial Vehicle Using Advanced High Strength Steel Material; Rohitt Ravi, Sivasubramanian, Simhachalam Bade, Krishna Srinivas; Tube Investments of India, Murugappa Plenary Address-4 Dr. K. Balasubramanian, Director, Non-Ferrous Technology Session B3: Design Methodology and CAE Session Bai: Design Methodology and CaE Session Bai: Design Methodol	1000 to 1100	Plenary Session 2: Session Chair: Dr. Sanjay Arole, D.G.M.(QA - Central Laboratory), Volkswagen India Pvt. Ltd.		
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		Advanced High Strength Steel Material; Rohitt Ravi, Sivasubramanian, Simhachalam Bade, Krishna Srinivas; Tube Investments of India, Murugappa	Optimization of Sheet Metal Forming Process Parameters Using Optimization Tool; Sagar Bajaj, Deepak Wakode, Gopal Musale; Tata Technologies Ltd.	
Material Solution to Automotive Segment: SAIL's Effort; Anjana Deva, S K De, A K Bhakat, S Mallik and B K Jha; Steel Authority of India Ltd. Ranchi Significance of Virtual Prototyping In Design of Composite Structures for Automob Gunjan Verma, Santosh Kottalgi, Ashutosh Srivastava; Ansys Inc.			Significance of Virtual Prototyping In Design of Composite Structures for Automobiles; Gunjan Verma, Santosh Kottalgi, Ashutosh Srivastava; Ansys Inc.	
1245 to 1345 Lunch	1245 to 1345	Lunch		

CONFERENCE SCHEDULE

Time	Day-2: 29 th April 2014, Tuesday	
	Session A4: Advanced Manufacturing-2	Session B4: Light-weight Materials-2
1345 to 1515	Session Chair: Mr. N.V. Karanth, Deputy Director, The Automotive Research Association of India	Session Chair: Mr. Udayan B Pathak, Asst. General Manager (Metallurgy), Tata Motors Ltd
	Keynote: Dr. G. Padmanabham, Associate Director, International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI); Dissimilar Materials Joining for Automotive Applications	Keynote: Dr. Satyam Suwas, Associate Professor, Indian Institute of Science, Bangalore; Materials Research for Automotive and Aerospace Applications
	Friction Stir Welding of Aluminium Alloys; M.J.Rathod, R.Karale; College of Engineering - Pune	Light-weight Materials and Their Automotive Applications; Sujeet K Sah, Moqtib A Bawase, M R Saraf; The Automotive Research Association of India
	Development of Stepped Tubular Components for Automotive Application Using Tube Extrusion Process; Ashok KK, Simhachalam Bade, Dhanooj Balakrishnan, Krishnasrinivas; Tube Investments of India, Murugappa Group	Microstructure and Mechanical Behavior of SiC Reinforced Aluminum Metal Matrix Composites for Automobile Applications; <i>Samir Sharma, S. Dhanasekaran, V.S Sreenivasa</i> ; Ashok Leyland Ltd.
	Development of CAE Methodology for Joining of Dissimilar Metals Using Cold Metal Transfer and Its Validation; <i>Kulkarni N. A., Mahajan R. S, Karanth N. V., K.V.Phani Prabhakar, Dr. G. Padmanabham;</i> 1. The Automotive Research Association of India, 2.International Advanced Research Centre For Powder Metallurgy And New Materials- Hyderabad	Design and Manufacturing Suitability for Making Light Weight Car Roof in Indian Automobiles Using Composites; <i>PrathapSimha PV, Manoj K Sanku, Swetha G; Tata Motors Ltd.</i>
	Eco friendly and Cost Effective Manufacturing Technique for Automotive Drive Shafts; <i>Dineshbabu P. , Magendran G. and Subhash Mahajan;</i> Mahindra & Mahindra Ltd.	Study on the Production of Ultra High Strength Steel (UHSS) at JSW Steel; <i>Pradip K Patra, Srimanta Sam, Mrigandra Singhai, Neel Kant;</i> JSW Steel Limited, Dolvi Works
1515 to 1530	Tea	
	Session A5: Materials Characterization	Session B5: Design and Analysis
		Session Dov Design and Amarysis
	Session Chair: Prof. Avinash R Arankalle, Professor, Vel Tech Dr.RR & Dr.SR Technical University, Chennai.	Session Chair: Dr. B P Gautham, Principal Scientist, Tata Consultancy Services
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1530 to 1645	Vel Tech Dr.RR & Dr.SR Technical University, Chennai. Keynote: Dr. P. Venkitanarayanan, Professor, Mechanical Engg, Indian	Session Chair: Dr. B P Gautham, Principal Scientist, Tata Consultancy Services Keynote: Dr. Palla Sivaprasad, General Manager, Sandvik Group R&D Development and Processing of High Performance Steels – An Approach Using
1530 to 1645	Vel Tech Dr.RR & Dr.SR Technical University, Chennai. Keynote: Dr. P. Venkitanarayanan, Professor, Mechanical Engg, Indian Institute of Technology-Kanpur; High Strain Rate Behavior: An Overview Piezo Based Testing Facilities to Discover New Areas in Material Characterisation; Christian Fischer1, Rainer Wagener2, Tobias Melz2, Heinz Kaufmann2; 1. Institute for System Reliability and Machine Acoustics SzM, Technische Universität Darmstadt, Germany, 2. Fraunhofer Institute for	Session Chair: Dr. B P Gautham, Principal Scientist, Tata Consultancy Services Keynote: Dr. Palla Sivaprasad, General Manager, Sandvik Group R&D Development and Processing of High Performance Steels – An Approach Using Modelling and Simulation Self-Loosening of Three Similar Bolted Joint Designs Using Finite Element Analysis;
1530 to 1645	Vel Tech Dr.RR & Dr.SR Technical University, Chennai. Keynote: Dr. P. Venkitanarayanan, Professor, Mechanical Engg, Indian Institute of Technology-Kanpur; High Strain Rate Behavior: An Overview Piezo Based Testing Facilities to Discover New Areas in Material Characterisation; Christian Fischer1, Rainer Wagener2, Tobias Melz2, Heinz Kaufmann2; 1. Institute for System Reliability and Machine Acoustics SzM, Technische Universität Darmstadt, Germany, 2. Fraunhofer Institute for Structural Durability and System Reliability LBF, Darmstadt, Germany Effect of Crystallographic Texture on Formability of Some FCC Metals and	Session Chair: Dr. B P Gautham, Principal Scientist, Tata Consultancy Services Keynote: Dr. Palla Sivaprasad, General Manager, Sandvik Group R&D Development and Processing of High Performance Steels – An Approach Using Modelling and Simulation Self-Loosening of Three Similar Bolted Joint Designs Using Finite Element Analysis; Shiva Kumar Manoharan, Christoph Friedrich; University of Siegen-Germany Modal Analysis for Exhaust Manifold in Hot Condition. Is There A Need?; S. Rajadurai,

Time	Day-3: 30 th April 2014, Wednesday		
0930 to 1000	Tea		
1000 to 1100	Plenary Session 3: Session Chair: Dr. M. J. Rathod, Professor, Metallurgy De	partment, College of Engineering - Pune	
1000 to 1030	Plenary Address-5 Dr. Rajkumar P. Singh, Director, Bharat Forge Limited		
1030 to 1100	Plenary Address-6 Dr. Ramakrishnan Narayanan, Advisor, Centre for Study of Science Technology & Policy (CSTEP)		
1100 to 1115	Tea		
	Session A6: Process and Simulation	Session B6: Advanced Materials	
1115 to 1245	Session Chair: Dr. Shashank Shekhar, Assistant Professor, MSE, Indian Institute of Technology-Kanpur	Session Chair: Dr. N.P. Gurao, Assistant Professor, MSE, Indian Institute of Technology-Kanpur	
	Keynote: Dr. Vinod Kumar, Assistant General Manager, Steel Authority of India Ltd; Role of Thermo-Mechanical Simulation Studies in Automotive/ Forging Industry	Keynote: Dr. Nagesh Kini, Principal Scientist and Head, Thermax Ltd; Hydrogen Storage Materials for Automotive Application	
	State-of-the-art 3D Simulation Tool as a Strategic Investment; Christiane FOURMENT, Julien BARLIER, Mickael BARBELET, Patrice LASNE, David CARDINAUX; Transvalor, Parc de Haute Technologie-France	Titanium – A Futuristic Material for Vehicle Exhaust System and Powertrain Components; Vikrant Garud, Prof. Avinash Arankalle; Vel-Tech Dr. RR & Dr. SR Technical University, Avadi-Chennai	
	Super-Plastic Forming of High Specific Strength Aluminum Alloys; Vinand V. Arabale; MSC Software Corporation India Pvt. Ltd.	i-Cool-Integration of New Materials into Metropolitan Car Concepts to Control the Inside Temperature; 1. Mr. Tejas Kalekar & 2. Dr. Ing. Carsten Stechert; 1. Automotive Research Association of India-Pune 2. Technical University Braunschweig-Germany	
	Optimization in Forging Process Using Computer Simulation; <i>Kumbhar A. R., Kulkarni S. A., Paranjpe J. M. and Karanth N. V.;</i> The Automotive Research Association of India-Pune	Smart Materials: A View Towards Shape Memory Alloy; R.Prajit, S.Srivatsan, V.Sathwik; SRM University	
	Design and Simulation of Magneto-Rheological (MR) Brake for Automotive Application; Shital M. Kalikate, Satyajit R. Patil, Suresh M. Sawant; Rajarambapu Institute of Technology-Sakharale	Nanofluids: Effectual Analysis in Automotive Application; <i>Dr. Sanjay Srivastava,</i> Nagendra Singh Chauhan; Maulana Azad National Institute of Technology-Bhopal	
1245 to 1430	Lunch and Visit to Expo		
1430 to 1600	Panel Discussion and Valedictory Function: Distinguished Guest Dr. Kantilal H. Sancheti		
1600 to 1730	Industrial Visit		



Final Programme

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Dept. of Materials Engineering - Indian Institute of Science

Shri Arjuna Rao M

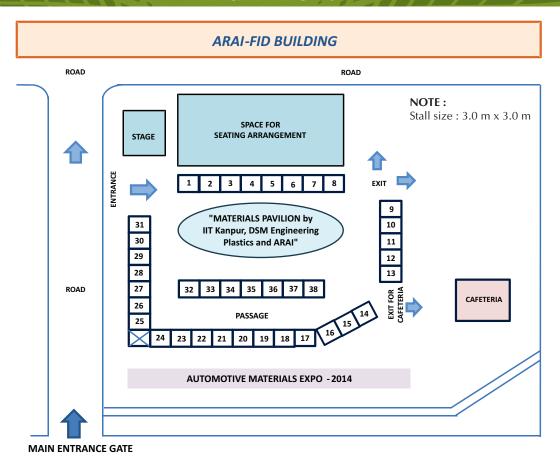
 $\label{eq:manager} \textit{Manager} \; (\textit{Materials} \; \& \; \textit{Technical} \; \textit{Benchmarking}) \; \text{, DICV Pvt. Ltd.}$





AM&M EXPO 2014 28 – 30 April 2014 Venue : ARAI-Forging Industry Division Chakan, Pune, India.

AM&M EXPO 2014



Stalls Booked by

- Axxon Material Science
- Jamna Auto Industries Limited
- Icon Analytical Equipment Pvt. Ltd.
- Panatech Asia
- APM Technologies
- MSC Software Corporation India Pvt. Ltd.
- Transvalor
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- AIMIL Limited

- · Hysitron Nanotechnology India Pvt. Ltd.
- Elico Marketing Pvt. Ltd.
- Premier Colourscan Instruments
- Auto Testing Services (ATS)
- Nilkamal Ltd.
- Comsol India
- Megatech Engineer and Services Pvt. Ltd.
- Horiba India Pvt. Ltd.
- Chennai Metco
- Ashland Composites
- Tube and Shell

For Expo AM&M 2014 information, please contact

V. V. Shinde, General Manager

The Automotive Research Association of India

S. No. 102, Vetal Hill, Off Paud Road, Kothrud, Pune 411 038, India





HERITAGE OF PUNE AND CHAKAN

Pune, formerly called **Poona** or **Punawadi** or **Punya Nagari**, is the eighth largest city and largest metropolis in India, and the second largest in the state of Maharashtra, after Mumbai. Pune is known to have existed as at own since 937 AD. Chhatrapati Shivaji Maharaj, the founder of the Maratha Empire, lived in Pune as a young boy, and later over saw significant growth and development of the town during his reign. In 1730, Pune became an important political centre with the Peshwas. After the town was annexed to British India in 1817, it served as a cantonment town and as the "monsoon capital" of the Bombay Presidency until the independence of India.

Today, Pune is known for its educational facilities, with more than a hundred educational institutions and nine universities. In Pune one can see many temples, own citadel Shaniwarwada, museums etc. Pune has well-established companies manufacturing, glass, sugar and forging industry since the 1950-60s. It has a growing industrial hinterland, with many information technology and automotive companies setting up factories in Pune district. The city is known for various cultural activities like classical music, spirituality, theater, sports, and literature. These activities and job opportunities attract migrants and students from all over India and abroad, which makes it a city of many communities and cultures.



Shaniwarwada



Aga Khan Palace



Parvati Temple



Sinhagad Fort



Pune University



Alandi



Gatha Temple Dehu



IT Park

Famous pilgrimage places of **Alandi** and **Dehu** are near to Pune. Saint Dnyaneshwar creator of holy book Dnyaneshwari spend significant time in Alandi and took Samadhi at the young age of 18 years. Saint Tukaram hails from Dehu. Dehu hosts famous Gatha Temple.

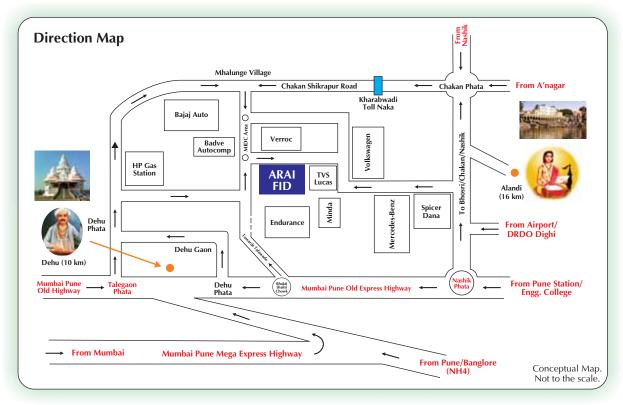
Chakan, where ARAI – Forging Industry Division is situated also has a history which dates back to period of Ramayan. Chakan has a fort called "Bhueekot Killa", which means that the fort is on normal ground level and surrounded by the walls or some security systems. The fort was built by Chhatrapati Shivaji Maharaj. Also the temple of Chakreshwar is of great faith for many people. It is said that at chakreshwar the Dashratha (Shri Ram's father) was battling against rakshasa at that time wheel of his ratha (vehicle) was stucked in mud, and the pond of chakreshwar and at that time Kaikayee helped him to get it out and this is the reason why Dashratha gave her three war (wishes)

The automotive sector is very prominent in and around Chakan MIDC, Pune. All sectors of the automotive industry are represented, right from two – wheelers and auto – rickshaws, to cars, tractors, tempos, excavators and trucks. To name a few are; Bajaj Auto, Tata Motors, Volkswagen, Mercedes Benz, General Motors, Force Motors, JCB, etc. Even ancillary units are gathering momentum in and around this domain.





AM&M EXPO 2014 28 – 30 April 2014 Venue : ARAI-Forging Industry Division Chakan, Pune, India.



Suggested Routes:

From Mumbai: Take expressway and drive upto Talegaon take Talegaon – Chakan Road. Locate MIDC Chakan next to Bajaj Auto Chakan near to Mahalunge Village and reach the Venue

From Nashik: Take Nashik Pune Highway, drive upto Chakan Chowk, take right turn from Chakan Chowk onto Chakan – Talegaon Road. Locate MIDC Chakan near Mahalunge Village and reach the Venue

From Pune Airport: Take Nagar road to reach Yerawade Bridge, then Bombay Sappers, Vishrantwadi on DRDO Dighi road. From Dighi – Alandi Road take turn near to Alandi to Reach Bhosari Chowk on Pune – Nashik Highway. Drive upto Chakan Chowk, take left turn from Chakan Chowk onto Chakan – Talegaon Road. Locate MIDC Chakan near Mahalunge Village and reach the Venue.

From Pune Junction or Shivaji Nagar Railway Station: Reach College of Engineering Chowk. Take old Pune – Mumbai Highway. Reach Nashik Phata. Take Pune – Nashik Highway to reach Chakan Chowk, take left turn from Chakan Chowk onto Chakan – Talegaon Road. Locate MIDC Chakan near Mahalunge Village and reach the Venue.

: Venue:



ARAI-Forging Industry Division, B-16/1, MIDC Chakan, Pune 410 501 Maharashtra, India Tel.:+91-02135-660837, Visit: http://fid.araiindia.com

