

DEPARTMENT OF MECHANICAL ENGINEERING

MECH @ CONNECT

JAN - JUNE
2023

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LAKSHMI NARAIN COLLEGE OF TECHNOLOGY, BHOPAL

VISION:

To be a premier institute where engineering education and research converge to produce engineers as responsible citizens.

MISSION:

- To improve continually in the teaching-learning process by strengthening infrastructural facilities and faculty credentials.
- To undertake interdisciplinary research and development by engaging the faculty and students in curricular, co-curricular and industry collaborated projects towards problem solving.
- To enhance proportion of skilled based courses beyond curriculum to create more employable graduates.
- To inculcate human values, ethics, patriotism and responsibility in our outgoing engineers by providing conducive environment.

DEPARTMENT OF MECHANICAL ENGINEERING

VISION:

To be recognized in academics and research for producing engineers as responsible citizen who are innovative, choice of employers and able to do further studies & research.

MISSION:

- To provide knowledge and skills of Mechanical Engineering to the students.
- To impart quality education to make students competent mechanical engineer and responsible citizen.
- To provide facilities and Environment conducive to grounding scholars for employability, higher studies and research.
- To prepare its students for Successful career in engineering.

Program Educational Objectives (PEOs)

To make the students able of applying knowledge of mathematics, science and subjects of mechanical engineering in dealing with engineering problems.

To be able to identify and understand real life problems and suitably design and manufacture, feasible and sustainable mechanical devices and systems.

To be able to carry out the research work in the field of Mechanical Engineering.

To be able to use modern tools and techniques for the efficient working and meeting challenges of modern society and industry.



PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

- Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 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.
- 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.
- 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.
- Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 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.
- 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.
- Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 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.
- 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.
- 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.

DEPARTMENTAL NEWS

Two of students of mechanical engineering department "Anshuman Gupta and Prakhhar Upadhyay" are placed in Ashok Leyland.

Congratulations!

TO SELECTED ALL **6 STUDENTS**
BATCH 2023 | PACKAGE 5 LPA

ASHOK LEYLAND
Aapki Jeet. Hamari Jeet



Aman Kumar Tiwari
LNCET - Electrical & Electronics



Mantasha Alam
LNCET - Electrical & Electronics



Akshat Sharma
LNCET - Electrical



Neeraj Kumar Vishw,
LNCET - Electrical & Electronics



Anshuman Gupta
LNCET - Mechanical

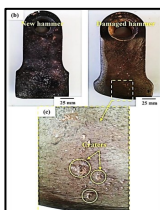
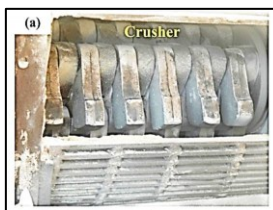


Prakhhar Upadhyay
LNCET - Mechanical

ARTICLE

Tribological performance of high chromium white cast iron and heat treated steel used in barite crushing industry

Barite sulfate ($BaSO_4$) is widely used as a weighting agent in drilling fluids, but its crushing process causes severe wear of high chromium white cast iron (HCWCI) hammers. This study compares the tribological performance of HCWCI and heat-treated AISI P20 steel under loads of 5–10 N and test durations of 60–240 min. AISI P20 exhibited a lower friction coefficient and significantly lower wear depth than HCWCI under all conditions. SEM analysis showed abrasive wear in both materials, with HCWCI exhibiting carbide cracking and AISI P20 displaying grooves and ploughing. Overall, AISI P20 demonstrated superior wear resistance and potential as a substitute for HCWCI.



CAMPUS SPORTS NEWS



6th Engineer Olympic Games inaugurated at Lakshmi Narayan College of Technology from 11th to 13th April 2023 to be played under lights Kabaddi, Volley Ball, Basketball, Football, Cricket, Chess, Table Tennis, Athletics, Carrom, Tug of War and Street cricket games are being organized.

In this competition more than 2800 players from different educational institutions will showcase their talent in various sports.

Tennis ball tournament has been won by L.N.C.T Group of College in 6th Engineer Olympic Games. Team has been led by Prashant Kumar (Mechanical Branch).



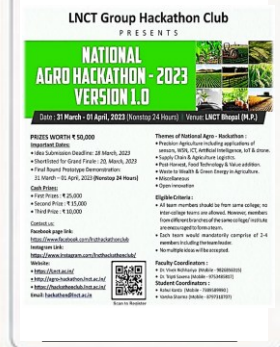
STUDENT ACHIEVEMENTS

Congratulations to the outstanding candidate from the 1MP CTR NCC Bhopal Group for achieving the highest score in the NCC certificate exam. Their exceptional dedication and hard work have set a new standard of excellence within the NCC community. We are immensely proud of their accomplishment and the commitment they have shown to their NCC training.



AGRO HACKATHON

LNCT Group Hackathon Club is organized a "National Agro Hackathon -2023, version 1.0" in order to encourage innovation and creativity in the field of agriculture. LNCT invited all students who are passionate about agriculture and have interest in finding solutions to current challenges in the industry. Win Cash Prizes worth up to ₹ 50,000 Grand Finale Date: 31 March -1 April, 2023 (nonstop 24 hours)



NEWS AROUND THE WORLD

Formula One specialist MGI Engineering has revealed two cargo drone technology demonstrators, using its motorsport mindset to tackle challenges in the sector.



ISRO getting ready for Chandrayaan-3 mission in July second week: Senior official



SPORTS NEWS

Tokyo Olympic gold medalist Neeraj Chopra has claimed number one ranking in men's javelin for the first time. Neeraj Chopra has topped the charts with 1455 points, 22 ahead of Grenada's Anderson Peters.



India beat England to win the inaugural Women's U19 T20 World Cup title. Chasing a meagre 69, India lost Shafali Verma and Shweta Sehrawat early. But G Trisha and Soumya Tiwari built a solid partnership to guide India home.



All-Terrain Vehicle

All-Terrain Vehicle, typically refers to a small, motorized vehicle designed for off-road use. It is commonly used for recreational purposes, such as exploring trails and navigating through rugged terrain.



Our college SAE club team visited Pune for ATV round in which there are four rounds TECHNICAL INSPECTION, BREAK TEST, ACCELERATION TEST, ENDURANCE TEST. (In this round the key moles have been achieving since 6 to 5 years)