

DEPARTMENT OF MECHANICAL ENGINEERING **MECHANICAL ENGINEERING ASSOCIATION** 







**EDITORS:** Dr. C. Velmurugan Dr. B. N. Sreeharan

**JUNE 2022** 

### **ASSOCIATE EDITORS:** Mr. B. Praveen Mr. S. V. Nithesh Mr. Shakeel Akthar Mr. K. T. Imayan



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### ABRASIVE BLAST CLEANING

Mr. Nithesh S V 20BME080 2<sup>nd</sup> Mech.- B

### **INTRODUCTION:**

Abrasive blast cleaning is a method of cleaning in which specific materials are directly applied to the surface with high power and velocity.

### **AIR BLASTING:**

It is the most common blast cleaning technique and is widely used in all types of industries. Some companies even offer this as a job with a fee apt for that. There is also the possibility of buying or renting this equipment for performing this cleaning activity. Various types of cleaning materials are used, and depending on the surface, the materials are chosen suitably.



These are directed to the surface that is to be cleaned with a jet of air. This device makes it possible to adjust the focus and intensity to control the cleaning in a very accurate manner. The pressure is adjusted during the cleaning process and ensures that the desired and required layers are cleaned properly. By only using high pressure, more energy is used, and more particles are cleaned, hence increasing the cost of the cleaning process. For instance, a small area is used for testing. If the cleaning surface is not uniform, then pressure has to be

adjusted while performing the work. Comparatively, this is a difficult process, and it requires highly skilled labour.

#### **USES:**

Automobiles, Bicycle manufacturers, Cement and cast form manufacturers, Cylinder repair, Contractors, Circuit Board, Deburring, Electrical and electronics

### **PROCESS:**

This method is used to remove existing paint, corrosion, and so on. In most cases, abrasive blast cleaning provides the optimum method for surface preparation.



## **ASSOCIATE EDITOR'S PORTFOLIO**

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### **ADVANTAGES:**

- Faster than other methods
- Quickest of all techniques
- Fully controllable selection of equipment types
- It can also be used to remove the existing coating

### **EXAMPLES:**

Pressure Blast - using a pressure vessel with dry abrasive media



- Wet Blast in situations where dust free or a gentler blast is there
- Wheel Blast used in fixed installations with ball shot to clean and peen surfaces by impact.
- Suction Blast used for spot cleaning work where gentle cleaning is needed.

### **TYPES:**

- Open Blasting often used by on-site contractors were the media cannot be recovered. A fast process but creates a great deal of dust.
- Blast Rooms provide an enclosed environment for containing dusts and collecting and recovering media, also has improved safety.
- Blast Cabinets normally used for safety containing blasting of smaller objects. Cabinets utilize either suction or pressure blasting systems.

### **PROGRAMMES ORGANIZED**

- 4 As a part of **Yugam 2022**, following programmes were organized by the department
  - Workshop on **"Welding Technologies"** on 16-05-2022 in collaboration with the Indian Welding Society. **Dr. Sudharsanam**, R & D Head, Welding Research Institute, was the resource person.





**Dr. V. Manivelmuralidaran**, Assistant Professor – II coordinated the workshop.

• Workshop on **"FEA/CFD"** on 18-05-2022 and 19-05-2022. **Mr. Kavi Pratap, Mr. Abdullah** from CAD Solutions, Coimbatore, were the resource persons.



**Dr. V. R. Muruganantham**, Associate Professor and **Dr. M. A. Vinayagamoorthi**, Assistant Professor – II, coordinated the workshop.





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• Workshop on "Non-Destructive Testing" on 20-05-2022. Mr. Manivannan, Mr. Senthil Kumar from Super Quality Services were the resource peoples.





**Dr. V. R. Muruganantham**, Associate Professor and **Dr. M. A. Vinayagamoorthi**, Assistant Professor – II, coordinated the workshop.



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 Workshop on "PLM" on 20-05-2022. Mr. R. S. Mohan Kumar, Assistant Professor – I of our department was the resource person.



**Dr. V. R. Muruganantham**, Associate Professor and **Dr. M. A. Vinayagamoorthi**, Assistant Professor – II, coordinated the workshop.





• Competition on "CAD-MAD" on 20-05-2022.





**Dr. V. R. Muruganantham**, Associate Professor and **Dr. M. A. Vinayagamoorthi**, Assistant Professor – II coordinated the workshop.



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• Competition on "RC Extreme" on 21-05-2022.



**Dr. V. R. Muruganantham**, Associate Professor and **Dr. M. A. Vinayagamoorthi**, Assistant Professor – II, coordinated the workshop.





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A workshop on "Computational Fluid Dynamics" was organized by the department on 25-05-2022. Dr. Sandeep Mouvanal, Senior researcher, Nottingham University, UK was the resource person.



**Dr. V. Manivelmuralidaran,** Assistant Professor – II and **Mr. S. Ramanathan,** Assistant Professor – II, coordinated the workshop.





A voting campaign was organized at KCT for Bhumi Campus Award 2022 for socially responsible campus on 25-05-2022 and 26-05-2022. **Mr. B. Jeeva**, Assistant Professor – I, coordinated the campaign.

### **FACULTY AS RESOURCE PERSONS**

**Dr. B. N. Sreeharan**, Assistant Professor – II, conducted a Hands-on Workshop on **"Excel and Power BI"** on 24-05-2022 for a group of 32 MBA students from CARE School of Business at Trichy.





On 25-02-2022, **Dr. P. R. Ayyppan**, Assistant Professor (SRG) served as an examiner at the Government College of Technology in Coimbatore.

### **MANUSCRIPT SUBMISSION**

The following faculty members submitted their respective prepared manuscripts to the Scopus/SCI indexed journals:

Dr. R. Manivel, Professor	2	SCI/Scopus
Dr. V. Manivelmuralidaran, Assistant Professor – II	1	SCI
Dr. N. Sangeetha, Associate Professor (Sr)	2	Scopus + SCI
<b>Dr. N. Sangeetna,</b> Associate Professor (Sr)	Z	Scopus + SCI



### **PAPER PUBLICATION**

**Dr. R. Manivel,** Professor, published his paper entitled "Multi-Parametric Investigations on Aerodynamic Force, Aeroacoustics, and Engine Energy Utilizations Based Development of Intercity Bus Associates with Various Drag Reduction Techniques through Advanced Engineering Approaches" in the SCI/Scopus indexed International Journal of Nan Tang University, China



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**Dr. K. M. Senthil Kumar,** Associate Professor, published his papers entitled "Optimization of stir casting process parameter using response surface methodology" and "Electrochemical machining of aluminium 7075 alloy, silicon carbide, and fly ash composites: An experimental investigation of the effects of variables on material removal rate Web of Science and Scopus indexed International Journals

### PAPERS REVIEWED

**Dr. C. Velmurugan,** Professor and HoD, reviewed a paper titled "Mechanical and Thermomechanical characterization of Ni50-x Ti50Cux(x=2, 5, 10at%) with Morphological Studies for Materials Today: Proceedings Scopus indexed International Journal.





**Dr. M. Balaji,** Associate Professor, reviewed a paper titled "An intrinsic approach towards sustainable industrial design and waste management" for a Scopus indexed international journal.

**Dr. P. R. Ayyappan**, Assistant Professor (SRG), Lightweight Methane-Air Gas Turbine Controller and Simulator for a Scopus indexed International Journal on Energy Conversion and Management: X.



### Ph. D. COMPLETION





**Mr. M. A. Vinayagamoorthi**, Assistant Professor – II, successfully defended his research work and was awarded his doctoral degree on 04-05-2022.

### **AWARDS**

**Dr. S. Balasubramaian**, Associate Professor, was awarded with a Project Mentorship Certificate on 23-05-2022 on behalf of Project based Learning, School of Foundation Sciences, Kumaraguru College of Technology.

### **PATENTS APPLIED**

**Dr. V. R. Muruganantham**, Associate Professor and **Mr. P. D. Devan**, Assistant Professor – I, filed a patent for "Bathroom Jali with detachable Cover" bearing application no. 202241028007 on 16-05-2022.









**Dr. K. M. Senthilkumar,** Associate Professor, filed a patent for "Automatic Indoor cleaning Robot" bearing application no. 202241027912 on 15-052022.

### **PROGRAMMES ATTENDED / COURSES COMPLETED**



**Mr. S. Sivakumar,** Assistant Professor II, participated in a workshop on "Intellectual Property Rights (IPR) & Patents and Design Filing" on 25-05-2022, organised by Kalasalingam Academy of Research and Education, Krishnankoil.

**Dr. S. Sivakumar,** Assistant Professor – III, participated in a workshop on "Data Science & Analytics with Python" from 02-05-2022 to 09-05-2022, organised by Forge, KCT, Coimbatore.



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**Dr. S. Thirumurugaveeakumar**, Associate Professor, participated in a workshop on "FUSION 360" on 14-05-2022, organized by FUSION 360, KCT.

**Dr. T. Karuppusamy,** Assistant Professor, participated in a workshop on "Intellectual Property Rights (IPR) and Patents and Design Filing" on 25-05-2022, organised by Kalasalingam Academy of Research and Education, Krishnankoil.





**Dr. S. Balasubramanian,** Associate Professor, participated in a webinar on "Space Quantum Frontiers" from 1 9-05-2022 to 19-05-2023, organised by ISRO, Ahemadabad.

**Dr. M. Thirumalamuthukumaran,** Assistant Professor II, participated in a seminar on "Healthcare Engineering: Health Maintenance through Medical Technology Innovation" on 27-05-2022, organised by The Institution of Engineers (India), Coimbatore Local Centre, Dept. of Biomedical Engineering, Dr. N. G. P. Institute of Technology, Coimbatore.





**Dr. M. Balaji,** Associate Professor, participated in a monograph competition on "QCFI" on 12-05-2022, organised by QCFI, India.

**Dr. B. N. Sreeharan**, Assistant Professor – II, completed an Online Course on "Modern Excel Analyst in a Day" on 17-05-2022, organised by Pragmatic Works, Finland. He also participated in a workshop on "Data Science & Analytics with Python" from 02-05-2022 to 09-05-2022, organised by Forge, KCT, Coimbatore.



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**Dr. K. M. Senthilkumar,** Associate Professor, completed an online course, Introduction to Solar Cells, through Coursera, conducted by the Technical University of Denmark.

### **INDUSTRIAL VISITS**



**Dr. S. Balasubramaian,** Associate Professor, arranged industrial visits for first year student in the following industries on 13-05-2022 and 26-05-2022 respectively.



M/s Rashi Steels, Coimbatore



M/s. Aquasub TEXMO Industries, Coimbatore

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### **SNAP SHOTS**



**Dr. V. Muthukumaran,** Professor, delivered a Guest Lecture on "Mass Reading" for the Nirmala Women's College, Coimbatore, students on 20-04-2022.





**Prof. T. R. Sukumar,** Associate Professor at Paavi Engineering College on 12-05-2022 and at SNS College of Engineering on 19-04-2022.



The Voting campaign team Bhumi Campus Award 2022 for KCT from Mechanical Engineering Department headed by **Mr. B. Jeeva**, Assistant Professor – I. Second International Conference on Advances in Management, Engineering and Technology ICAMET 2022, RSP Conference Hub, Online International Conference, Coimbatore, Tamil Nadu, 25th - 26th June 2022

- Category: Online International Conference
- Start Date: 25th June 2022
- End Date: 26th June 2022
- Event Mode: Online
- Organiser: <u>RSP Conference Hub</u>
- City: Coimbatore
- State: Tamil Nadu
- Open to All: Students (UG/PG), Research Scholars, Professors & Educators
- For Abstract & Full Paper Registration: tinyurl.com/ICAMET2022
- LAST DATES FOR REGISTRATION

Paper submission last Date: 22/06/2022

• **REGISTRATION FEES** 

Conference only / Poster Presentation - INR 1499 (Three to Five Authors)

**Student -** Conference+ publication in CROSSREF DOI , Academia & Google scholar indexed journal - INR 2799

**Faculty -** Conference+ publication in CROSSREF DOI , Academia & Google scholar indexed journal - INR 2999

**Foreign Authors -**Conference+ publication in CROSSREF & Google scholar indexed journal \$ 100 / Rs. 5999

Organiser Website | editorrspconferencehub@gmail.com

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**ICAMET - 2022** 

**RSP Conference Hub**,

oimbatore, Tamilnadu, India

Second International Conference on Advances in Management, Engineering & Technology

## 25<sup>th</sup> & 26<sup>th</sup> June 2022

**Registration Link:** tinyurl.com/ICAMET2022

Virtual Presentation:-

💶 Google Meet

### Benefits

- All the accepted papers will be published in International
- Journal indexed in CROSSREF with eISSN & Doi Number Abstract will be published in Conference Proceedings
   Free Plagiarism Checking
- · Exclusive Keynote Session

Individual Conference Presentation & Publication e-Certificate

### Important Dates:-

Last date for Submitting Extended Abstract Last date for Submitting Full-Length Paper Intimation of Acceptance through Email

: 18.06.2022
: 20.06.2022
: 22.06.2022

#### Journal Published with doi, elssn & Crossref





Intelligent Computing

Mathematics

Nano Technology

Textile Engineering

Physics

Petroleum

Machine & Deep Learning

Mechanical Engineering

Mechatronics Engineering

(Including International Poster/Conference Participation with Publication in Crossref, e-Issn & Doi Indexed Journal )

Indian Participants INR

Student - Rs. 2799 Faculty – Rs. 2999 Industry – Rs. 3499 **International Participants** (Student/Faculty/Industry) USD - 100 or INR - 5999 **Conference only/ Poster Presentation** (Student/Faculty/Industry)

INR - 1499 / USD - 75

Conference Coordinators: Mr. T. Pravin, Mr. M. Saravana Kumar

\$+91-9790035414, +91-6380524933

rspconferencehub.com

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(ICAMET - 2022) THEME OF THE CONFERENCE (TOPICS NOT LIMITED TO ... )

#### **Science and Technology**

**ONLINE CONFERENCE** 

CONFERENCE HUB WANT TO THE

- Aeronautical Engineering
  Instrumentation Engineering
- Artificial Intelligence
- Architecture & Design
- Automobile Engineering
- Big Data & Analytics
- Biomedical Engineering
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science
- Design Thinking
- Education
- Electronics & Communication
- Human Computer Systems
- Information Technology

### E-HAMIK 2022, Annai Vailankanni College of Engineering Kanyakumari, Electric Bike Design Challenge, Kanyakumari, Tamil Nadu, 14th June 2022

- Category: Electric Bike Design Challenge
- Start Date: 14th June 2022
- End Date: 14th June 2022
- Event Mode: Venue
- Organiser: Annai Vailankanni College of Engineering Kanyakumari
- City: <u>Kanyakumari</u>
- State: Tamil Nadu
- **REGISTRATION FEES**

5000 per team. A team can have 5-15 members

• LINK:

https://docs.google.com/forms/u/6/d/e/1FAIpQLSfdybhtYB\_326fDZNZoEsznr2vofND6efG 6wkV4fxfL7zH9IA/viewform?usp=sf\_link

Organiser Website | e.hamik2k22@gmail.com

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# UDAAN 2022, Institute of Industrial and Computer Management and Research, Management Fest, Pune, Maharashtra, 24th - 25th June 2022

- Category: Management Fest
- Start Date: 24th June 2022
- End Date: 25th June 2022
- Event Mode: Venue
- Organiser: Institute of Industrial and Computer Management and Research
- City: <u>Pune</u>
- State: <u>Maharashtra</u>

### LINK: https://forms.gle/P6b6AyQ1s4F9zPV1A

### DESCRIPTION

MBA@IICMRR feels profound privilege to announce UDAAN 2022, 12th year Continuum, with the theme "Engage-Motivate-Ideate (EMI). The event is scheduled on 24th June & 25th June 2022 at MBA@IICMR auditorium. UDAAN is an inter-collegiate Business Project & Plan Competition organized every year at IICMR campus in association with Project Management Institute (PMI) Pune Deccan Chapter. This year this competition will also have support from Pimpri Chinchwad Start-up and Incubation Centre.

UDAAN is one such flagship event of MBA@IICMR that provides every student an opportunity to explore ideas and convert them into viable and sustainable businesses.

The students can participate in different verticals, by filling the Google form and paying the requisite entry fee. The event will be conducted both ONLINE & OFFLINE

Organiser Website | iicmrudaan2022@gmail.com

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### CERTIFICATIONS

The following students got certified by M/s. Dassault Systems as Certified SolidWorks Associate (CSWA) – Additive Manufacturing through Centre of Exemplary Learning (COEL). COEL trained the students to get the certifications.

S. No.	Roll Number	Name
1	20BME094	Mr. RITHUVARSHAN I M
2	20BME021	Mr. BHARATH YUVARAJ P
3	20BME115	Mr. SURENDHER S
4	20BME066	Mr. LOKESWARAN R
5	20BME111	Mr. SUBRAMANIAN M
6	20BME033	Mr. GOPINATHAN M
7	20BME087	Mr. PRAVEEN KUMAR R
8	20BME100	Mr. SANJAI KUMAR A D
9	20BME051	Mr. JOBISHA CELIN A
10	20BME039	Mr. GURU G
11	20BME032	Mr. GOKULAVASAN K
12	20BME097	Mr. SABARIVASAN
13	20BME122	Mr. VETRISELVAN V
14	20BME037	Mr. GOWTHAM R
15	20BME008	Mr. AKASH VELANGANNI D
16	20BME069	Mr. MAHESH S
17	20BME092	Mr. RAKUL S
18	20BME084	Mr. PRANAV KRISHNA S
19	20BME018	Mr. BALAMURUGAN A
20	20BME014	Mr. ARULMURUGAN K

### **PROGRAMMES ATTENDED**

- **Mr. E. Mohind,** 21BME225, participated in a workshop on "FEA/CFD Workshop" on 18-05-2022 and 19-05-2022 organized by CAD Solutions, Coimbatore.
- Mr. Jagadish Castro, 20BME046, participated in a workshop on "Defense Career Expo" from 17-05-2022 to 19-05-2022, organized by NCC, KCT, Coimbatore.
- Mr. M. Gokulakrishnan, 21BME024, participated in a workshop on "Welding Technology" on 16-05-2022, Mr. Auto on 19-05-2022 and Mr. Stylist on 20-05-2022 organized by KCT, Coimbatore.
- Mr. Imayan K T- (20BME045), Mr. Nithesh S V (20BME080), Mr. Mouleeswar K -(20BME073) of second year Mechanical Engineering B section attended a National level Workshop named as "SAE SUPRA RULEBOOK WORKSHOP" on 21-05-2022 organized by SAE SUPRA.

### YUGAM WORKSHOPS

### FEA & CFD:

FEA & CFD is a two-day workshop organized by Mechanical Engineering Association during Yugam 2022 with a registration fee of Rs. 400. This was organized by **Mr. Suvanraj R** of third year Mechanical Engineering. This workshop was coordinated by **Mr. Ananthu Krishna G V and Mr. Kumarasamy R** of second year Mechanical Engineering Department. More than 15 students were participated and got benefitted from this workshop.



In this workshop, Abhinav R, Darshan S, of Second year mechanical Engineering and Mohind E, Vijay, Abdul Anas S, Nalan M, Jeevananthan S, Nirmal Kumar D P, Yaswanth Raghav M, Rahul P of third year mechanical Engineering has participated from our Institution.

#### Non – Destructive Testing

NON-DESTRUCTIVE TESTING is a workshop organized by Mechanical Engineering Association during Yugam 2022 with a registration fee of Rs. 600. This was organized by **Mr. Kishore Krisna S** of third year Mechanical Engineering. This workshop was coordinated by **Mr. Kalaiselvan P** of second year Mechanical Engineering. More than 20 students were participated and got benefitted from this workshop.



In this workshop, Sanjay R of First year mechanical Engineering has participated from our Institution.

#### **Product Lifecycle Management:**

Product Lifecycle Management is a workshop organized by Mechanical Engineering Association during Yugam 2022 with a registration fee of Rs. 300. This was organized by **Mr. Manav R Samant** of third year Mechanical Engineering. This workshop was coordinated by **Mr. Shakeel Akthar S and Ms. Jobisha Celin A** of second year Mechanical Engineering. More than 20 students were participated and got benefitted from this workshop.



In this workshop, **Tharun J of third year mechanical Engineering** has participated from our Institution.

### Welding Technology:

Welding Technology is a workshop organized by Mechanical Engineering Association during Yugam 2022 with a registration fee of Rs. 500. This was organized by **Mr. Hemavijay B** of third year Mechanical Engineering. This workshop was coordinated by **Mr. Atharsh A R** of second year Mechanical Engineering. More than **20 students** were participated and got benefitted from this workshop.



**In this workshop,** Varun M P, Santhana Krishnan R S, Gokulakrishnan M of First year mechanical Engineering and Bhuanesh D, Monish R, Pradheep P, Praveen R, Hari sudhan B, Mohan prasad T, Siva prasad M K, Dinesh Kumar R of third year mechanical Engineering has participated from our Institution.

#### Additive Manufacturing:

Additive Manufacturing is a workshop organized by Mechanical Engineering Association during Yugam 2022 with a registration fee of Rs. 700. This was organized by **Mr. Ashwinth K V** of third year Mechanical Engineering. This workshop was coordinated by **Mr. Vaseekaran S L** of second year Mechanical Engineering. More than 30 students were participated and got benefitted from this workshop.



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**In the above workshop,** Vijay Adithya K V, Chandhru A P, Arun K L, Varun A, Aswin R, Sanjay, Anand R, R Deepak, Jayasivaraman R E, Arun B G, Bhoopathy R, Mohan Pramoth. K, Kabilash S, Gourav S, Akilesh C, Kanishkar R, Giftson Rhenius A, Adithya T, Sidharth KM of First year mechanical Engineering and Jeevabharathi K, Madhavan G S of Second year mechanical Engineering has participated from our Institution.

### **YUGAM EVENTS**

### CAD\_MAD:

CAD\_MAD is an Event organized by Mechanical Engineering Association during Yugam 2022 with the prize amount of Rs. 8000. This was organized by **Mr. Aswin Baalaje R** of third year Mechanical Engineering. More than 50 students were participated and got benefitted from this Event.



In this Event, **Dhiran K S and Balavignesh P** of Mechanical Department has participated from our Institution.

### HUNT THE SQUARE

HUNT THE SQUARE is an Event organized by Mechanical Engineering Association during Yugam 2022 with the prize amount of Rs. 5000. This was organized by **Mr. Nishanth S** of third year Mechanical Engineering. More than 80 students were participated and got benefitted from this Event.



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**In the above event,** Mohammed Irfan U, Athul P, Sairam R, Amaresh M, Harshini J, Sarah Caroline S, Abhishek, Kanishkar R, Dhanush J S, Bhavya A, Sowmini G A, Mayuri G, Varshini D, of First year mechanical Engineering, Susharitha G R, Radha J, of Second year Mechanical Engineering and Akilesh M, Dinesh S of third year mechanical Engineering has participated from our Institution.

### **RC EXTREME**



RC EXTREME is an Event organized by Mechanical Engineering Association during Yugam 2022 with the prize amount of Rs. 40,000. This was organized by **Mr. Raaj Khishorre K R** of third year Mechanical Engineering. More than 3 Teams were participated and got benefitted from this Event.

## **REVIEWER'S POINT**

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### **BENELLI KEEWAY CRUISER 250 cc**



Mr. Nithesh S V 20BME080 2<sup>nd</sup> Mech.- B

### Introduction:

Keeway is a Hungarian brand which is now debuted in India with their first two premium scooters named as "Sixties 300i" and "Vieste 300". It is the European registered brand of Qianjiang Group of China. It has become the multinational organization having R&D, design, sales and service and other mechanical products.

### Cruiser:

The cruiser is most probably expected to price more than the Royal Enfield Meteor 350. But the leaks are likely giving an expectation that it would be a Royal Enfield's 650 twins. Instead of being a cruiser type, it gets a minimum amount of chrome treatments on the body, to improve the outlook and make it sporty. It gets a beautiful chunkier seat which

is a single piece unit with a pillion back rest, USD forks and tyres. It has a seat height of 715 mm and 160 mm of ground clearance which is much sufficient for Indian roads.

### **Specifications:**

Its front suspension gets USD forks and a Twin-shock absorber at the rear. It gets a 16" alloy wheel at front and rear. It gets a single wheel disc setup with a dual channel ABS. It gets the LED headlights, DRL's, indicators mounted on the handlebars. It gets a beautiful digital instrumental cluster. It gets a huge capacity of 20 L fuel tank and an engine protection guard.



### **Engine:**

The engine is a long stroke V-twin, 249 cc air cooled engine which produces 18.7 bhp @ 8500 RPM and a torque of 19 Nm @ 5500 RPM. The engine is mounted on double cradle chassis and powers via belt drive to the rear wheel. It is observed that, during isolation the performance is not bad.

#### **Pricing:**

Its pricing is slightly higher and it's on road pricing starts from 3.5 Lakhs and few variations depending on the place.



### **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 centre, that imparts quality higher education through the programme in the field of Mechanical Engineering and to meet the changing needs of the society.

#### **DEPARTMENT MISSION:**

The department involves in sustained curricular and co-curricular activities with competent faculty through teaching and research that generates technically capable Mechanical Engineering professionals to serve the society with delight and gratification.

### **B. E. MECHANICAL ENGINEERING**

#### **PROGRAM EDUCATIONAL OUTCOMES (PEO's):**

- **PEO 1 :** Graduates will take up career in manufacturing and design related disciplines.
- **PEO 2 :** Graduates will be involved in the execution of Mechanical Engineering projects.
- **PEO 3 :** Graduates will take up educational programme in mastering Mechanical sciences and management studies.

#### **PROGRAM OUTCOMES (PO's):**

**1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

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- 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.
- 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. Engineering knowledge: 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. 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.
- 7. 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.
- 8. 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.
- **9. Individual and teamwork:** 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.

#### **PROGRAM SPECIFIC OUTCOMES (PSO's):**

- 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.

#### **M. E. INDUSTRIAL ENGINEERING**

#### **PROGRAM EDUCATIONAL OBJECTIVES (PEO's):**

- **PEO 1 :** Graduates will be mid to higher level management / engineering professionals with responsibilities in engineering management, data analysis and business operations.
- **PEO 2 :** Graduates will be engineering professionals, and technology leaders who would manage such functions as plant engineering, production, supply chain and quality management.
- **PE03 :** Graduates would function as educators or researchers in academic institutions.

#### **PROGRAM OUTCOMES (PO's):**

- **P01 :** An ability to independently carry out research /investigation and development work to solve practical problems.
- **P02** : An ability to write and present a substantial technical report/document.
- **PO3** : Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.
- **P04 :** Apply knowledge and competencies in manufacturing, analytics, supply chain, quality and engineering management.
- **P05** : Apply principles of industrial engineering to solve problems in industry.
- **P06 :** An ability to work as part of interdisciplinary teams, communicate effectively, model and design engineering systems optimally.

#### **PROGRAM SPECIFIC OUTCOMES (PSO's):**

- **PS01 :** Graduates will be able to apply the engineering management and data management concepts in industrial engineering areas.
- **PS02 :** Graduates will be able to apply industrial engineering skills and knowledge to effectively manage the functions of production and supply chain management.

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