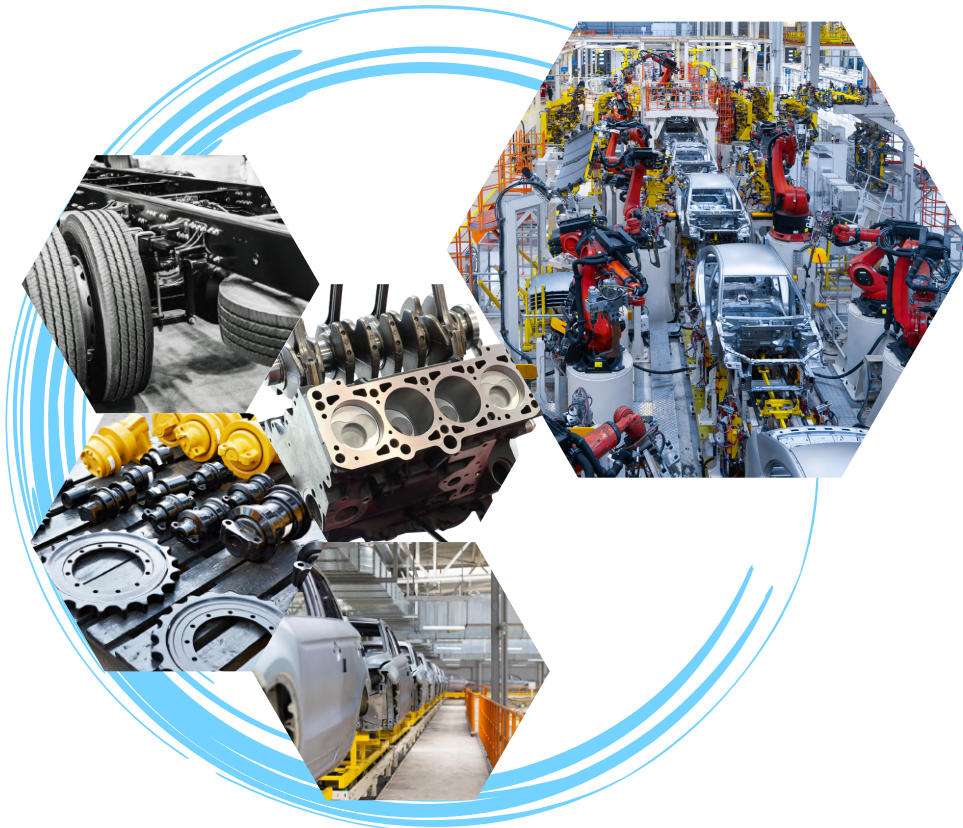


First
Announcement

International Conference on
**Advances in the Manufacturing
Processes and Assembly
Techniques:**
for Designing Lightweight Vehicle
Components

 20th & 21st June 2024  09:00 hrs to 16:30 hrs



Venue



ARAI Academy, ARAI Forging Industry Division, Chakan
B-16/1, MIDC Chakan, Tal. Khed, Dist. Pune 410 501 Maharashtra
Google Map Link: <https://maps.app.goo.gl/gpsgNcc5U76DXCAT8>

Jointly organized by:



Background

A revolution is being witnessed in the automotive sector with new approaches of multi-functional engineering design using lightweight materials and cost-effective product manufacturing processes. Simultaneously, the industry has to achieve environmental protection laws controlling GHGs for carbon credit goals, conserve mineral resources with recyclability, sustainable products and circular economy. To adapt and shift the paradigm, there are many constraints and issues in manufacturing technologies while using advanced light weight alternate materials. It includes – developments in advanced materials to meet demand-supply chain management, investment costs, design of product using simulation packages, meeting high performance levels, life cycle analysis, human skill development, etc. The industry 4.0 is also on the background emerging along with 3D modeling techniques. Moreover, the future is in use of multi-materials for various parts and assemble similar and dissimilar materials of variable gauge thicknesses using advanced fabrication processes without sacrificing the micro and macro level properties of the assembled parts. The industry will require to address zero defect manufacturing, control scrap values, improved tools & die design, reduce cutting and machining, and meet RoHS norms.

The two-day conference aims at all these goals to provide better awareness on the manufacturing and assembly techniques along with the industry case studies presented by the experts and the invited speakers in the field.

Registration Fee (including GST):

Member: (ARAI Company / LWT / SAEINDIA Members)	₹ 7080/-
Non Member:	₹ 8850/-
Student:	₹ 4720/-



Or copy paste following link in any browser:
<https://forms.gle/5C2TRgniH5BcRir28>

Who should attend

- Automotive OEMs
- Tier-I, Tier-II, Tier-III component Manufacturers
- Body-in-white (BIW) Engineering
- Bus body and Truck body builders
- Component Manufacturing and Assembling Units
- Material sourcing and Suppliers
- Consultants and Advisers
- Designers using software packages
- Research & Development Institutes, Laboratories
- Engineering students / PhD Scholar / Professors
- Project investors and partners

Organizing Committee Members



Dr. Reji Mathai
Director, ARAI
&
Chairman, SAEINDIA WS



Shrikant Marathe
Chairman,
LWT Group



Medha Jambhale
Sr. Dy. Director, Head ARAI
Academy & FMCE, ARAI



Avinash Arankalle
Convener
Faculty on Materials



Prasad Phale
Dy. General Manager
FMCE, ARAI



Dr. Rajeev Basargekar
Member
LWT Group



Dr. S. M. Arole
Sr. Director, Automobile
Engineering, Symbiosis Skills
& Professional University



R. T. Kulkarni
Secretary
LWT Group



Ramesh Pasarija
Executive Director
SAEINDIA Western Section

Topics Covered

- Emerging manufacturing processes and joining techniques - Challenges and opportunities in designing in lightweight materials
- Manufacturing of Hydrogen Fuel Cell storage tanks for zero emission vehicles in future
- Manufacturing of EV batteries to improve power density, life and meet circular economy with the improved recyclability
- Manufacturing technologies in advanced high strength and ultra-high strength steels (AHSS / UHSS) in steel mills
- Developments in manufacturing auto-grade aluminum and magnesium based alloys
- Formability requirements for BIW and other structural vehicle components
- Hot, warm, and cold forming of auto parts
- Design for forming operations with tools and dies.
- Case studies in BIW and auto structural part designs
- Advances in forging materials and processes for cost optimization and weight reduction
- Die designs to improve shelf life of molds and tools in forging processes.
- Manufacturing of Compacted Grey cast Iron (CGI) products for auto applications
- Metallurgy of controlled microstructures and strengthening mechanisms in manufacturing AHSS / UHSS
- Case studies in Hydroforming of auto components
- Design for the welding operations using advanced welding processes.
- Developments in welding dissimilar materials controlling defects, mechanical properties and desired structures in the end products.
- Technologies in adhesives and sealants in joining automotive parts.
- Design for manufacturing plastics and FRP including emerging carbon fiber and nanocomposites.
- Understand possible modes of failures in the lightweight materials and processes with the case studies.
- Industry 4.0 for automotive sector in using advanced manufacturing in lightweight vehicles
- Applications of simulation packages for 3D material modeling, prototyping and manufacturing in auto part designs.
- **Panel Discussion on "Roadmap for design in lightweight and manufacturing technology"**

* Organizers may change the topics as per speakers suggestions.

In case of any queries, please contact :

Mr. Onkar Deshpande

☎ 75586 66825

✉ officer-ws@saeindia.org

Mr. Sagar Murugkar

☎ 99222 77224

✉ sagarvm@saeindia.org

Mr. Prasad Diwanji

☎ 97655 34601

✉ diwanji.pga@araiindia.com

Ms. Purnima

☎ 97647 11315

✉ arkeyconference@arkeycell.com