ASHOKRAO MANE POLYTECHNIC,

VATHAR TARF VADGAON.

NEWSLETTER : MECH-MASTER

VOL-X, ISSUE-I, DECEMBER 2024

DEPARTMENT OF MECHANICAL ENGINEERING

THEME -KAIZEN TECHNOLOGY

NEWSLETTER : MECH-MASTER

-"Excellence is not a destination; it is a continuous journey that never ends."

Messages

Message from Principal Desk

Prof. (Dr.) Y. R. Gurav
Principal,
Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon.

Dear Readers,

Best wishes for the New Year. It's a prideful moment to interact with the readers at the start of the new year. Newsletter is an initiative by department which has a specific purpose in it. The contribution made so far by the teac hers, students, academicians and industrialists has compelled to promote such moves in the era of emerging technologies such as Robotics, Artificial Intelligence, Machine Learning, Internet of Things, etc. Newsletter is also acting as a medium to convey message about its vision and values along with future strategies and plans. The newsletter has a unique theme 'Kaizen Technology', which is widely used now a days, I appreciate the editing team, which is putting efforts of compiling various news about diploma education system in department along with views and information about a relevant theme and disseminating it to a cohesive community of stakeholders - students, faculty, parents, administrators, institutes, industry and community at large, through this newsletter.

Message from Editor's Desk

Mr. S. N. Yadav
H.O.D. Mechanical Engineering,
Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon.

Greetings to faculties and friends !

It gives an immense pleasure to congratulate department newsletter committee for releasing semester wise department newsletter. We strived hard, gave our best possible efforts to make "MECH- MASTER" really versatile.

We have tried to give the students those memories that stand as a footprint of progress where each word speaks out with knowledge. It gives the scope and freedom to imagination power of the students to express their line of thought through creative ideas. Besides imagination is a mirror to our academic progress, co-curricular and extra-curricular activities, achievements and a reflection of the strength of our department that gives us new energy to grow. The Mechanical Engineering department is striving towards the goal of providing innovative and quality education with high standard to achieve academic excellence.

INSIDE

VISION OF DEPARTMENT

To excel in engineering education for creating competent mechanical engineers with high social and ethical standards to serve the society.

MISSION OF DEPARTMENT

- m1. To impart basic as well as discipline knowledge to solve engineering problems.
- m2. To direct towards skill development by using modern tools and emerging technologies to enhance employability.
- m3. To develop leadership qualities and ability to visualize needs for entrepreneurship development.
- m4. To inculcate sense of responsibility towards society and environment through professional and social ethics.

ABOUT INSTITUTE

Shri Balasaheb Mane Shikshan Prasarak Mandal Ambap's, Ashokrao Mane Polytechnic, Vathar (AMPV) was established in 2008 and is located near Kolhapur. This institute has AICTE approval for the Seven diploma courses. Under the visionary leadership and administration, AMPV has emerged as a leading technological institute and is perfect destination for quality technical education. The institute has NBA accredited Programmes, 100% placements in MNCs, best academic results, well established labs. The institute was also honoured with notable awards.

ABOUT DEPARTMENT

Mechanical Engineering Department is established in 2008 in beautiful campus of AMP, Vathar. The department is honoured with NBA accreditation, ISO certification and also received excellent / very good remark by MSBTE.
This department has well equipped laboratories and excellent upgraded facilities. The department has an enthusiastic team of qualified and experienced teaching and non-teaching staff.
The department attracts aspiring students every year and aims to provide solid foundation for careers in industry, research and academia. The department has great history of highest admissions, best academic results and Higher placements.
The department also conducts various departmental activities like technical events, expert lectures, industrial visits, career guidance training programs and workshops to aware the students about the technical knowledge.

CHIEF EDITOR:
Mr. S. N. Yadav
EDITOR COMMITTEE:
1. Mr. P. S. Patil
2. Mr. S. B. Lambe
3. Mr. Sarvjeet S. Patil
4. Miss. Anjali J. Koli
5. Miss. Tanvi S. Patil

DEPARTMENTAL NEWS

Gurupornima Celebration

Pratima poojan of Goddess Sarasvati, at the hands of Prof. Y. R. Gurav (Principal AMP, Vathar)

Students expressing their gratitude towards the teachers

Gurupornima is the celebration of the strong bond of respect and trust between teachers and students. On this day we get an opportunity to thank all our guru for selflessly sharing their knowledge and skills with us.

This auspicious day was celebrated with great joy and enthusiasm on 20th July, 2024 at Ashokrao Mane Polytechnic, Vathar by Mechanical Engineering Department in Association with MESA (Mechanical Engineering Student Association). This event was celebrated in presence of students and faculty members of department. Celebration started with and lightening of lamp and pratima poojan of Goddess Sarasvati, at the hands of Prof. Y. R. Gurav (Principal AMP, Vathar) accompanied by faculty members and students. On this occasion many students were given opportunity to deliver speeches in which they shared their thoughts and experiences, expressing their gratitude towards the teachers who had played significant role in shaping their lives and academic journey.

Engineer's Day Celebration

On the occasion of Engineer's Day, Mechanical Engineering Department proudly organised two competitions for all students of Ashokrao Mane Polytechnic on Friday 15th of September 2024.

1.Assembly Champ Event

The inaugural and welcome function was carried out in the presence of Prof. Y. R. Gurav (Principal, AMPV.), Mr. S. N. Yadav (H. O. D, Mechanical Engineering) and all other dignitaries.

Assembly Champ Event:

"Assembly Champ" competition was organised and conducted by the students of Mechanical Engineering Department under the guidance of competition coordinators Mr. S. B. Lambe and Mr. R. P. Bagewadi. This competition was conducted in two rounds. The first round was carried out as screening round in which students were to match and assemble the correct pair out of given nuts and bolts. In second round the short listed students from first round were given the task to assemble the disassembled parts of tailstock assembly of lathe machine. First two Students who completed the assembly in minimum time were awarded by first two ranks. Total 205 students had participated in this competition.

Pratima poojan of Goddess Sarasvati, at the hands of Prof. Y. R. Gurav (Principal AMP, Vathar)

Students performing in the first round of matching and assembling nuts and bolts in Assembly Champ Event

DEPARTMENTAL NEWS

Pratima poojan of Dr. Sarvpalli Radhakrishnan, at the hands of Prof. Y. R. Gurav (Principal AMP, Vathar)

A student delivering lecture

1.Lecture conduction by students:

The first event was the conduction of lectures by students in which few students from second and third year played a role of teacher. Through this event students showed their stage daring and got to know how much dedication & preparation is required to deliver a lecture.

2.Puzzle Champion Event:

After this event in the second session of the day, department organized puzzle champion event in which participants had to solve the given jig saw puzzle. Total 92 students from different departments participated in this competition out of which first two ranks were awarded to those students who solved given puzzle in minimum time.

3. Tree plantation and Prize Distribution Event:

Tree plantation and prize distribution of puzzle champion event was carried out in last session of the day. The Principal acknowledged the importance of Guru Purnima and emphasized the role of teachers in sculpting their student's future.

Teacher's Day Celebration

Teacher's day is celebrated on 5th September each year on the occasion of birth anniversary of Dr. Sarvepalli Radhakrishnan who is known as an amazing teacher of his time. This day was celebrated by students and staff members of Mechanical Engineering Department of AMP by organizing various events.

On the occasion of Teacher's Day celebration, Mechanical Engineering Department had proudly organised three events on 05th of September 2024.

1. Lecture conduction by students.
2. Puzzle Champion Event.
3. Tree plantation and Prize Distribution Event.

The day was started with lightening of lamp and pratima poojan of Goddess Sarasvati, at the hands of Prof. Y. R. Gurav (Principal AMP, Vathar) accompanied by faculty members and students.

Puzzle Champion Event

'Tree Plantation' on the occasion of Teachers Day

EXPERT LECTURES

Expert Lecture on "Electrical Safety and Protection"

On 07/08/2024, Mechanical Engineering Department had arranged an expert lecture on **"Electrical Safety and Protection"** for the Second Year Mechanical Engineering students. The lecture was given by Mr. Sandeep Ashok Mahulkar, who is Deputy Executive Engineer at Sangli Regional Training Center. In this lecture, students learned the importance of safety while working with electricity and various concepts related to it included in subject Electrical and Electronics Engineering.

Expert Lecture on "Preview of Research Tool and Standardization Methods"

On 05/10/2024, Mechanical Engineering Department arranged an expert lecture on **"Preview of Research Tool and Standardization Methods"** for the Third Year Mechanical Engineering students. The lecture was given by Mr. Pradeep R. Sabale, who is Assistant Professor at Dr. D. Y. Patil C. A. E. & T. Talsande. In this lecture students learned about research work, methods of research, types of researches , various tools used for research works etc. and various concepts related to it included in subject Capston Project Planning.

Expert Lecture on "Industrial Approach of Design software"

On 19/09/2024, Mechanical Engineering Department had arranged an expert lecture on **"Industrial Approach of Design software"** for the Third Year Mechanical Engineering students. The lecture was given by Mr. Sumit Jondhale, who is Techno-commercial officer at Reliable Solutions Shiroli MIDC, Kolhapur. In this lecture, students learned Advanced Design Software's,their industrial approach in industry and various concepts related to it included in subjects Solid Modelling and additive Manufacturing and Elements of Machine Design .

Expert Lecture on "Power of subconscious mind and self-building"

On 24/10/2024, Mechanical Engineering Department had arranged an expert lecture on **"Power of subconscious mind and self-building"** for the Second Year Mechanical Engineering students. The lecture was given by Prof. Manali Prakash Bhosale, Assistant Professor, M. B. A. Department, Ashokrao Mane Group of Institution, Vathar. In this lecture, students learned Various techniques to build up mind power and their personality under the subject Personality Development.

INDUSTRIAL VISITS

Industrial visit at "Shriram Foundry Pvt. Ltd. Unit-1 Shiroli MIDC"

Department of Mechanical Engineering, Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon arranged one day industrial visit for Second and Third Year students to **"Shriram Foundry Pvt. Ltd. Unit-1 Shiroli MIDC, Tal. Hatkanangle, Dist. Kolhapur, 416122",** on 10th October, 2024 for technical knowledge enhancement of students. In this visit, students have seen different types of production processes, various types of tools, design procedures, software's used in industry and various concepts related to it included in curriculum.

Industrial visit at "Kasturi Foundry Pvt. Ltd. T-6 Five Star MIDC Kagal"

Department of Mechanical Engineering, Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon arranged one day industrial visit for Second and Third Year students to **"Kasturi Foundry Pvt. Ltd. T-6 Five Star MIDC Kagal, Dist. Kolhapur, 416236"**, on 10th October, 2024 for technical knowledge enhancement of students. In this visit, students understood various production processes, foundry processes, management system, design software's and various concepts related to it included in curriculum.

Industrial visit at "IFFE EXPO 2024 – Industrial Exhibition at JP Industrial Park, Peth Vadgaon"

Department of Mechanical Engineering, Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon arranged one day industrial visit for Second and Third Year students to **"IFFE EXPO 2024 – Industrial Exhibition at JP Industrial Park, Peth Vadgaon Tal. Hatkanangle, Dist. Kolhapur, 416112"**, on 11th November, 2024 for technical knowledge enhancement of students. In this visit, students learned the different advanced technologies used in industry, machine tools, projects etc.

N. S. S. Activities

'Tree Plantation -19/06/2024'

Every man needs oxygen for his life and trees are the foremost source of oxygen, trees help to reduce the level of carbon dioxide as well. As we all know that the whole world is facing the problem of global warming and to recover from such problem planting the trees has become one of the most important aspects today.

NSS committee of Ashokrao Mane Polytechnic, Vathar arranged the "Tree Plantation (Vrukshotsav)" under the National Service scheme (NSS) on Wednesday, 19 June 2024 as per the guidelines in circular of Maharashtra State Board of Technical Education (MSBTE), Mumbai.

'Diwali Pharal Distribution to Needy-30/10/2024'

Under the N.S.S, on behalf of Shri Balasaheb Mane Shikshan Prasarak Mandal, Ashokrao Mane Polytechnic Vathar, diwali snacks were distributed to nomadic communities and people living a struggling life, sugarcane workers from different districts moving from village to village to earn their livelihood as well as truck drivers from the states of Karnataka, Gujarat, Kerala, Madhya Pradesh, Uttar Pradesh transporting goods from different states who spend several months away from home during the festive season. People performing multifaceted folk art in a nomadic society should double the joy of diwali. All the underprivileged who are away from their family should be able to enjoy the snack. Hence the N.S.S. department implemented the snack distribution activity with great enthusiasm.

'Har Ghar Tiranga Abhiyan-14/08/2024'.

"Har Ghar Tiranga Abhiyan" (Campaign) is an initiative under the larger Azadi Ka Amrit Mahotsav, launched by the Government of India to commemorate 75 years of India's independence. The campaign encourages citizens to hoist the national flag (Tiranga) at their homes to celebrate the spirit of patriotism and unity.

'एक पेड माँ के नाम-10/07/2024'

The "Ek Ped Maa Ke Naam Abhiyan" is a unique initiative that allows individuals to plant trees in the name of their mothers, combining environmental action with a personal touch. As part of this campaign, students of Ashokrao Mane Polytechnic Vathar Tarf Vadgaon took the initiative to participate individually, planting saplings at their homes, in local parks, or nearby areas. The event aimed to foster a sense of responsibility towards the environment while celebrating the nurturing spirit of mothers.

The campaign saw participation from 60 students across various departments of Ashokrao Mane Polytechnic Vathar Tarf Vadgaon. Each student chose a location for planting a tree near their homes or in community spaces. Each student selected a sapling and planted it either in their garden, a public park, or an open space near their residence.

N. S. S. Activities

'Sweaters and Nutritional Diet Distribution to Orphan Children-04/12/2024'

On behalf of Shri Balasaheb Mane Shikshan Prasarak Mandal, Ashokrav Mane Polytechnic Vathar, under N.S.S. sweaters and nutritional diet were distributed to Orphan Children in Ashram School at Peth Vadgaon.

"Eco-Friendly Ganesh Visarjan and Nirmalya Collection Campaign" - 12 /09/2024

The National Service Scheme (NSS) of Ashokrao Mane Polytechnic,Vathar organized an initiative titled "Eco-Friendly Ganesh Visarjan and Nirmalya Collection Campaign" aimed at promoting environmental awareness and sustainability during the Ganesh Chaturthi festival. This activity was led by NSS coordinators and volunteers across various local locations, emphasizing the importance of eco-friendly practices.

One Day Workshop on 'Auto-CAD'

Felicitation of Expert Mr. Pruthviraj Patil by Mr. S. N. Yadav H. O. D. Mechanical Engineering

Conduction of CAD workshop

Students participating in the workshop

One day workshop on 'Auto-CAD' was organized by Mechanical Engineering Department on 25/10/2024. This workshop was arranged to provide knowledge of industrial drawing reading, to draw simple 2D drwaing of mechanical components, complex 2d drawings and 3D components drawings using Auto-CAD software. This workshop was helpful to students to get more knowledge of Auto-CAD software and its industrial use.

SCHOOL CONNECT PROGRAM

A prototype of 'Burg-Khalifa', 'Plam City'

School Students visit prototype of 'Radhanagari Dam'

School Students visit prototype of 'Burg-Khalifa', 'Plam City'

Mr. Vijaykumar Patil, Lectuer, Mech. Engg. guiding 10th standard students about Polytechnic.

Mr. Rahul Nagvekar, Lectuer, Mech. Engg. guiding 10th standard students about Polytechnic.

In case a student wishes to take admission for 'Polytechnic' and is at Xth standard, he or she generally wants the information regarding polytechnic, its environment,infrastructure,syllabus,various activities conducted in polytechnic and how students participate in various activities?.

To provide information for all above questions, difficulties and confusions, a project or initiative has been taken up by our college and Mechanical Engineering Department. The program involves a face-to-face interactive session with students of class Xth of different schools in local region. For that Ashokrao Mane Polytechnic, vathar has made a prototype of 'Burg-Khalipa', 'Plam City' and 'Radhanagari dam-Smart City' on the occasion of Engineer's Day and invited schools for watching such a projects and taking information about polytechnic through school connect program.

FACULTY SPEAK.....

Mr. N. Y. Patil
Lecturer,
Mechanical Engineering Department,
Ashokrao Mane Polytechnic,
Vathar Tarf Vadgaon.

Kaizen - Continuous Improvement

Kaizen is a Japanese word which mean "continuous improvement." It is a philosophy that says "do better every day, with everyone, and everywhere". It is a technique on the applications of which we can see the improvement in every functions of business from marketing to finance to the warehouse. This technique focuses on every minor everyday improvements to current work processes, carried out by each and every working person from ground level workmen to executive. The Kaizen philosophy challenges the statement of "that's just the way we do things." Through micro-changes, it strives to eliminate silos, egos, and waste and instead aims for efficient and standardized processes, especially in areas like Quality, Cost, Delivery, Management & Safety. Another benefit is that with the implementation of this method one can achieve matching of organization goal to needs of employee. By applying kaizen, small incremental improvements can deliver significant results in terms of organizational goals as well as fulfils essential needs of employees by engaging them and develop a culture of continuous improvement.

Mr. R. P. Bagewadi
Lecturer,
Mechanical Engineering Department,
Ashokrao Mane Polytechnic,
Vathar Tarf Vadgaon.

1. Introduction to Kaizen in Industry

Meaning and Origins:

Kaizen (Japanese: "Kai" = change, "Zen" = good) means "continuous improvement."

Initially popularized in Japan's manufacturing sector, particularly by Toyota.

Core Principle:

Small, consistent changes over time lead to significant overall improvements.

2. Importance of Kaizen in Industry

- Efficiency Enhancement:
  - Eliminating waste (time, resources, energy) in industrial processes.

Quality Improvement:

  - Ensuring higher standards in products and services.

- Employee Empowerment:
  - Encouraging worker involvement in problem-solving and innovation.

3. Key Elements of Kaizen in Industry

- Teamwork and Collaboration:
  - Employees at all levels contribute ideas for improvement.
- Standardization:
  - Implementing clear, repeatable processes to maintain quality.
- Feedback Mechanisms:
  - Regularly reviewing processes to identify inefficiencies or errors.

4. Applications of Kaizen in Various Industries

Manufacturing:

Example: Toyota Production System—continuous improvement in assembly lines to reduce defects and waste.

Streamlining customer service workflows to reduce wait times and enhance customer satisfaction.

- Healthcare:
  - Improving patient care processes, reducing delays in treatment, and minimizing errors.
- Technology and IT:

Iterative software development (similar to Agile methodologies) for better product delivery.

5. Benefits of Implementing Kaizen in Industry

- Cost Savings:
  - Reduction in wastage and unnecessary expenditure.
- Higher Productivity:
  - Optimized workflows lead to increased output.
- Employee Morale:
  - Inclusive approach creates a sense of ownership and motivation among employees.

- Adaptability:

Companies become more responsive to market changes.

6. Challenges and How to Overcome Them

- Resistance to Change:
  - Solution: Educating employees about the benefits of Kaizen and involving them in decision-making.
- Short-Term Focus:
  - Solution: Emphasizing the importance of long-term gains over immediate results.
- Lack of Commitment:
  - Solution: Leadership support and consistent follow-up on Kaizen initiatives.
- There are five principles that kaizen follows, including (1) Know your customer, (2) Let it flow, (3) Go to Gemba, (4)Empower people, and (5) Be transparent. The implementation of kaizen in the workplace has borne many other strategies that helped the productivity of the company. Kaizen focuses on eliminating waste, improving productivity, and achieving sustained continual improvement in targeted activities and processes of an organization.
- The 4 Ps of Kaizen are purpose, process, people, and performance. These principles guide continuous improvement in organizations. Purpose involves setting clear goals and objectives. It gives direction and motivation to the team.
- The three pillars of Kaizen include housekeeping, waste elimination, and

standardization. At the core of the practice is continuous improvement.

"Kaizen" refers to a Japanese word which means "improvement" or "change for the better". Kaizen is defined as a continuous effort by each and every employee.A Gemba Walk is a workplace walkthrough which aims to observe employees, ask about their tasks, and identify productivity gains. Gemba Walk is derived from the Japanese word "Gemba" or "Gembutsu" which means "the real place", so it is often literally defined as the act of seeing where the actual work happens.Under kaizen, improvements can be initiated by any employee at any time. The philosophy is that everyone has a stake in the company's success and everyone should strive, at all times, to help make the business better. Many companies around the world have adopted the kaizen concept

STUDENT SPEAK.....

Miss. Tanvi S. Patil
Student,
Seconnd Year Mechanical Engineering Department,
Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon.

Kaizen is an approach to creating continuous improvement based on the idea that small, ongoing positive changes can reap significant improvements. Typically, it is based on cooperation and commitment and stands in contrast to approaches that use radical or top-down changes to achieve transformation. Kaizen is core to lean manufacturing and the Toyota Way. It was developed in the manufacturing sector to lower defects, eliminate waste, boost productivity, encourage worker purpose and accountability and promote innovation.As a broad concept that carries myriad interpretations, it has been adopted in many other industries, including healthcare. It can be applied to any area of business and even on the individual level. Kaizen can use a number of approaches and tools, such as value stream mapping which documents, analyzes and improves information or material flows required to produce a product or service and Total Quality Management which is a management framework that enlists workers at all levels to focus on quality improvements. Regardless of methodology, in an organizational setting, the successful use of Kaizen rests on gaining support for the approach across the organization and from the CEO down.Kaizen is a compound of two Japanese words that together translate as "good change" or "improvement." However, Kaizen has come to mean "continuous improvement" through its association with lean methodology and principles.Kaizen has its origins in post-World War II Japanese quality circles. These circles or groups of workers focused on preventing defects at Toyota.They were developed partly in response to American management and productivity consultants who visited the country, especially W. Edwards Deming, who argued that quality control should be put more directly in the hands of line workers. Kaizen was brought to the West and popularized by Masaaki Imai via his book Kaizen: The Key to Japan's Competitive Success in 1986.

Miss. Anjali J. Koli
Student,
Third Year Mechanical Engineering Department,
Ashokrao Mane Polytechnic,
Vathar Tarf Vadgaon.

Toyota's Use of Kaizen for Continuous Improvement:

Objective: To improve operational efficiency, reduce waste, and enhance product quality.

Toyota is widely recognized as a pioneer of the Kaizen philosophy. The company adopted Kaizen as a core part of its Toyota Production System (TPS), focusing on continuous improvement and lean manufacturing. Through Kaizen, Toyota has managed to become one of the world's leading automakers while maintaining high standards of quality and efficiency.

Implementation of Kaizen

1. Employee Involvement:

Toyota encouraged participation from all employees, from assembly line workers to management.

Workers were empowered to identify inefficiencies and suggest improvements through regular team meetings and suggestion boxes.

2. Standardized Work Procedures:

Toyota created detailed work standards to ensure consistency and efficiency in processes.

Kaizen encouraged small, incremental changes to these standards, making them more effective over time.

3. Gemba Walks:

Managers regularly performed Gemba Walks (on-site observation) to identify waste and inefficiencies directly at the source.

This ensured that real-world challenges were addressed collaboratively.

4. Focus on Waste Reduction:

Toyota applied the Seven Wastes (overproduction, waiting, transport, overprocessing, inventory, motion, and defects) framework to identify areas for improvement.Processes were streamlined to eliminate non-value-adding activities.

5. Quality Circles:

Groups of workers met regularly to discuss and solve quality-related issues.

This collaborative approach ensured continuous refinement of products and processes.

Results

1. Efficiency Gains:

Assembly line efficiency improved due to reduced waiting times and standardized workflows.

Production costs decreased as waste was minimized.

2. Product Quality:

Defect rates significantly declined due to the focus on small, continuous improvements.

Customer satisfaction improved as a result of better product reliability.

3. Employee Morale:

Empowering employees to contribute to improvements fostered a sense of ownership and pride in their work.

4. Global Competitiveness:

Toyota's adoption of Kaizen helped it compete effectively in the global market, outperforming competitors in cost management and quality.

Summary of the case Study is,

1. Empower Employees: Engaging all levels of the organization in the improvement process ensures practical and effective solutions.

2. Focus on Incremental Change: Small, continuous changes often have a cumulative, significant impact over time.

3. Eliminate Waste: Regularly evaluating and refining processes can reduce costs and improve quality.

4. Sustain the Process: Continuous improvement is not a one-time initiative but a long-term commitment.

This case study illustrates how Kaizen can transform a company's operations, making it more efficient, competitive, and customer-focused.

INDUSTRY SPEAK.....

Mr. Kishor R. Mane
Assistant Production Managar,
Penta Designers & Engineers Pvt. Ltd. Pune.

Kaizen Technology:

Kaizen Technology could refer to a company, organization, or the application of the Kaizen philosophy in technological fields

Kaizen Technology represents the integration of continuous improvement (Kaizen) principles with modern technology to streamline processes, improve efficiency, and enhance productivity.

Kaizen Technology include:

1. Process Optimization: Utilizing technology to analyze workflows and eliminate inefficiencies.

2. Automation: Incorporating tools like AI, RPA, and IoT to improve repetitive processes.

3. Employee Engagement: Encouraging team collaboration to suggest tech-driven solutions.

4. Data Analytics: Using metrics and real-time data for decision-making and process enhancements.
5. Scalability: Continuously updating tools and systems to meet evolving business needs.

Kaizen Technology in Manufacturing Automation:

Objective: To optimize production processes using Kaizen principles and advanced technologies, improving efficiency, reducing downtime, and enhancing product quality.

Panasonic Corporation, a global leader in electronics manufacturing, adopted Kaizen Technology to modernize its production lines and align with Industry 4.0 standards. By integrating Kaizen principles with automation, IoT (Internet of Things), and real-time data analytics, Panasonic aimed to achieve continuous improvement in its manufacturing processes.

Implementation of Kaizen Technology

1. Integration of IoT Sensors:

IoT sensors were installed across the production line to collect real-time data on machine performance, temperature, and energy consumption.

The collected data was analyzed to identify inefficiencies and areas prone to breakdowns.

2. Predictive Maintenance:

Advanced machine learning models were developed to predict equipment failures before they occurred.

This reduced downtime and extended the lifespan of machinery.

3. Worker and Machine Collaboration:

Collaborative robots (cobots) were introduced to assist workers with repetitive or physically demanding tasks.

Employees provided feedback on how to optimize the interaction between humans and machines.

4. Data-Driven Decision Making:

A centralized dashboard was implemented to monitor production metrics in real time.

Managers used this data to make quick, informed decisions about process improvements.

5. Employee Training and Engagement:

Workers were trained on how to use new technologies and interpret data insights.

A suggestion system encouraged employees to propose tech-driven solutions for process optimization.

Mr. Babalu L. Arade
Machine Shop In-charge,
Manoj Industries Shiroli MIDC, Kolhapur.

Kaizen Technology refers to the application of the Kaizen philosophy—continuous improvement—in technological processes, systems, and products.

Originating from Japanese management principles, Kaizen focuses on incremental, ongoing improvement rather than large-scale overhauls. When applied to technology, this can include improving software development, IT infrastructure, hardware, and digital workflows.

Core Elements of Kaizen Technology

1. Continuous Improvement: Regular updates and optimizations for systems, software, or devices to enhance functionality and efficiency.
2. Employee Involvement: Encouraging teams, including developers and IT professionals, to suggest and implement small, impactful changes.
3. Elimination of Waste: Streamlining processes by removing inefficiencies, such as redundant code, unnecessary features, or delays in deployment cycles.
4. Data-Driven Decisions: Using metrics and analytics to identify areas for improvement.
5. Agile Integration: Often paired with agile methodologies, ensuring iterative progress in technology projects.

Applications in Technology

1. Software Development: Continuous integration/continuous deployment (CI/CD) pipelines for regular, incremental software updates.
2. IT Operations: Monitoring and refining network performance, cyber security measures, and data management systems.
3. Manufacturing Technology: Automation systems and IoT devices optimized for better efficiency.
4. User Experience (UX): Interactively improving app interfaces or website designs based on user feedback.

Benefits

1.Enhanced efficiency and productivity.
2.Reduced costs through waste elimination.
3.Improved user satisfaction with better-quality products.
4.Fosters a culture of innovation and adaptability.
5.Better Risk Management.
6.Increased Customer Satisfaction.
7.Greater Employee Satisfaction
8.Enhanced Collaboration.
9.Increased Innovation and Creativity.
10.Cost Savings.

In essence, the benefits of Kaizen technology are wide-ranging and contribute to creating a more efficient, innovative, and user-centric business environment, ensuring that technology evolves in a sustainable and cost-effective manner.

STUDENT ACHIEVEMENTS

Summer Exam 2024

Third Year Mechanical Engineering


Mr. Sujit Mahadev Patil :91.67 %


Mr. Shivtej Kakaso Jagtap : 91.22 %


Miss. Sharvary Uttam Patil : 89.89 %


Mr. Sumedh Ananda Minachekar : 89.89 %

Second Year Mechanical Engineering


Miss. Shravani Maruti Thorat :77.38%


Mr. Sarvajeet Santosh Patil : 75 %


Miss. Anjali Jotiram Koli: 67.75 %

First Year Mechanical Engineering


Miss. Tanvi Shrikant Patil 85.48%


Mr. Rohan Vasant Mohite : 83.86 %


Mr. Shubham Sarjerao Mohite: 82.39%

Felicitation of Third Year Mechanical Engineering Students scoring 70 out of 70 marks in various Subjects


Mr. Sujit Mahadev Patil got 70 out of 70 marks in Automobile Engineering & Industrial Hydraulics & pneumatics.


Miss. Sharvary Uttam Pati got 70 out of 70 marks in Automobile Engineering.


Mr. Suyash Chandrakant Kadam got 70 out of 70 marks in Industrial Hydraulics & pneumatics.


Mr. Shivtej Kakaso Jagtap got 70 out of 70 marks in Automobile Engineering.


Mr. Sumedh Ananda Minachekar got 70 out of 70 marks in Automobile Engineering & Industrial Hydraulics & pneumatics.

STAFF ACHIEVEMENTS

Felicitation of Mr. Pradip H. Shinde, Lecturer, Mechanical engineering Department for successfully completing M. Tech Design at the hands of Hon. Principal Dr. Y. R. Gurav. Mr. Pradip H. Shinde has Completed their M. Tech. in Mechanical Design Engineering from Shivaji University with Distinction.

SUCCESS STORY

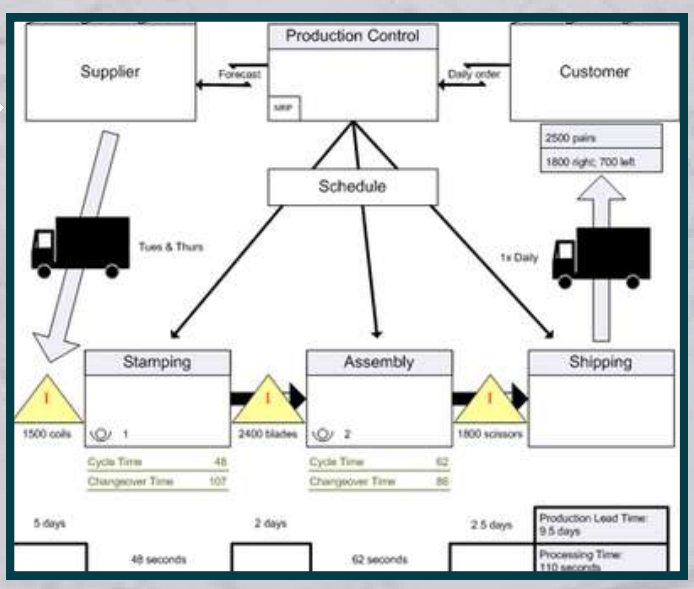
I am Neha Deshpande, alumnus of Ashokrao Mane Polytechnic 2019 Batch. Earlier I was not convinced to take admission to Diploma but when I entered the institute I could see the energy of students which were along with me doing a tough competition. I stood 1st in 1st sem across institute and then I got confidence that,

I could do better. We were a group of 15+ students who used to study, hangout and share knowledge and thoughts together. Not only I was good at academics but also I participated in various competitions such as Paper Presentation, Project Presentation, etc. Our team secured 1st rank in M.S.B.T.E. paper presentation competition for the first time in the institute. Due to these I was able to perform well during my campus placement. Currently I'm working as a Mechanical Engineer in SLB Technical Services India, Pune with higher Package. Many thanks to the institute for making us better citizen and providing tons of memories with best people.

Theme of the next Issue : Value Stream Mapping

Let's Celebrate!

HAPPY NEW YEAR



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