



NEWSLETTER

# MExpress



Department of Mechanical Engineering, KUMARAGURU COLLEGE OF TECHNOLOGY

Vol. 02 No. 10

*For internal circulation only*

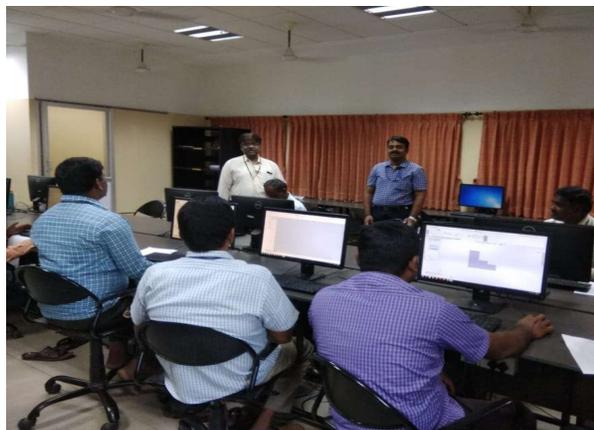
01.05.2019 – 31.05.2019

Editors: Dr. C. Velmurugan, Mr. B. N. Sreeharan

Associate Editors: Mr. P. Kapil, Mr. K. Arun,

## Programmes Organized

- Department organized a Hands on Training in Modelling to Technical supporting staff using Solid Works 2018 on 13.05.2019 and 14.05.2019.



Mr. M. Thirumalaimuthukumar, AP (II)/ME, Dr. V. R. Muruganatham, ASP/ME & Mr. T. Karuppusamy, AP (II)/ME coordinated the training.



- Department organized Hands-on training programme on “CFD Using Star CCM+ Application Software” on 09.05.2019. Following faculty members coordinated the training.

Dr. S. Sivakumar, AP (III)/ME, Mr. S. Ramanathan, AP (II)/ME, Mr. B. N. Sreeharan, AP (II)/ME, Mr. P. Pradeep, AP/ME, Mr. P. Prashanth/ME and Mr. P. Karthi, AP/ME

## Faculty Development Programme (FDP)



- Mr. P. D. Devan has participated in the AICTE sponsored one-week QIP Short Term Course on “Introduction to Human Factors Engineering and Advanced Cognitive Systems Design (Cognitive Ergonomics / Cognitive Systems Engineering)” conducted by IIT Bombay during May 06-10, 2019.
- Dr. R. Manivel, Prof./ME participated in the DSIR presentation at New Delhi on 09.05.2019.
- Mr. S. Sivakumar, AP (II)/ME participated in the Hands-on training programme on “CFD Using Star CCM+ Application Software” on 09.05.2019 organised by the Department of Mechanical Engineering, KCT.

- Mr. B. Jeeva, AP/ME is attending Summer Faculty Research Fellowship Programme (SFRFP) from 13.05.2019 to 25.06.2019 at Indian Institute of Technology, Delhi
- Mr. P. Prashanth, AP/ME, participated in a Short-term Course on “Numerical Analysis using Matlab” from 15.05.2019 to 19.05.2019 at National Institute of Technology, Tiruchirappalli.
- Following faculty members participated in One-week Faculty Development Programme on “Industry 4.0” at KCT, Coimbatore.
  - Dr. C. Velmurugan, HoD/ME
  - Mr. S. Sivakumar, AP (II)/ME
  - Mr. M. A. Vinayaga Moorthi, AP (II)/ME
  - Mr. S. Ramanathan, AP (II)/ME
  - Mr. B. N. Sreeharan, AP (II)/ME
  - Mr. V. R. Navaneeth, AP (II)/ME
  - Mr. S. Subbiah, AP (II)/ME
- Mr. S. Ramesh Selvaraj, Special Grade Welder, Mr. K. Arumugam, Sr. Technical Associate, Mr. N. Jeybal, Lab Instructor, Mr. V. Raghupathy, Lab Instructor undergone industrial training from 27.05.2019 to 29.05.2019 at M/s. Flow Link Systems (P) Limited, Coimbatore.
- Dr. C. Velmurugan, HoD/ME, Dr. V. R. Muruganantham, ASP/ME, Dr. S. Thirumuruga Veerakumar, AP (III)/ME, Mr. M. Thirumalaimuthukumar, AP (II)/ME and Mr. T. Karuppusamy, AP (II)/ME participated in a TEQIP -III Sponsored One Week FDP on “Thermal Measurements and Process Control” from 27.05.2019 – 31.05.2019 conducted by Coimbatore Institute of Technology, Coimbatore.



## Paper Publication

- Mr. R. S. Mohan Kumar, AP/ME published following entitled paper in the ‘Journal of Applied Science and Computations’, Vol. 6, No. 5, Impact factor: 5.8
  - “Design and Analysis of Honeycomb Reinforced Epoxy Glass Fibre Bumper” (pp 2170 – 2176)

Along with Mr. M. A. Vinayagamoorthi, AP (ii)/ME, he published the following paper in the same journal.

- “Design and Fabrication of Automated Inbuilt Hydraulic Jack for Light Motor Vehicle” (pp 2183 -2190)

Mr. M. A. Vinayagamoorthi, AP (II)/ME along with Mr. R. S. Mohan Kumar, AP/ME published following entitled paper in the same journal

- “An Experimental study on friction stir welding using M42 on AISI 1018 steel plates” (pp 2177 – 2182)

## External Examinership

- Mr. M. Ramesh Kumar, AP/ME and Mr. P. D. Devan, AP/ME acted as external examiners for the end semester practical examination at Sri Ramakrishna Engineering College, Coimbatore on 02.05.2019.
- Dr. K. K. Arun, AP (III)/ME and Dr. K. M. Senthil Kumar, ASP/ME acted as external examiners for the end semester practical examination at Sri Ramakrishna Engineering College, Coimbatore on 03.05.2019.
- Mr. V. R. Navaneeth, AP/ME acted as external examiner for the end semester practical examination at Sri Ramakrishna Engineering College, Coimbatore on 04.05.2019.
- Dr. N. Sangeetha, Sr. ASP/ME acted as external examiner for the Question Paper Scrutiny at Government College of Technology, Coimbatore on 08.05.2019 .

- Following faculty members acted as external examiner for the valuation of mechanical board at Hindusthan College of Engineering and Technology, Coimbatore on 08.05.2019.
  - Dr. K. M. Senthilkumar
  - Mr. S. Prabhu
  - Mr. M. Ramesh Kumar
  - Dr. S. Balaji

### Industry Institute Interaction

Mr. S. Sivakumar, AP (II)/ME acted as technical panel member in the interview for Cameron-PGDDE-BATCH-6 on 15.05.2019.

### Guest Lecture Delivered

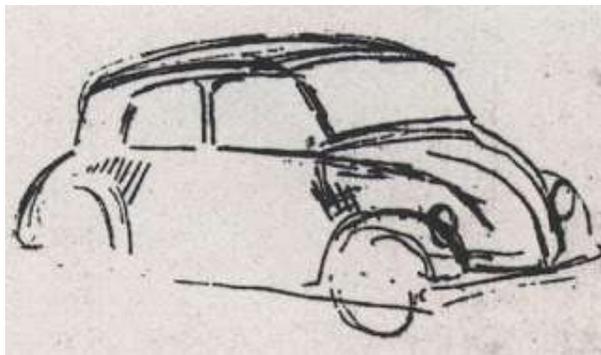
Dr. S. Sivakumar, AP (III)/ME delivered a guest lecture on "Ideal and real gas and properties of gases" in a Faculty Development programme on 23.05.2019 at Dr. N. G. P Institute of Technology, Coimbatore.

### Consultancy

- Mr. P. D. Devan, AP /ME provided consultancy as Modal Analysis for 'CARE Group of Institutions' for ₹1770/-.

### Engineering facts that blows your mind

#### 1. Hitler designed the prototype of Beetle design for Volkswagen



Sitting at a restaurant table in Munich in the summer of 1932, Hitler designed the prototype for what would become the immensely successful Beetle design for Volkswagen (literally, the "car of the people").

In an era where only the most economic elite possessed cars, Hitler believed that all people should be able to own a car and additionally thought that a smart design could allow for reliability, enjoyment, and vacation travel. The name given to the car in 1938 was Kraft durch Freude (KdF-Wagen, literally "strength through joy car").

#### 2. The first car accident



The first car accident occurred in 1891, in Ohio.

#### 3. The Four Rings in the AUDI Logo represent the FOUR companies of AUTO UNION



By 1932, the name fiasco between Horch the man, and Horch the company was water under the bridge.

Horch (the company) and Audi entered an agreement along with two other German car manufacturers, DKW and Wanderer, to form Auto Union. The four rings, which Audi still uses today, originally represented the four companies of Auto Union.

#### 4. The average car has 30,000 parts.

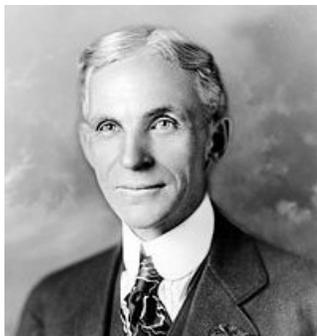


**5. Ferrari Engines are Musically Engineered**



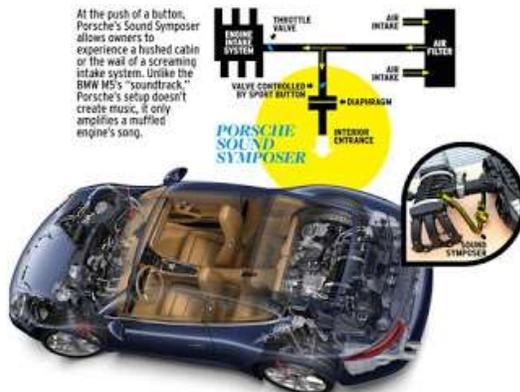
Ferrari engines are musically engineered to sound perfect by utilizing 3rd and 6th harmonics on the air intake, like an organ or flute.

**6. Henry Ford was the 1st person who Introduced Weekends.**



Henry Ford was an American industrialist, the founder of the Ford Motor Company, Introduced Weekends to his employees.

**7. Most new cars fake engine noise through speakers They are quite silent otherwise**



**8. Crash tests were first carried out by Audi.**



In 1938, crash tests were first carried out by Audi. These tests gave the company an idea about how the car would behave in case an accident occurred. Without realizing it, the company had set a precedent for all other car manufacturers.

**9. LAMBORGHINI Cars were a result of a Tractor Company Owner being insulted by the founder of FERRARI**



Ferruccio famously owned a Ferrari 250GT, which he took in to be serviced at the Maranello headquarters after realizing that the clutch was identical to the one being used on his production line. He politely asked Enzo Ferrari for a replacement part, who replied "You're just a silly tractor manufacturer, how could you possibly know anything about sports cars?"

Like any red blooded Italian, he spit on the floor, walked out and started designing his own sports car. Four months later he unveiled the Lamborghini 350GTV. Boss.

- Compilation by Mr. B. N. Sreeharan, AP/ME



# KUMARAGURU

## college of technology

COIMBATORE – 641 049

### Department of Mechanical Engineering

#### INSTITUTE VISION

The vision of the college is to become a technical university of International Standards through continuous improvement.

#### INSTITUTE MISSION

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

#### DEPARTMENT VISION

To emerge as a center that imparts quality higher education through its program in the domain of Mechanical Engineering to meet the changing needs of the society.

#### DEPARTMENT MISSION

Bring about supremacy in curricular and co-curricular sustained activities with competent faculty through teaching and research, that generates technically capable mechanical engineering professionals to serve the society with delight and gratification.

#### PROGRAMME OUTCOMES (POS)

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

#### PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

- PEO 1** : Graduates will take up careers in manufacturing and design related sectors.
- PEO 2** : Graduates will be involved in the execution of mechanical engineering projects.
- PEO 3** : Graduates will take up educational programmes in mastering Mechanical Engineering Science and Management.

#### PROGRAMME SPECIFIC OUTCOMES (PSOS)

1. Apply the fundamentals of science and mathematics to solve complex problems in the field of design and thermal sciences.
2. Apply the concepts of production planning and industrial engineering techniques in the field of manufacturing engineering.