



K. D. Polytechnic Patan

*The official news Letter of
Mechanical Engineering Department*



Institute Vision

To impart quality technical education and create an ethically sound class of well-trained youth that can achieve opportunities in industries and serve the society.

Institute Mission

- To develop well-equipped laboratories and good academic infrastructure.
- To promote co-curricular and extracurricular activities for overall personality development of the students.
- To strengthen industry institute interaction.
- To inculcate entrepreneurial skills.
- To instill discipline and social awareness among students and enable them to deal with practical problems in daily life.



Issue-03, Jan-June 2023

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Message from Principal

Shri R. M. Shaikh

Our Nation is developing phase, Development and sustainability of nation is proportional with the development of industries. Industrial development is dependent on the availability of trained and skilled manpower. The K. D. Polytechnic, Patan offers a variety of courses, with an emphasis on basic to advanced engineering tools and techniques, rigorous tasks and project-based learning under the guidance of experienced mentors.

We believe that students of K. D. Polytechnic, Patan would excel across multi dimensions, like knowledge domain, skills, communication, basic human values and environmental consciousness. We are making sincere efforts for the holistic development of the students hence we have succeeded in maintaining our position among leading Diploma Institute in Engineering in the state.

The Training and Placement cell works tirelessly towards ensuring employment for all students across various industries and helping for Startups through the Gujarat of Government SSIP policy to transforms ideas into product.

I wish them all the very best to all for their bright futures and we are associated with the students for achieving & fulfilling their academic pursuits throughout their stay at the campus and even after.

Message from HOD

Shri. H. C. Parmar

A warm and Green Greetings from the Department of Mechanical Engineering at K D Polytechnic, Patan.

Mechanical engineering plays a significant role in enhancing safety, economic vitality, enjoyment and overall quality of life throughout the world. It is one of the oldest and broadest engineering discipline. Mechanical Engineering is a professional Core engineering discipline that deals with the design, production and maintenance of any produce of any industry.

Our department always work with the motto "Nothing can be achieved without genuine effort." The core values of the department help the students to develop their overall personality and capable them to work at global level. Our department has a team of highly qualified and experienced faculty, good infra structure and lab facilities. We are striving hard continuously to improve upon the quality of education and to maintain its position of leadership in engineering and technology. Our faculty are continuously attending various training programs, publishing research papers, books and filing patents. Many are pursuing research.

We are happy to share that many students are pursuing higher studies in leading universities in India and abroad. I am certain that our students will prove to be an invaluable asset to an organization.

Department Vision

To impart quality technical education and prepare competent diploma mechanical engineers to cater industry needs and carry out innovation.

Department Mission

- To Adopt outcome base curricula and implement innovative teaching learning process for realizing outcome base education.
- To Provide opportunities to the students for the development of professional skills.
- To Inculcate life-long learning approach in the students.

Program Educational Objectives

- To Adopt outcome base curricula and implement innovative teaching learning process for realizing outcome base education.
- To Provide opportunities to the students for the development of professional skills.
- To Inculcate life-long learning approach in the students.

Faculty Achievements



Mr. N. J. Prajapati

Lecturer Mechanical

Paper Published

Title:- “Parametric study and experimental investigation of material removal capability of powder mixed electric discharge machining”

Journal:- Journal of Aeronautical Materials

Publication:- Vol.43 Issue: 01, 23 pp. 434-446 ISSN: 1005-5023




About Article:-

The use of powder mixed electric discharge machining (PMEDM) has shown promising results in the machining of difficult-to-cut materials, such as metal matrix composites (MMCs). This process involves adding powder particles to the dielectric fluid used in electric discharge machining (EDM), improving the material removal rate (MRR) and surface quality of the machined part. This paper provides a comprehensive review of research studies on PMEDM for the machining of MMCs, focusing on the effects of various process parameters, such as powder concentration, pulse on-time, and ultrasonic amplitude, on the MRR and surface quality. The review also identifies the challenges and limitations of this process, and suggests areas for future research.




Results from previous studies have demonstrated that PMEDM can significantly improve the MRR and surface quality of machined MMCs when compared to traditional EDM. The addition of powder particles to the dielectric fluid and the application of ultrasonic vibrations have shown to enhance the flushing and cooling of the machining zone, reducing tool wear and improving machining accuracy.




Student Achievements

SEMESTER-5

RANK-1		RANK-2		RANK-3	
					
NAME	Trivedi Smit Surendrakumar	NAME	PRAJAPATI KEYURKUMAR MOHANBHAI	NAME	ZALA SACHINSINH RAVINDRASINH
ENROLLMENT NO	196310319146	ENROLLMENT NO	206310319016	ENROLLMENT NO	206310319013
SPI (OUT OF 10)	9.88	SPI (OUT OF 10)	9.47	SPI (OUT OF 10)	9.21

SEMESTER-3

RANK-1		RANK-2		RANK-3	
					
NAME	PATHAN MOHAMMADANAS MOHAMMADAMIN	NAME	DEVLIYA DARSHAN PRAKASHBHAI	NAME	PATEL HARSH ARVINDBHAI
ENROLLMENT NO	216310319011	ENROLLMENT NO	216310319033	ENROLLMENT NO	216310319060
SPI (OUT OF 10)	8.78	SPI (OUT OF 10)	8.61	SPI (OUT OF 10)	8.52

RANK-1		RANK-2		RANK-3	
					
NAME	RAVAL SARVAGNA DHURVKUMAR	NAME	THAKOR JAYDIPSINH VASANTJI	NAME	DAVE HETKUMA GIRISHCHANDRA
ENROLLMENT NO	226310319056	ENROLLMENT NO	226310319064	ENROLLMENT NO	226310319012
SPI (OUT OF 10)	10	SPI (OUT OF 10)	9.2	SPI (OUT OF 10)	8.65

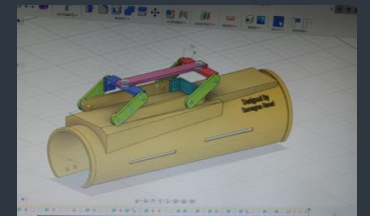


The You tube channel - Sarvagna Raval DIY Videos

I have a youtube channel named SARVAGNA RAVAL which is related to DIY projects. I uploaded 86 videos and 26 shorts which are related to technical projects.

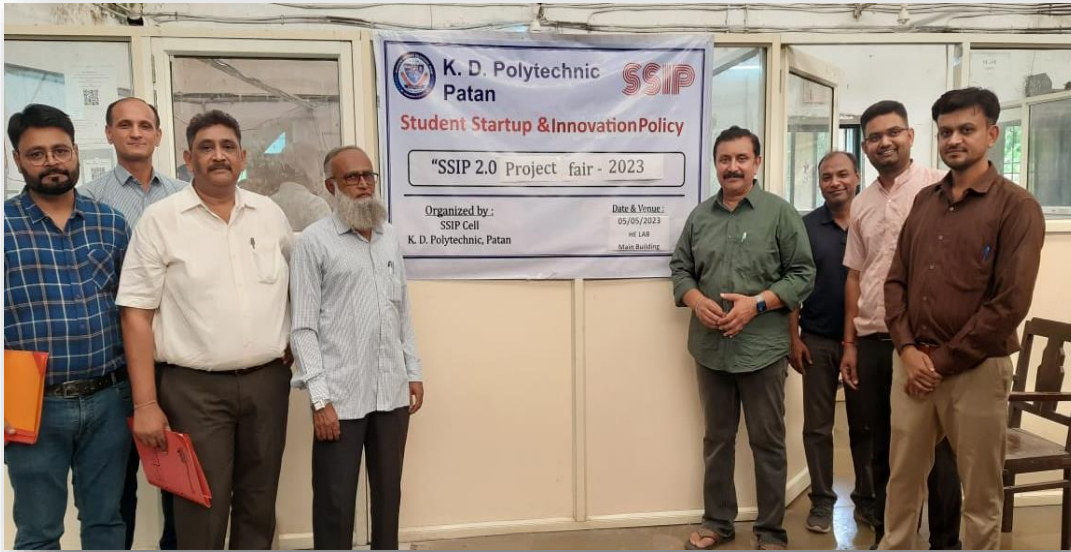
3 years ago I made an Ironman Hand Gauntlet prototype which is my main project. Then I made that again 3 times to make it more advance.

And now I'm going to make whole 3d printed gauntlet which is gonna be more efficient. I already made its Design in Fusion 360. Which you can see in this image.



- Sarvagna Raval

SSIP 2.0



Student Start up & Innovative Policy SSIP 2.0

Date: - 05-05-2023

Venue: - HE Lab

Group of students: - 19

The Student Startup and Innovation Policy (SSIP) 2.0 is the updated version of the SSIP 1.0 policy launched by the Government of Gujarat in January 2022. The policy period is of 5 years (January 2022 – March 2027). The aim of SSIP 2.0 is to build on the success of the previous policy and take it to the next level by providing more comprehensive support to the startups and entrepreneurs in the state.

The policy provides funding assistance, mentorship, incubation, and accelerator support to the student startups, along with access to industry networks and global markets.

The SSIP 2.0 policy has also introduced a new concept of Innovation and Entrepreneurship (iHub), which is acting as a one-stop-solution for sector-wise startups and entrepreneurs. These hubs will provide state-of-the-art facilities, including co-working spaces, labs, and incubation centers, to the startups.

Expert Lecture/ Seminar



EXPERT LECTURE

Expert lecture on AutoCAD

By Mr. Mukesh Goya

Dt:- 06th Jan 2023

Sem: - 2

No of Students: - 35



Expert lecture on Solid works

By Mr. Mukesh Goya

Dt:- 5th April 2023

Sem: - 6

No of Students: - 45



Expert talk on Career Guidance & Skill build

By Mrs. Sharvari Parikh & Mrs. Devika Jagannath

Dt:- 30th Jan 2023

Sem: - 6

No of Students: - 60

Expert Lecture/ Seminar



EXPERT LECTURE

Expert talk on Consumer awareness & Cyber Security

By P. K. Patel and Roshni Patel, Police Station, Patan

Dt:- 10th Jan 2023

Sem: - 6

No of Students: - 40



Seminar on Y20

By Mr R. H. Prajapati

Dt:- 08th Feb 2023

Sem: - 2

No of Students: - 42



Expert talk on Career Guidance after Diploma in Mech

By Prof. Vivek kumar Mishra (NIT Bhopal)

Dt:- 08th Feb 2023

Sem: - 6

No of Students: - 60

INDUSTRIAL Visit



Adani Industry Pvt. Ltd

03 & 04th March
2023 (02 Days)

Sem: - 6

No of Students: - 38

No of Faculties: -02

This Visit includes

- Adani Wilmar
- Adani Port
- Adani Power plant
- Adani Westport

This industrial visit is beneficial to enhancing practical knowledge in following diploma courses:

- Thermal Engineering
- Industrial Engineering & management
- Advance Manufacturing System

Mundra Port is the largest private port of India located on the north shores of the Gulf of Kutch near Mundra, Kutch district, Gujarat.



Industrial Visit



INDUSTRIAL Visit



Sarjan Industry Ltd

19th & 21st January
2023

Sem: - 1

No of Students: - 37

No of Faculties: -02

Sarjan Industries is a well-established experienced engineering company with in-house design capability. While following the best industry standards. They are manufacturing swings - a feeling of indian tradition. All kind of exterior & interior - garden, patio, indoor, outdoor swings.

This industrial visit is beneficial to enhancing practical knowledge in following diploma courses:

- Manufacturing Engg-1

Industrial Visit



INDUSTRIAL Visit



GPRI, Mevad

04th May 2023

Sem: - 6

No of Students: - 47

No of Faculties: -02

GPRI Mehsana have jointly established "Centre of Excellence (CoE) in Industrial Automation" for skill up gradation of Engineering students and professionals of this regime. The major objectives are to develop latest and open technology laboratories, to promote research and innovation for practicing industries, to promote industry-academia interfacing.

Maruti ind Patan

03rd May 2023

Sem: - 6

No of Students: - 59

No of Faculties: -02

This above industrial visit is beneficial to enhancing practical knowledge in following diploma courses:

- Advance Manufacturing System
- Computer Aided Manufacturing

Industrial Visit



03/05/2023 14:10

Placement



Training & Placement Cell

The Training and Placement cell works tirelessly towards ensuring employment for all students across various industries and helping budding entrepreneurs in establishing successful businesses.

Placement

	Name of Company	No. of Students Selected
1	ARSELLAR MITTAL NIPPON STEEL LTD	12
2	KRISHNA GRUPO ANTOLIN	8
3	CEAT TYRE	29
4	HELLA AUTOMOTIVE INDIA PVT.LTD	16
5	SHARDA SONS	60
6	5TH CORNER OVERSEAS	14
7	YANTRADHIGAM	2
8	KRISHNA MARUTI LTD	16



ENERGY SAVING TIPS

THROUGH THE GREEN IMPACT PROGRAMME, WE ARE ALWAYS TRYING TO BE MORE ENERGY EFFICIENT IN OUR OFFICE. TO HELP YOU CONTINUE THE GREAT WORK, HERE ARE SOME TOP TIPS FOR SAVING ENERGY.



LIGHTS

Remember to switch off lights when you leave your area of the office. People can turn the light back on again if they need to!

COMPUTERS

At the end of the day shut down your computer properly - at the plug if possible. If your computer needs to stay on please switch off the screen.



CHARGERS

Switch it off and save! Unplug any chargers when they are not in use as even mobile phone chargers continue to use electricity when they aren't charging.



IN THE KITCHEN

Switch off the light when leaving the kitchen and remind others to do the same! Turning off the microwave and toaster can also save energy.



PRINTERS

Remember that the MDF printer cannot be turned off at the plug. Instead put the printer in sleep mode and print double-sided to save paper!

SUGGESTIONS?



Mega Placement Camp 2023



Mega Placement Camp 2023

Date:- 16th March 2023

Venue:- HNGU Campus Patan

Campus recruitment is a process through which the corporate (employer) organization recruits the required talent pool from the academic campuses. The selection process takes place in the final year of a programme for students of both undergraduate and Diploma courses. Over the years, campus recruitment has assumed greater significance in the minds of several stakeholders.



**INVEST IN AN ELECTRIC
VEHICLE, IF POSSIBLE**

An electric vehicle can help you **reduce your**
carbon footprint with zero tailpipe emissions.

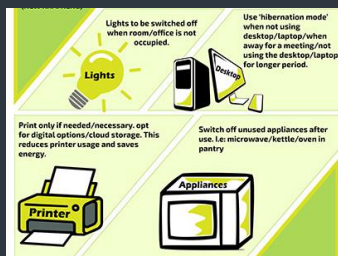


National Service Scheme- NSS Activities

The National Service Scheme (NSS) is a Central Sector Scheme of Government of India, Ministry of Youth Affairs & Sports. It provides opportunity to the student youth of 11th & 12th Class of schools at +2 Board level and student youth of Technical Institution, Graduate & Post Graduate at colleges and University level of India to take part in various government led community service activities & programmes. The sole aim of the NSS is to provide hands on experience to young students in delivering community service.

The Motto of NSS

"Not Me But You"



NSS/Gymkhana Activities



Women Empowerment- 05-01-2023



National Youth Day Celebration- 12-01-2023



List of NSS Activities

- Women Empowerment
- National Youth day Celebration
- Drawing Competition
- World Sparrow day
- Seminar on Indian Constitution
- Essay Competition on history of Gujarat

NSS/Gymkhana Activities



Seminar on Indian Constitution- 27-04-2023



Cyber Crime Awareness Program

MANAGE YOUR WASTE AT THE SOURCE

It is essential to segregate wastes into wet and dry as it paves the way for its scientific treatment at the source itself. **Effective waste segregation at homes and offices** means easy recycling and lesser waste at the landfills, leading to cleaner and better environment and human health.

NSS/Gymkhana Activities

List of Gymkhana Activities

- Republic day celebration
- Essay writing on G20/Y20
- Quiz
- Seminar on Y20
- Essay writing on Anti corruption
- Webinar on Women Development
- Vyasan mukti lokjagruti
- Sports week
- Day celebration
- Thalassemia test
- Hinsa mukti seminar



Republic day celebration- 26-01-2023



Sports Week – 05-04-2023

Editor's Note:-

It gives us an immense pleasure to introduce this Newsletter of Mechanical Engineering, named "Shashvat"

I am grateful to our honorable Principal and HOD who gave this opportunity. It has been a learning experience to us. I am also thankful to all staffs for their co-operative nature. At last but not least we are thankful to all those helped us directly and indirectly.

Shivam R. Modi
Lecturer Mechanical Engineering

PROTECT EXISTING TREES

A single mature tree can absorb carbon dioxide at a rate of 22 kilograms per year and release enough oxygen back into the atmosphere to support two human beings. So, about **1.3 million trees can remove more than 2500 tonnes of pollutants from the air.**