EGS PILLAY

ENGINEERING COLLEGE,AUTONOMOUS

(An Autonomous Institution, Affiliated to Anna University, Chennai)
Nagore Post, Nagapattinam – 611 002, Tamilnadu.

MAGAZINE

2021-2022

MECHBEEZ 2K22

Address

Egs Pillay Engineering college
Nagore post,
Nagapattinam-611002
Website :www.egspec.org
Landline:04365-251112,251114

Contents

Vision

To deliver the highest quality engineering graduates, cutting-edge research and innovative technology for the benefit of society locally and globally.

Mission

To provide an excellent education to our undergraduate and graduate students, to conduct leading-edge research in Mechanical Engineering, and to serve our professional communities effectively. This mission is to be carried out in accordance with the Guiding Principles of Anna University, Chennai.

About the Department

The department of Mechanical Engineering was established in 1995. The department offers a under graduate B.E. (Mechanical Engg.) and a Post Graduate M.E. (Manufacturing Engg.) programmes. The department has approved as research centre by Anna University and Annamalai University. The department has highly qualified and experienced faculty. The department has well infrastructural facilities and has fully equipped laboratories with adequate hardware and software. The teaching faculties are active in conducting research and publishing the papers in reputed Journals and Conferences. The department has conducted six International Conferences and four AICTE sponsored Faculty Development Programs.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: To prepare students for successful careers in industry that meet the needs of Indian and multinational companies.

PEO 2: To develop the ability among students to synthesize data and technical concepts for application to product design.

PEO 3: To provide opportunity for students to work as part of teams on multidisciplinary projects.

PEO 4: To provide students with a sound foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies.

PEO 5: To promote student awareness of the life-long learning and to introduce them to professional ethics and codes of professional practice.

PROGRAM OUTCOMES (POs)

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

PO 2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 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.

PO 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.

PO 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.

PO 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.

PO 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.

PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 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.

PO 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.

PO 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 (PSOs)

After successful completion of the programme, Graduates will be able to

PSO1: Design, develop, test and maintain advanced thermal engineering systems for industrial and other applications.

PSO2: Apply the concepts of modern manufacturing and industrial engineering techniques in industries.

PSO3: Modeling, design and analysis of mechanical components using Computer Aided Design and Analysis software tools.

1.Felicitation

I am happy to share that EGSP group of institution is publishing magazine MECHBEEZ2K22.

College magazines have a great educative value.It encourage students to think and write.Infact,young talent finds its exposure through this medium.The magazine also records the acheivements and various activities of the institution ,I hope that this publication would be successful in achieving these objectives.

Smt.S.Jothimani G.S.Pillay,

It gives immense pleasure to publish our college magazine MECHBEEZ2K22.its a perfect blend of literary articles ,art,photography,personal experiences and wonderful memories of students which reflects their creativity and potential. I am very happy to convey my congratulations and best wishes to all the students and faculty for their endeavours in bringing out this wonderful magazine

Mr.S.SenthilKumar
Secretary

I congratulate all the faculty and students of the mechanical departments for taking efforts to conduct and attend various events during this period . I appreciate every student who enjoyed the pleasure of participating in co-curricular and extra curricular activities along with their obligation to curriculam.I also take this opportunity to appreciate the entire EGSP magazine team.

mechanical departmentof our college is bringing out a college magazine “MECHBEEZ” for the year 2021-22.Bringing out a magazine is not a easy task ,but it is a venture of the combined efforts of students and teachers,I wish every success to the venture.

Dr.S.Krishnmohan ,M.E,Ph.D

Dean/Building science,

I heartly congratulate the co-ordinator and his team members who have taken pains to bring out this magazine adding glory to EGSPEC .I expect my students to be sincere responsible and commited to their endeavours.

Dr.N.Ramanujam ,M.Tech,Ph.D

Professor/Mechanical

I extend my hearty congratulations to the co
ordinator,students members and editorial board on the outstanding acheivements with blessings

Dr.G.Gurumoorthi,ME,Ph.D

Hod/Mech

1.Faculty articles

Experimental Investigations on Mechanical Properties of AZ31/Eggshell Particle-Based Magnesium Composites

N. Ramanujam,1 S. Muthukumaran,2 B. Nagesawara Rao ,3 M. Ramarao,4 Amol L. Mangrulkar,5 K. S. Ashraff Ali,6 L. Pugazhendhi,7 and Mebratu Markos

Magnesium (AZ31) is an excellent choice for a bionic implant. To enhance biocompatibility, the hardest graphene nanoparticles were reinforced with biocompatible materials. In this paper, biocompatibility composite material is produced by stir-casting nanoshell particles reinforced with various weight percentages (0, 1, 2, 3, and 4 wt. percent) of AZ31 magnesium alloy. To understand the mechanical properties of the composite material, results of which are compared to the base alloy (AZ31) are used. The study mentioned how AZ31 magnesium alloy, reinforced with reinforcing particles, may be used to create implant-related human bone materials. Magnesium alloy reinforced with reinforcing particles is described in the study.

Investigation of Damping Characteristics on Copper-Based Shape Memory Alloy Frictional Damper in Boring Process

Authors: Chockalingam Singaravelu, Prasannavenkadesan Varatharajan, Ganesan Ramu, Karthikeyan Alagappan

Chatter is a self-excited phenomenon in machining, especially in boring and end milling processes due to the slender nature. A passive approach of copper-based shape memory alloy frictional damping has been provided to suppress the tool chatter. Boring tools made of EN31 material have been chosen and damped with frictional dampers made of copper-based shape memory alloy such as naval brass, Muntz metal and leaded brass. Characterization study of shape memory alloys was performed using the X-ray analytical microscope, differential scanning calorimetry and impact hammer test for element confirmation, transition temperature and modal analysis, respectively. Machining performance of the proposed damping bars was investigated through logarithmic decrement, damping ratio and resonance gap of the machining system, as well as the displacement, temperature, tool wear and surface roughness in the boring process. The comparative study was reported between the damped and undamped boring bars. The comparative study revealed that better results were obtained from the boring bar damped with leaded brass. A 19.2%, 55%, 59.9% and 78.1% of reduction was witnessed in terms of temperature, displacement, surface roughness and tool wear of the boring bar damped with leaded brass compared with the unchanged boring tool holder.

On the Influence of Electrical Discharge Drilling Parameters and Performance Measures of Inconel 718 Superalloy - a Study

Jayaraj JEEVAMALAR*, Sundaresan RAMABALAN**

Presently, with gamut of technologies available still the manufacturing industries are beleaguered by significant challenges from hard-to-cut materials like superal-Alloys, ceramics, stainless steels, brass, carbides and fiber-reinforced composites along with exact design requirements (i.e., superior surface finish, high precision, versatility, high strength, intricate geometrical properties, low thermal expansion and robustness, etc.) and economical operation. Conventional Machining Processes (CMP) requires cutting tools that are tougher than the workpiece and require direct interaction between the workpieces. These features of CMP lead to hardships in handling hard and fragile materials. Unconventional advanced manufacturing processes (UMP) are an ensemble of material removal techniques involving mechanical, chemical, electrical or thermal energy or application of hybrid energies to machine difficult geometries along with superior surface finish. Unconventional Machining Processes are used where CMPs are not practicable, reasonable or cost-effective. With the proliferation of industrial and technological innovations in the domain of manufacturing and material sciences, every industry, including aerospace, automobile, biotechnology, nuclear, army, chemical, locomotive, and foundries aims for higher production efficiency, higher accuracy and precision, greater surface finish and close tolerances in all their applications. Unconventional machining processes when implemented properly provide limitless benefits over CMPs.Inconel 718 is a superalloy based on nickel chromium that contains large amounts of iron, niobium and molybdenum, together with smaller quantity of titanium and aluminium. It is a precipitation-hardened alloy and pigeonholed as hard-to-drill material since it has superior strength and hardness (38 HRC) and good tensile strength (180 ksi). It has excellent oxidation resistance (983˚C) and high creep-rupture strength (700°C). These properties impose some technical hitches during drilling. Alternatively, these hitches were accredited to its competence to preserve its rigidity at a very high temperature and appropriate for the hot working environment. The creation of complex contours in Inconel 718 along with decent drilling performance and geometric accuracy are not viable by CMP and require advanced techniques to achieve the best finish of the machined surface. Inconel 718 has extensive applications in spacecraft and gas turbines, reciprocating engines,components of heat treating equipment, nuclear pressurized water reactors, and motor shafts for the submersible well pump, chemical processing, pressure vessels, and petrochemical industries. In spite of the enormous majority of research activities have focused in recent years to drill hard-to-cut materials, still the following issues are not resolved for drilling of superalloys: 1. shorter tool life due to their hardening and erosion properties; 2. the workpiece temperature increases up to its boiling temperature while drilling;3. built-up-edge is often formed on the electrode owing to an elevated temperature across tool and work-piece material [1 – 3]; 4. metallurgical impairment to the drilling parts owing to excessive forces, which gives elevated work instrurement, surface cracking and deformation. Of late, many researchers have investigated the drilling performance of superalloy by considering differentinput parameters. Yet, the challenge to measure the performance regarding the drilling technique of Inconel 718 is continuing. This research is mainly to increase performance, product quality and the overall economy of the drilling process on Inconel 718 using Tungsten powder mixed dielectric and Copper (Cu) electrode. After a comprehensive investigation of the previ-ous research works related to the Electrical Discharge Drilling (EDD) process of superalloys, it is clear that the influence of the rotating electrode with W-powder assorted with kerosene has not been described in the literature suffi-ciently [4 – 15]. Moreover, very few investigations have been reported on the evaluation of Surface Roughness (SR) of the Inconel 718 through EDD process. The research question of this present study is to explore the effects of input variables like peak current Ip, pulse-on time Ton and pulse-off time Toff on performance metrics such as Material Removal Rate (MRR) and Surface Roughness (SR) while drilling on Inconel 718 under Tungsten (W) powder suspended kerosene with a rotating hollow Copper tool. The experiments have been done based on L27 orthogonal Array (OA) and the effects had been validated by using Artificial Neural Networks (ANN) technique and the results were confirmed by Artificial Neural Networks (ANN) technique. To evaluate the property of the machined surfaces, Scanning Electron Microscope observations were carried out. To the best of our knowledge, the literature shows that no researcher realizes surface characterization of the drilled workpieces with W-powder suspended EDD. Hence, this shows the uniqueness of this work, it is much important to investigate and characterize the surface of the drilled Inconel 718 workpiece.

Modeling tensile modulus of nanoclay filled ethylene-propylene –diene monomer/styrene –butadiene rubber using composite theories

Dr.V.Navaneetha Krishnan

Nanocomposites of ethylene–propylene–diene monomer (EPDM)/styrene–butadiene rubber (SBR) (80/20) filled with different content of nanoclay 0–10 phr (parts per hundred rubber) were prepared on the two-roll mill. Tensile modulus was studied using composite theories. Transmission electron microscopy showed the existence of intercalated, aggregated, and partially exfoliated structures. The tensile modulus of nanocomposites was studied by the Guth, Halpin–Tsai, and modified Halpin–Tsai equation, which is generally used for composites reinforced through fiber-like or rod-like fillers. Composite models are mostly used in particulate-reinforced polymers, particularly in non-rigid polymer matrices. The aspect ratios of nanoclay platelets in nanocomposites were determined by statistically analyzing transmission electron micrographs. The modulus reduction factor is a vital role in the enhancement of predicted theoretical values of the tensile modulus. Taking account of the lower influence of the platelet-like filler to tensile modulus than the fiber-like filler, the modulus reduction factor for the platelet-like fillers of 0.66, determined by fitting experimental data, is introduced into the above three equations. Because of the necessity for the development and reduction of characterization of these materials for diverse applications, modeling of rubber-based nanocomposites has become a hot issue in recent years. Mechanical modeling of rubber nanocomposites is critical for studying Young's modulus using various composite theories. Moreover, the effect of nanoclay addition on tensile properties of EPDM/SBR–nanoclay composite was tested. Percentage increase in tensile strength and elongation at break are 80% and 27%, respectively.

Advanced Multi Criteria Optimal Design of Spiral Bevel Gear Pair using NSGA – II

Dr. S..Ramabalan

In gear applications, quality of design significantly influences transmission, machine performance, size and weight of the gears. In the present work, a nonlinear optimization problem having three objective functions, five design variables and eleven constraints considering a spiral bevel gear pair is solved. The aim of this research is to optimize weight, pitch cone distance, and efficiency by formulating three cases. In Case 1, the objective functions, namely,weight and pitch cone distance are minimized, while treating efficiency as constraint. In Case 2, the objective functions weight is minimized and efficiency is maximized, keeping pitch cone distance as constraint. In Case 3, the objective functions pitch cone distance is minimized and efficiency is maximized, having weight as constraint. Pareto frontiers are generated by Non-dominated Sorting Genetic Algorithm (NSGA-II). Simulation is analysed and validated with literature. Results show that there is a considerable rise in weight, module, and efficiency and a decrease in cone distance than literature. Results also indicate that Case 2 formulation offers the best optimal design parameters

Advanced power optimization of worm gear drive with profile shift using nature inspired algorithms

Dr. S. Ramabalan

To maximize power at drive output is important in gear devices, as it directly influences power loss, which significantly affects overall efficiency. In this article, the aim is to optimize output power of worm gear drive taking into account eight design variables and sixteen critical mechanical constraints. Various design constraints, namely, linear pressure, bending strength, deflection of worm along with other important constraints are incorporated. The design variables, namely, number of teeth, coefficient of friction, helix angle of the thread as well as profile shift coefficient is considered. Nature inspired algorithms, namely, Firefly Algorithm (FA), Cuckoo Search (CS) and fmincon solver are used in the MATLAB environment. Simulation results are analysed and validated with literature. Results show that CS technique gives the best design parameters for the problem. Results also reveal that the addition of profile shift constraint causes a decrease in power loss by FA (8.23%) and CS (8.90%) than SA of literature. So it is desirable to include the same in worm gear design.

Visible Light Driven AL2O3,CuO and AL2 O3/CuO Nanocatalysts : Synthesis and Enhanced Photocatalytic Activity

Dr. S. Krishnamohan

A novel and facile γ-Al2O3/CuO nanocomposites (NCS) was fabricated via a hydrothermal technique for Visible light mediated photocatalytic activity. The synthesized samples of pure γ-Al2O3, CuO and γ-Al2O3/CuO NCs were analyzed using XRD, UV-DRS, PL, FT-IR, BET, and FESEM analysis techniques. The as prepared γ-Al2O3, CuO and γ-Al2O3/CuO catalysts were used to degrade Rhodamine B (RhB) and Methylene Blue (MB) textile dyes, which were studied using photocatalytic experiments. The degradation took place in the presence of visible light illumination. The degradation efficiency of γ-Al2O3, CuO, and γ-Al2O3/CuO nanocomposites for RhB and MB dyes was 52 %, 59 %, 78 %, and 65 %, 73 %, 91 %, respectively. The higher degradation efficiency was achieved by using γ-Al2O3/CuO nanocatalysts due to their efficient increase in photo-induced e^-/h^+ charge separation and diminishes their charge carrier re-coupling factor.

Slurry Erosion Behaviour Of Eco Friendly Surface Modified Pump casings Used in Coal Mines

Mr.G.Sundaravadivel,Dr.S.Krishnamohan

Slurry erosion is a severe problem and a major concern for slurry handling equipment, as it leads to considerable expense caused by failures, downtime and material replacement costs. Slurry erosion is dependent on several parameters such as slurry properties, service conditions, and material properties. Hence, much high-quality research has been aimed at obtaining a fundamental understanding of this complex failure mode and developing new test methodologies and erosion resistant materials to minimize erosion rates. This is a review of the literature covering research into the effects of the main parameters influencing the slurry erosion of different types of steels, focusing on those which have been developed for pipeline applications. The types of bench-scale erosion test rigs, the mechanisms involved, and the behavior of different microstructures under slurry erosion conditions are discussed.

2.Student topics

ALTERNATE FUELS LNG AND CNG IN AUTOMOBILES

CNG and LNG are considered alternative fuels. The horsepower, acceleration, and cruise speed of Natural Gas Vehicles(NGV) are comparable with those of equivalent, conventionally fueled vehicles. Also, compared with conventional diesel and gasoline vehicles, NGVs offer other air quality benefits beyond greenhouse gas emissions. Two forms of natural gas are currently used in vehicles: compressed natural gas (CNG) and liquefied natural gas (LNG). Both are domestically produced, relatively low priced, and commercially available

Compressed Natural Gas

CNG is produced by compressing natural gas to less than 1% of its volume at standard atmospheric pressure. To provide adequate driving range, CNG is stored onboard a vehicle in a compressed gaseous state at a pressure of up to 3,600 pounds per square inch.

CNG is used in light-, medium-, and heavy-duty applications. A CNG-powered vehicle gets about the same fuel economy as a conventional gasoline vehicle on a GGE basis. One GGE equals about 5.66 pounds of CNG.

Liquefied Natural Gas

LNG is natural gas in its liquid form. LNG is produced by purifying natural gas and super-cooling it to -260°F to turn it into a liquid. During the process known as liquefaction, natural gas is cooled below its boiling point, removing most of the extraneous compounds found in the fuel. The remaining natural gas is primarily methane with small amounts of other hydrocarbons.

Because of LNG's relatively high production cost, as well as the need to store it in expensive cryogenic tanks, the fuel's use in commercial applications has been limited. LNG must be kept at cold temperatures and is stored in double-walled, vacuum-insulated pressure vessels. LNG is suitable for trucks that require longer ranges because liquid is denser than gas and, therefore, more energy can be stored by volume. LNG is typically used in medium- and heavy-duty vehicles. One GGE equals about 1.5 gallons of LNG.

Vehicle Performance

Natural gas vehicles (NGVs) are similar to gasoline or diesel vehicles with regard to power, acceleration, and cruising speed. The driving range of NGVs is generally less than that of comparable gasoline and diesel vehicles because, with natural gas, less overall energy content can be stored in the same size tank. Extra natural gas storage tanks or the use of LNG can help increase range for larger vehicles.

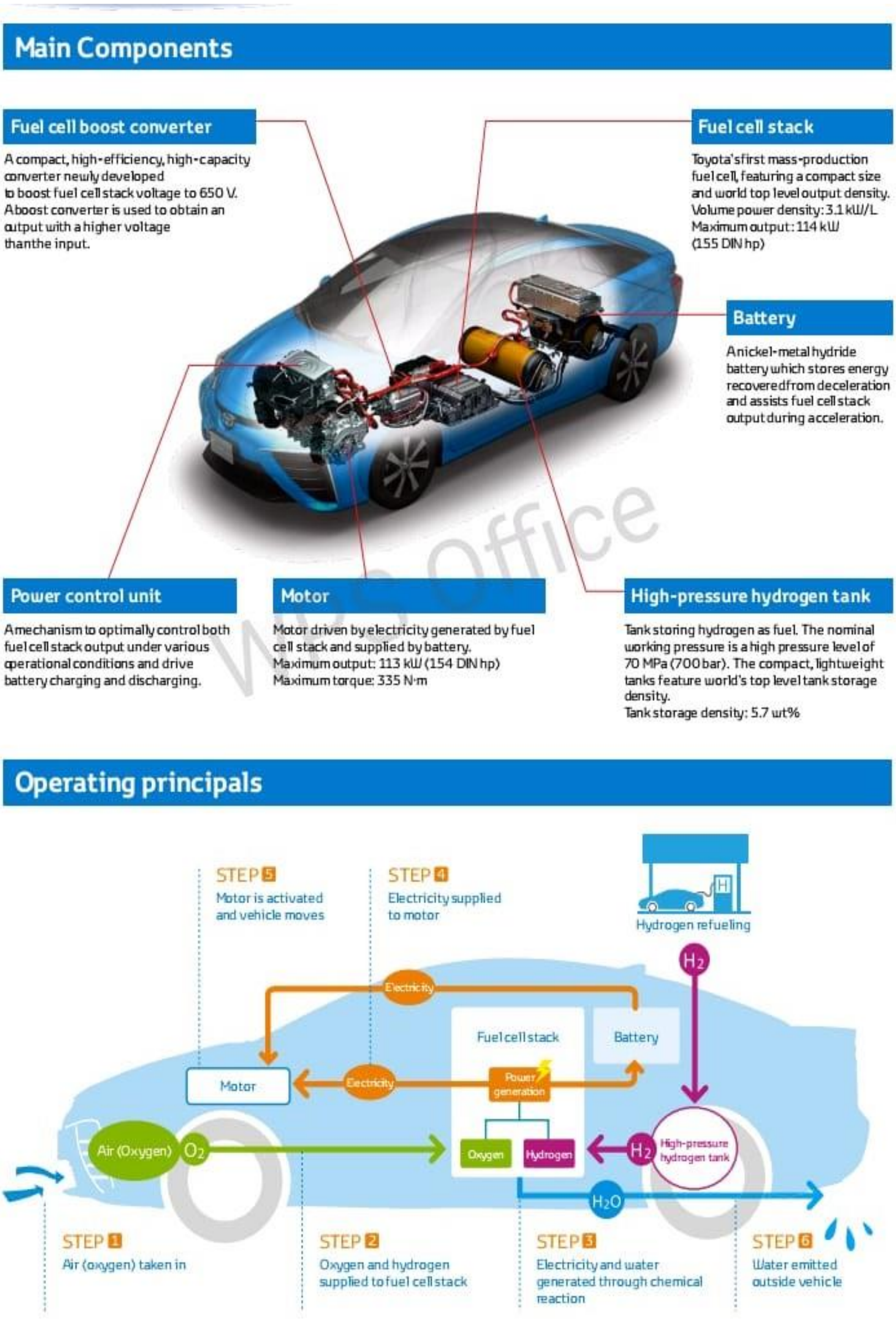
In heavy-duty vehicles, dual-fuel, compression-ignited engines are slightly more fuel-efficient than spark-ignited dedicated natural gas engines. However, a dual-fuel engine increases the complexity of the fuel-storage system by requiring storage of both types of fuel and the integration of diesel after treatment devices.

Lower Emissions

All new vehicles are equipped with effective emission control systems and must meet the same emissions standards, regardless of fuel type. Consequently, tailpipe emissions from natural gas vehicles are comparable to those of gasoline and diesel vehicles when all are equipped with modern emissions controls. According to Argonne National Laboratory's Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model, light-duty vehicles running on conventional natural gas can provide small to moderate GHG emissions reductions reduce life cycle greenhouse gas emissions by 15% (reductions are more substantial for vehicles running on RNG). In addition, because CNG fuel systems are completely sealed, the vehicles produce no evaporative emissions.

Prepared by R.dhinesh ,IV-MECH

Future battery technologies in E-Vehicles

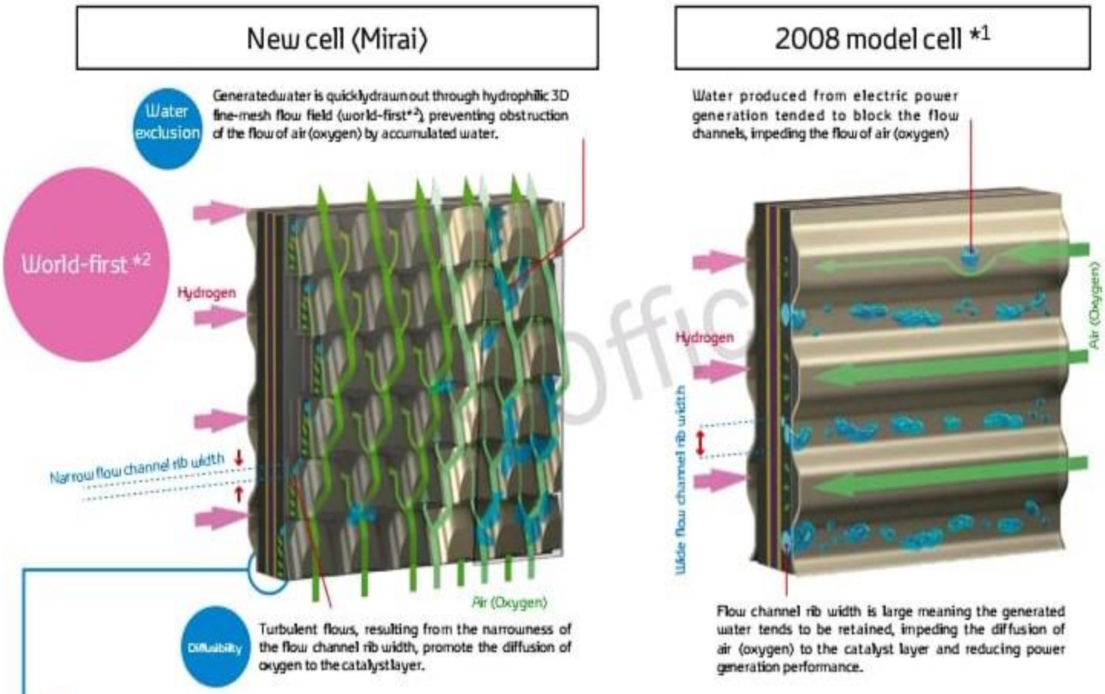


Higher performance of new cells

1 Innovations to cell flow channels (Cathode)

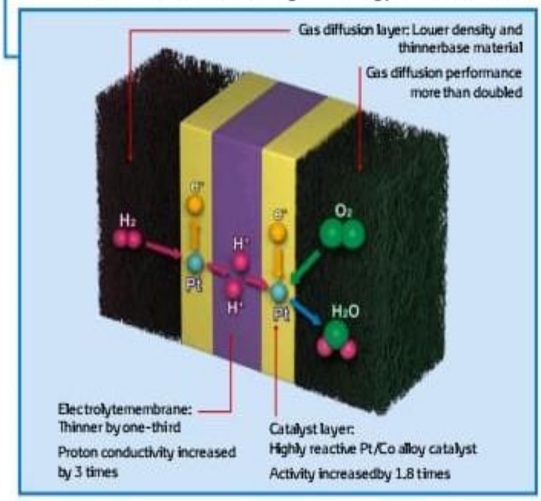
Flow channels: Using 3D fine-mesh flow field (world-first *2) simultaneously improves water exclusion and air (oxygen) diffusion, achieving uniform generation in cell surfaces.

3D fine-mesh flow field: A flow channel with a three-dimensional fine mesh structure



2 Electrode innovations

The electrolyte membrane was made thinner, the diffusion performance of the gas diffusion layer was increased, and the catalyst was hyper-activated to greatly enhance electrode responsiveness.



*1 2008 model: Toyota FCHV-adv *2 November 2014, Toyota data

BY

Kesavmoorthi, II-MECH

Trending topics

ADDITIVE MANUFACTURE OF AL-TI-C METAL MATRIX COMPOSITE:

Researchers at Purdue University have developed a new additive manufacturing technique for creating high-strength aluminum-titanium-carbon (Al-Ti-C) metal matrix composites. Al-Ti-C metal composites offer a lightweight, high-performance advantage in automotive and aerospace applications; however, currently manufacturing methods can lead to loss of ductility and other desired material properties, such as strength. This process allows for smaller composite grain size and implements heat treatment to ensure exceptional product finish with the strengthening phases of TiC and Al3Sc particles in different sizes.

SUPERCAPACITOR ELECTRODES FROM MOS2, CARBON NANOTUBES, AND METAL-ORGANIC FRAMEWORK:

Researchers at Purdue University have developed composite electrodes to improve the energy density of supercapacitors. This hybrid electrode framework demonstrates a specific capacitance over 262 F/g and an energy density of ~52.4 Wh/kg while keeping a high power density (~3680 W/kg). Another advantage of this electrode is its high durability, maintaining high capacitance retention over 50,000 charge/discharge cycles. This technology has applications in energy storage solutions and takes an important step towards bridging the gap between the energy density differential between capacitors and batteries.

FORMULATION FOR CONTROLLED DISPERSION OF CELLULOSE NANOMATERIALS:

Researchers at Purdue University have created new process for controlled dispersion of cellulose nanomaterials using carboxymethylcellulose. Cellulose nanomaterials materials are desirable as they are sustainable, biodegradable, and highly abundant in nature. CNCs can be used in cosmetic, composite, paint, ink, gas, packaging, construction, and food applications – to name a few. Currently, agglomeration of CNCs can occur as they are dried, and processes used to reduce this effect traditionally involve costly, energy-intensive methods as well as often compromise material properties. Purdue researchers have combined a polymer shear mixing technique to create CNC and a CMC dispersion that allows for redispersion the material. The technique can also hinder redispersion as desired by soaking the dispersion in multi-valent salt solutions or dilute acids. Further, this improves the material's ability to dry evenly and homogenously

By
E.VENGADESH
IV-MECH

3.SOCIAL ACTIVITY


நாகை இஜிஎஸ் பிள்ளை கல்வி நிறுவனங்களின் செயலாளர் பரமேஸ்வரன், கலெக்டர் அருண்தம்புராஜிடம் பசுமை சாம்பியன் விருதை வழங்கி வாழ்த்து பெற்றார். அருகில் கல்லூரி முதன்மை

Green champion award received by Nagapattianam district collector

covid vaccination camp in our campus

Covid Awareness Rally

best social activist award

Road safety awareness

Tree plantation

NSS ACTIVITY

4. STUDENT INTERACTION &ACHEIVEMENTS

ACADEMIC YEAR-2021-2022					
1	DINESHKUMAR S	IV A	RAPID MANUFACTURING	NPTEL COURSE	JUL-OCT 2021
2	PRAKASH M	IV A	RAPID MANUFACTURING	NPTEL COURSE	JUL-OCT 2021
3	JAIGANESH R	IV A	RAPID MANUFACTURING	NPTEL COURSE	JUL-OCT 2021
4	HARIHARAN S	IV A	RAPID MANUFACTURING	NPTEL COURSE	JUL-OCT 2021
5	VENGADESH E	IV A	RAPID MANUFACTURING	NPTEL COURSE	JUL-OCT 2021
6	THILOTH A	IV A	RAPID MANUFACTURING	NPTEL COURSE	JUL-OCT 2021
7	MURALIMANOGAR A	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
8	NEELAKANDAN S	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
9	NITHARSHAN V	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
10	RAJESH R	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
11	SAKTHI A	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
12	SANJAY BHARATHI B	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
13	SATHISHKUMAR S	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
14	SHYAM BARATH B	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
15	SIVANESAN P	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
16	VASANTH M	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
17	VENKADESH S	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
18	VIMALRAJ K	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
19	LOKESHWARAN U	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
20	MOHAMED RASOOL FAHITH H	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021

21	PAVITHRAN.R	II B	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
22	AKASH S	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
23	ARUN PRABAKARAN A	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
24	ARUNPRAGASH P	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
25	DHILEEPKUMAR T	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
26	GURUSWARAN R	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
27	HARISH K	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
28	JEEVITHAN M	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
29	KAMALESH T	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
30	KAVIYARASAN M	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
31	LALITHKUMAR B S	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
32	MARAIMUDHALVAN P	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
33	ANBARASAN G	II A	ONLINE WEBINAR ON RECENTS TRENDS IN MANUFACTURING TECHNOLOGY	AVCEC	31.12.2021
34	AKILAN R	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
35	ALDRIN LEO R	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
36	ARUN KUMAR S	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
37	ASHWIN P	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
38	BAVADHARINI S	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
39	DEENA A	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
40	DHARAN R	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021

41	GOWDHAM R	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
42	HARIHARAN S	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
43	JANAKI RAMAN .G	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
44	KABILESH M	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
45	RAGUL H	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
46	RAJAJI M	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
47	RAMKUMAR N	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
48	RITHEES M	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
49	SAKTHIPRAKASH T	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
50	SARAN K	III A	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
51	SRIDHAR S	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
52	SRISUDHARSAN M	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021
53	THIRUMURUGAN T	III B	ONLINE WEBINAR ON CAD Academia to Industry	SINCET	29.12.2021

Dinesh babu from IV Mech got prize
in tamil speech competition

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository. https://nptel.ac.in/noc/

Roll No: NPTEL21ME104514460034

To
PRAKASH M

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Complete
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

PRAKASH M

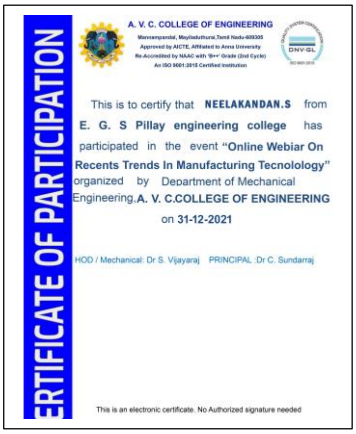
for successfully completing the course

Rapid Manufacturing

with a consolidated score of 82 %

Online Assignments	25/25	Proctored Exam	57/75

Total number of candidates certified in this course: 926



CERTIFICATE OF PARTICIPATION

A. V. C. COLLEGE OF ENGINEERING

Mannampandal, Mayiladuthurai,Tamil Nadu-609305
Approved by AICTE, Affiliated to Anna University
Re-Accredited by NAAC with 'B++' Grade (2nd Cycle)
An ISO 9001:2015 Certified Institution

This is to certify that **NEELAKANDAN.S** from **E. G. S Pillay engineering college** has participated in the event **"Online Webiar On Recents Trends In Manufacturing Tecnolology"** organized by Department of Mechanical Engineering,**A. V. C.COLLEGE OF ENGINEERING** on **31-12-2021**

HOD / Mechanical: Dr S. Vijayaraj PRINCIPAL :Dr C. Sundarraj

This is an electronic certificate. No Authorized signature needed

5.TAMIL PAKKAM

இயந்திரம்

இயந்திரம் இல்லா உலகம் வெறுமை!!
என்பதால் இயந்திரவியல் (mech) என்று
சொல்வதில் எங்களுக்கு பெருமை!!
குண்டு ஊசி முதல்
மலை குடையும் இயந்திரம் என நிலம், நீர், வானம் என
எங்கும் இயந்திரம்
இதுவே இவ்வுலகை இயக்கும் மந்திரம்!!!
சர்வமும் நாங்கள் தான் என்பதால்
கொஞ்சம் கர்வம் எங்களுக்கு எங்கள் மேலே!!!
பெருமை கொள்ள உரிமை கொண்டுள்ளோம்...
இயந்திரத்தின் சப்தம்
நாங்கள் இசைந்து கேட்கும் சங்கீதம்!!

SIDDHARTH –IV Mech

இயற்கை

இந்த உலகில் யாரும்
அனாதை அல்ல
இனிமையை தர காற்றும்
வழிகாட்ட வானமும்
இருக்கும் வரை.
இயற்கை செழிக்க
வைத்தால் இயற்கை
நம்மை செழிக்க வைக்கும்.
இயற்கையை நாம் அழிக்க
நினைத்தால் இயற்கை
நம்மை அழித்து விடும்

-BALAN-III-MECH

பிரளயம்

இறைவன் படைத்த அனைத்தும்
மக்கும் தன்மை கொண்டது
மனிதன் படைத்த அனைத்தும்
மக்கா தன்மை கொண்டது
வருங்கால சந்ததியினரை மனத்திற்
இறைவன் படைப்பு கொண்டது
வருமானம் ஒன்றினையே மனத்திற்
மனிதன் படைப்பு கொண்டது
இறைவன் படைப்பு முடிவில்
மண்ணை வளமாக்கி தந்தது
மனிதன் படைப்பு முடிவில்
மண்ணை தரிசாக்கி தந்தது
ஐந்தறிவு வரை இறைவன்
படைத்தது இயற்க்கையே நேசித்தது
ஆறாம் அறிவு இயற்கையே
அழித்து தன்னை நேசித்தது
விளைவு பூகம்பம் முதல்
பிரளயம் வரை வருத்தியது

-DINESH BABU-IV MECH

6.QUOTES

Engineers like to solve problems. If there are no problems handily available, they will create their own problems

The problem in this business isn't to keep people from stealing your ideas; it's making them steal your ideas

Any idiot can build a bridge that stands, but it takes an engineer to build a bridge that barely stands

The human foot is a masterpiece of engineering and a work of art

I've never seen a job being done by a five-hundred-person engineering team that couldn't be done better by fifty people

Manufacturing is more than just putting parts together. It's coming up with ideas, testing principles and perfecting the engineering as well as final assembly

A good scientist is a person with original ideas. A good engineer is a person who makes a design that works with as few ideas as possible. There are no prima donnas in engineering

"Engineering is the art of modelling materials we do not wholly understand, into shapes we cannot precisely analyse so as to withstand forces we cannot properly assess, in such a way that the public has no reason to suspect the extent of our ignorance

Consolidate by

ARUN-IV MECH

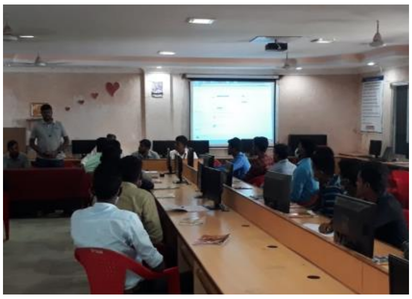
7. INDUSTRIALVISIT/IPT/INTERNSHIP/TRAININGS

NLC ,TE-2

GOLDEN ROCK, TRICHY PONMALAI

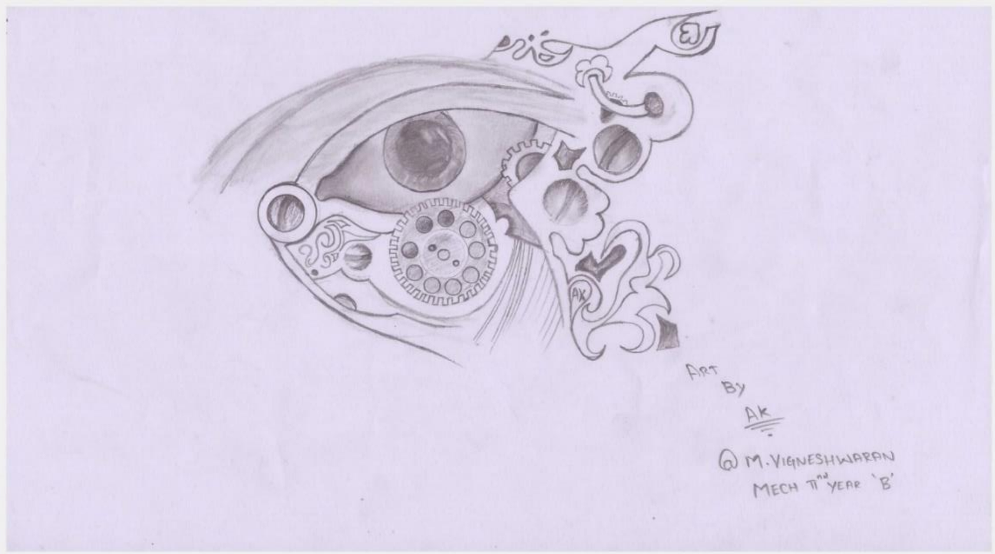
TNSTC, KUMBAKONAM

HANDS ON TRAINING IN SOLID WORKS



HANDS ON TRAINING IN HVAC

8.Creativity



9.SPORTS

II MECH Student got prize in KABADI match in papanasam

PLACE:PAPANASAM
PRICE: 2ND PRICE

PLACE: PANDARAVADAI (PAPANASAM)
price: 4th price

10. TRAINING & PLACEMENT

PLACEMENT DAY GALLERY