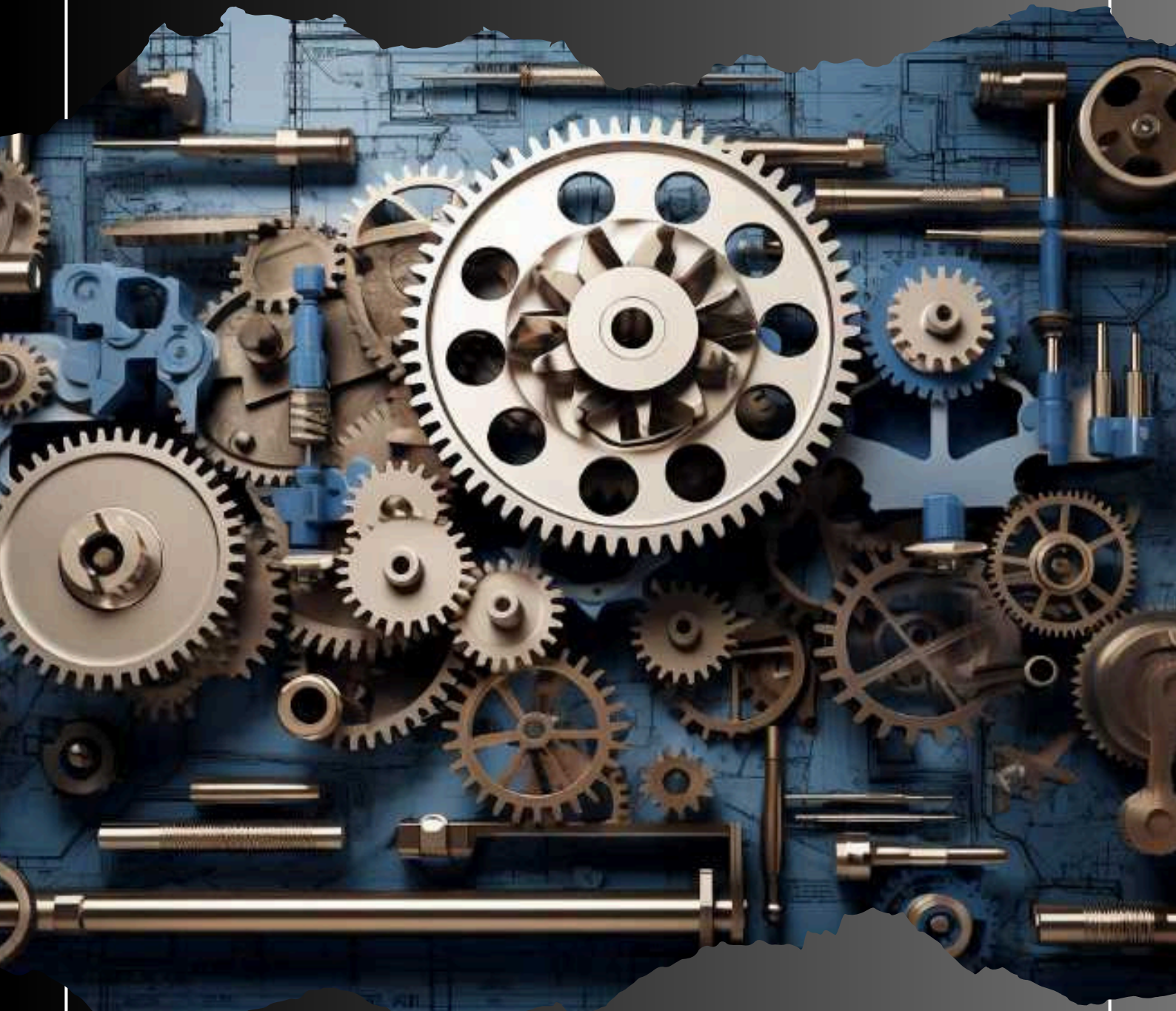


PRATIBIMB

LOKMANYA TILAK JANKALYAN SHIKSHAN SANSTHA'S
**PRIYADARSHINI BHAGWATI COLLEGE OF
ENGINEERING**

DEPARTMENT OF MECHANICAL ENGINEERING



Departmental Magazine (2023-24)

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ABOUT US



PRIYADARSHINI BHAGWATI COLLEGE OF ENGINEERING, AN AUTONOMOUS INSTITUTE, WAS ESTABLISHED IN THE ACADEMIC YEAR 2007 AND IS ONE AMONG THE FAST-GROWING TECHNICAL INSTITUTES IN THE REGION WITH A VIEW TO IMPART HIGH-QUALITY TECHNICAL EDUCATION TO THE ASPIRANTS OF TECHNICAL EDUCATION IN THE FIELD OF ENGINEERING. THE COLLEGE IS SITUATED IN THE HEART OF NAGPUR CITY AT HARPUR NAGAR ON THE MAIN UMRED ROAD, AT A DISTANCE OF ONLY 5 - 6 KMS FROM RAILWAY STATION AND 2.5 KMS FROM BUS STAND. IT IS WELL CONNECTED BY RAIL, ROAD AND AIR ROUTES. THE COLLEGE IS IN DEVELOPING STAGE, WELL EQUIPPED WITH ALL KIND OF NECESSARY INFRASTRUCTURE AND QUALIFIED AND DEDICATED FACULTIES. IT IS SET UP ON 06 ACRES LAND SITUATED WELL WITHIN THE CITY AREA AT NAGPUR - THE ORANGE CITY.

VISION & MISSION OF THE INSTITUTE

VISION

To be a leading institution ensuring Academic Excellence, Nurturing Research, Innovation and Entrepreneurial Attitude to produce employable technocrats for service to society.

MISSION

1. To be a student centric institute imbuing experiential, innovative and lifelong learning skills, addressing societal problems.
2. To create a conducive ecosystem for Research, innovation & extension services.
3. To inculcate entrepreneurial attitude and values amongst Learners.
4. To Collaborate with Industries and other institutions to strengthen symbiotic relations.
5. To inculcate high ethical and moral values among the students.

MEET MECHANICAL DEPARTMENT



TRENDS IN THE SCIENTIFIC AND TECHNOLOGICAL WORLD INDICATE RAPID TRANSFORMATIONS IN THE SCOPE OF MECHANICAL ENGINEERING. THE MECHANICAL ENGINEERING DEPARTMENT WAS ESTABLISHED IN 2010. THE DEPARTMENT HAS HIGHLY RICH TEAM OF WELL QUALIFIED, DEDICATED, HIGHLY COMPETENT FACULTIES WITH SPECIALIZATIONS IN DIVERSE AREAS OF MECHANICAL ENGINEERING WITH RESEARCH AND INDUSTRIAL EXPERIENCE.

PUPILS CAN HAVE THE HAND ON EXPERIENCE FOR PERFORMING THE TASK SUCH A MOLDING AND MACHINING PROCESSES. THE DEPARTMENT HAS ALL TYPE OF TURBINES IN HYDRAULIC LAB AND MACHINE SHOP IS EQUIPPED WITH MILLING MACHINE, SHAPING MACHINE, RADIAL DRILL MACHINE AND LATHE MACHINES. IN ADDITION TO CLASSROOM TEACHING, OUR LEARNING METHODS INCLUDE SEMINARS, EXPERT LECTURES AND INDUSTRY BASED PROJECTS. THE STUDENTS OF THE DEPARTMENT ALSO EXCEL IN THE UNIVERSITY AND SECURE MERIT RANKS.

VISION & MISSION OF THE DEPARTMENT

VISION

To produce competent engineers who are ready to contribute effectively to the advancement of mechanical engineering and to accommodate the needs of the profession.

MISSION

M1: To provide a student-centric learning environment that fosters hands-on, experiential, and lifelong learning in mechanical engineering.

M2: To cultivate a research-driven ecosystem that promotes innovation and collaboration with industries and academic institutions.

M3: Encourage students to develop an entrepreneurial mindset, fostering creativity and innovation in engineering.

M4: Instil strong ethical and moral values to develop responsible engineers and leaders who positively impact society.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1:

Graduates will apply fundamental knowledge of mechanical engineering to solve complex engineering problems in industry, research, or higher education.

PEO2:

Graduates will demonstrate professional ethics, effective communication, teamwork, and leadership skills to excel in multidisciplinary environments and adapt to evolving technologies.

PEO3:

Graduates will contribute to society through responsible engineering practices, sustainable solutions, and a commitment to lifelong learning and innovation.

PROGRAM OUTCOMES

- PO1: Engineering Knowledge: Students will be able to apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem Analysis: Students will be able to identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
- PO3: Design/Development of Solution: Students will be able to 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.
- PO4: Investigation: Students will be able to 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.
- PO5: Modern Tool Usage: Students will be able to 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.
- PO6: Engineer and Society: Students will be able to apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practices

PROGRAM OUTCOMES

- PO7: Environment and Sustainability: Students will be able to understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
- PO8: Ethics: Students will be able apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and Team Work: Students will be able to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: Communication: Students will be able to communicate effectively on complex activities.
- PO11: Project Management & Finance: Students will be able to understand and apply engineering and management principles to manage projects in multidisciplinary environments.
- PO12: Life-long Learning: Students will be able to engage in independent and lifelong learning in broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

- PSO1: The graduates will be able to identify, formulate and analyze complex Engineering problems in Thermal Engineering, Design Engineering and Manufacturing Engineering domains.
- PSO2: The graduates will be able to find out, articulate the local industrial problems and solve with the use of Mechanical Engineering tools for realistic outcomes.
- PSO3: The graduates will be able to get the knowledge from the collaborative learning to find out cost-effective optimal solution for sustainable growth.

**FROM THE DESK OF
DR. N. K. CHOUDHARI
PRINCIPAL, PBCOE**



"Honest efforts taken in right direction always leads to a path towards goal."

Technical Education plays important role in the development of Nation. We at PBCOE believe in providing quality based Technical Education for creating Engineers with sound technical knowledge and high moral

character to serve the society. To accomplish our aim we provide best infrastructure with well equipped laboratories, highly competent and learned faculty devoted towards academics and overall development of the students. We have successfully achieved total academic environment with high discipline.

FROM THE DESK OF
DR. R. K. POHANE
HEAD OF THE DEPARTMENT,
MECHANICAL ENGINEERING



Trends in the scientific and technological world indicate rapid transformations in the scope of mechanical engineering. The Mechanical Engineering department was established in 2010. The department has highly rich team of well qualified, dedicated, highly competent faculties with specializations in diverse areas of Mechanical Engineering with research and industrial experience.

Pupils can have the hand on experience for performing the task such a molding and machining processes. The department has all type of turbines in Hydraulic lab and Machine shop is equipped with milling machine, shaping machine, radial drill machine and lathe machines.

FROM THE DESK OF
DR. K. D. GANVIR
FORUM INCHARGE,
MECHANICAL ENGINEERING



The student forums of the Mechanical department and sankalp have always been a hub of creativity, innovation, and collaboration. This year's edition of pratibimb captures the essence of our collective efforts and achievements across various domains. The forums have witnessed significant participation in technical workshops, seminars, and competitions, with students excelling in both academic and practical arenas, setting new benchmarks within the department. In addition to academic excellence, the department has also embraced cultural, sports, and social activities, recognizing their vital role in holistic development. Our students have actively engaged in cultural events, showcasing their artistic talents and fostering a vibrant community spirit. The enthusiasm in sports has been equally commendable, with students achieving notable successes that bring pride to the department. As Pratibimb reflects on the past year, it also looks forward to the future, where the commitment to creativity, innovation, excellence, and holistic development remains unwavering.

FROM THE DESK OF
DR. A. D. ANJIKAR
MAGAZINE INCHARGE,
MECHANICAL ENGINEERING



FROM THE DESK OF
DR. S. P. DAF
MAGAZINE INCHARGE,
MECHANICAL ENGINEERING



The Editorial Board of the Institute proudly presents its unique creation in the form of the Annual Magazine "PRATIBIMB " every year which serves as a platform to highlight the literary and artistic segment of the Department of Mechanical Engineering, Priyadarshini Bhagwati College of Engineering. Being the Editor In charge of the Departmental magazine "PRATIBIMB 2024-25" , it gives me great pleasure to bring to you this issue "PRATIBIMB 2024-25" is designed to present to its readers the year's events that have gone by, the magazine also showcases the talents of our faculty members and students. With a sense of pride and satisfaction I would like to say that with the active support of the management, Principal, HOD, faculty members and students, such cherished work has come alive. With all the efforts and contributions put in by the faculty members and students, I truly hope that the pages that follow will make some interesting reading.

I congratulate the editorial team for making the magazine innovative and inspiring.

FACULTY OF MECHANICAL DEPARTMENT



Dr. R. K. Pohane
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Associate Professor & HOD



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Ph.D, M.Tech,
B.E Assistant Professor



Dr. S. V. Borkar
Ph.D, M.Tech,
B.E Assistant Professor



Prof. S. G. Ghugal
Ph.D, M.Tech,
B.E Assistant Professor



Dr. R. K. Bhojar
Ph.D, M.Tech,
B.E Assistant Professor



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B.E Assistant Professor

Staff Group Photo



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AYUSH MULE
VI SEM
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CONTENT AGGREGATOR



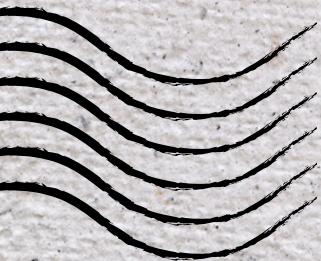
MAYUR SAWANE
VI SEM
CONTENT AGGREGATOR



2023 - 2024

ARTICLE

**"A WORD AFTER A WORD AFTER
A WORD IS POWER."**



ARTICLE

ADVANCEMENTS IN 3D PRINTING FOR MECHANICAL COMPONENTS

Introduction

Advancements in 3D Printing for Mechanical Components is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Advancements in 3D Printing for Mechanical Components. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of Advancements in 3D Printing for Mechanical Components are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

Despite its advantages, Advancements in 3D Printing for Mechanical Components faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Advancements in 3D Printing for Mechanical Components looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Advancements in 3D Printing for Mechanical Components stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~AKSHAY NIMJE

ROLE OF ARTIFICIAL INTELLIGENCE IN MECHANICAL ENGINEERING DESIGN

Introduction

Role of Artificial Intelligence in Mechanical Engineering Design is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Role of Artificial Intelligence in Mechanical Engineering Design. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

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Challenges

Despite its advantages, Role of Artificial Intelligence in Mechanical Engineering Design faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Role of Artificial Intelligence in Mechanical Engineering Design looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Role of Artificial Intelligence in Mechanical Engineering Design stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~AMIT VITOLE

ELECTRIC VEHICLES VS. INTERNAL COMBUSTION ENGINES: A MECHANICAL PERSPECTIVE

Introduction

Electric Vehicles vs. Internal Combustion Engines: A Mechanical Perspective is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Electric Vehicles vs. Internal Combustion Engines: A Mechanical Perspective. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of Electric Vehicles vs. Internal Combustion Engines: A Mechanical Perspective are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

Despite its advantages, Electric Vehicles vs. Internal Combustion Engines: A Mechanical Perspective faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Electric Vehicles vs. Internal Combustion Engines: A Mechanical Perspective looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Electric Vehicles vs. Internal Combustion Engines: A Mechanical Perspective stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~CHETAN LONARE

HYDRAULIC SYSTEMS: CONSTRUCTION, WORKING, AND APPLICATIONS

Introduction

Hydraulic Systems: Construction, Working, and Applications is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Hydraulic Systems: Construction, Working, and Applications. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of Hydraulic Systems: Construction, Working, and Applications are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

Despite its advantages, Hydraulic Systems: Construction, Working, and Applications faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Hydraulic Systems: Construction, Working, and Applications looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Hydraulic Systems: Construction, Working, and Applications stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~DEEPAK POKALE

THE FUTURE OF ROBOTICS AND MECHATRONICS IN MANUFACTURING

Introduction

The Future of Robotics and Mechatronics in Manufacturing is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of The Future of Robotics and Mechatronics in Manufacturing. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of The Future of Robotics and Mechatronics in Manufacturing are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

Despite its advantages, The Future of Robotics and Mechatronics in Manufacturing faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of The Future of Robotics and Mechatronics in Manufacturing looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

The Future of Robotics and Mechatronics in Manufacturing stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~DEVILAL VERMA

ADDITIVE MANUFACTURING VS. SUBTRACTIVE MANUFACTURING

Introduction

Additive Manufacturing vs. Subtractive Manufacturing is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Additive Manufacturing vs. Subtractive Manufacturing. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of Additive Manufacturing vs. Subtractive Manufacturing are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

Despite its advantages, Additive Manufacturing vs. Subtractive Manufacturing faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Additive Manufacturing vs. Subtractive Manufacturing looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Additive Manufacturing vs. Subtractive Manufacturing stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

HEAT EXCHANGERS: TYPES, DESIGN, AND INDUSTRIAL APPLICATIONS

Introduction

Heat Exchangers: Types, Design, and Industrial Applications is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Heat Exchangers: Types, Design, and Industrial Applications. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

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Despite its advantages, Heat Exchangers: Types, Design, and Industrial Applications faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Heat Exchangers: Types, Design, and Industrial Applications looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Heat Exchangers: Types, Design, and Industrial Applications stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~GAURAV MAHADULE

RENEWABLE ENERGY SYSTEMS AND THEIR MECHANICAL DESIGN CHALLENGES

Introduction

Renewable Energy Systems and Their Mechanical Design Challenges is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Renewable Energy Systems and Their Mechanical Design Challenges. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of Renewable Energy Systems and Their Mechanical Design Challenges are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

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Future Outlook

The future of Renewable Energy Systems and Their Mechanical Design Challenges looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Renewable Energy Systems and Their Mechanical Design Challenges stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~GAURAV JAWANJAL

SMART MATERIALS AND THEIR ROLE IN MECHANICAL ENGINEERING

Introduction

Smart Materials and Their Role in Mechanical Engineering is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

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Conclusion

Smart Materials and Their Role in Mechanical Engineering stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~GURPRIT GILL

JET PROPULSION SYSTEMS: PRINCIPLES AND MODERN APPLICATIONS

Introduction

Jet Propulsion Systems: Principles and Modern Applications is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Jet Propulsion Systems: Principles and Modern Applications. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

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Jet Propulsion Systems: Principles and Modern Applications stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~HARSHAL MANDHARE

AUTOMATION IN PRODUCTION: CNC VS. TRADITIONAL MACHINING

Introduction

Automation in Production: CNC vs. Traditional Machining is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

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Recent advancements have enhanced the scope of Automation in Production: CNC vs. Traditional Machining. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

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~HARSHAL TAYDE

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Automation in Production: CNC vs. Traditional Machining stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~HIMANSHU MANKAR

BIOMECHANICS: MECHANICAL ENGINEERING IN MEDICAL APPLICATIONS

Introduction

Biomechanics: Mechanical Engineering in Medical Applications is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

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Recent advancements have enhanced the scope of Biomechanics: Mechanical Engineering in Medical Applications. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

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The applications of Biomechanics: Mechanical Engineering in Medical Applications are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

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Despite its advantages, Biomechanics: Mechanical Engineering in Medical Applications faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Biomechanics: Mechanical Engineering in Medical Applications looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Biomechanics: Mechanical Engineering in Medical Applications stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~ISHWAR CHAUDHARY

VIBRATION ANALYSIS IN MECHANICAL SYSTEMS AND ITS IMPORTANCE

Introduction

Vibration Analysis in Mechanical Systems and Its Importance is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

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Despite its advantages, Vibration Analysis in Mechanical Systems and Its Importance faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

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The future of Vibration Analysis in Mechanical Systems and Its Importance looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Vibration Analysis in Mechanical Systems and Its Importance stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~MANISH YENDE

TRIBOLOGY: THE SCIENCE OF FRICTION, LUBRICATION, AND WEAR

Introduction

Tribology: The Science of Friction, Lubrication, and Wear is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

Recent advancements have enhanced the scope of Tribology: The Science of Friction, Lubrication, and Wear. Engineers are now capable of designing more efficient, durable, and cost-effective solutions using this technology. Developments in computational tools, advanced materials, and automation have further accelerated progress.

Applications

The applications of Tribology: The Science of Friction, Lubrication, and Wear are vast. It plays a crucial role in automotive, aerospace, energy systems, biomedical engineering, and manufacturing industries. Each of these sectors has benefitted greatly from innovations in this area.

Challenges

Despite its advantages, Tribology: The Science of Friction, Lubrication, and Wear faces challenges including cost, implementation complexity, maintenance, and the need for skilled professionals. Addressing these limitations is essential for its wider adoption.

Future Outlook

The future of Tribology: The Science of Friction, Lubrication, and Wear looks promising. With the integration of Industry 4.0, Artificial Intelligence, and advanced materials, this field will continue to evolve, providing more efficient and sustainable solutions.

Conclusion

Tribology: The Science of Friction, Lubrication, and Wear stands as a cornerstone of modern mechanical engineering. Its continuous development ensures that it will remain vital for innovation and industrial growth in the future.

~MAYUR KHOT

MODERN WELDING TECHNOLOGIES AND THEIR INDUSTRIAL IMPACT

Introduction

Modern Welding Technologies and Their Industrial Impact is one of the most important areas in modern mechanical engineering. This topic has been extensively researched and applied in recent years, bringing innovation, efficiency, and improved performance across various industries.

Key Developments

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Applications

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Conclusion

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~NEHAL NINAVE

ACTIVITY



**FOUNDER
DAY**

**SOCIAL
ACTIVITY**

**SPORT
ACTIVITY**

**WALL
MAGAZINE**

A WEBINAR TO MOTIVATE MECHANICAL ENGINEERING STUDENTS

Priyadarshini Bhagwati College of Engineering (PBCOE) had recently organised a webinar called — Industry 4.0. It was initiated by the internal quality assurance cell along with the mechanical department of the college for the students and the faculty members.

The online session was conducted by VNTT professor Dr AM Kuthe, who specialises in rapid prototyping, biomedical engineering and layered manufacturing. Another professor Kanchan Ganvir Ramteke holds the specialisation on CAD/CAM was the co-ordinator. She motivated the students to keep the learning curve and make sure their knowledge is put to right use in developing their

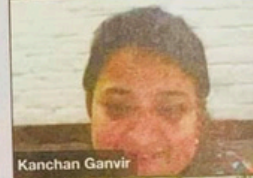
personalities and the country.

The webinar gave around 250 collegians an opportunity to know the nitty-gritties of the industry for mechanical engineers and its functioning. They were given insights on the future of the industry post lockdown, including the changes as well as opportunities.

The head of the Mechanical Department, Dr SM Pimpalgaonkar, added that learning has to be a continuous process and it helps in opening the perspectives. On a concluding note, principal, PBCOE Dr NK Choudhari, said that the education is not merely meant to attain knowledge but to catalyse the same into action. Dr AR Chaudhari too participated in the discussion.



Dr AM Kuthe



Kanchan Ganvir



Dr Nitin Chaudhari

The faculty members who participated at the webinar



Priyadarshini Bhagwati College of Engineering

The Hitavada

NAGPUR ■ Sunday ■ April 21 ■ 2019

Priyadarshini Bhagwati College of Engg



Dignitaries on the dais during the event Anubhuti.

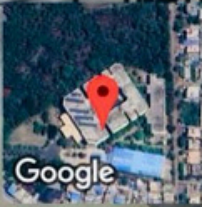
MECHANICAL Department of Priyadarshini Bhagwati College of Engineering organised 'Anubhuti 2K19' - A Technical Event recently. There were three main competition viz Wrangle - A Debate competition, Quizard and Idea Expression - Power point presentation. Abhijeet Ubarhande, HR Manager, Mahindra & Mahindra Ltd, was the chief guest for the programme. Inauguration was done at the hands of chief guest Dr N K Choudhari. Principal Dr A R Chaudhari was also present for the programme, HoD S M Pimpalgaonkar was convenor of the programme, where Prof K D Ganvir and Prof S G Ghugal were organising secretary of the event. Abhijeet Ubarhande chief guest of the programme, delivered a motivating speech. At the end, a vote of thanks was proposed by Prof S G Ghugal, expressing his gratitude towards the management for providing such an eminent platform to carry out the programme. Prof S P Daf, N Z Adkane and M R Moroliya were event in-charges. Senior faculties Dr A R Golhar and Dr R A Nandanwar, Dr R K Pohane, Dr S D Dhoble, Prof P M Palkar were present for the programme. All faculty members of Mechanical Department, Non-teaching staff, student coordinators and student participants were present for the programme.











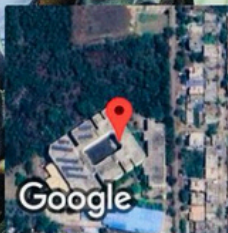
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STUDENT FORUM



July 2023

Student forums provide a valuable platform for students to share ideas, discuss technical topics, and collaborate on projects. They foster a sense of community, encourage peer-to-peer learning, and help students stay updated on industry trends and developments.

2023 - 2024

MECHANICAL DEPARTMENT

EDUCATION | SPORT | AWARD

[HTTPS://PBCOE.EDU.IN/](https://pbcocoe.edu.in/)