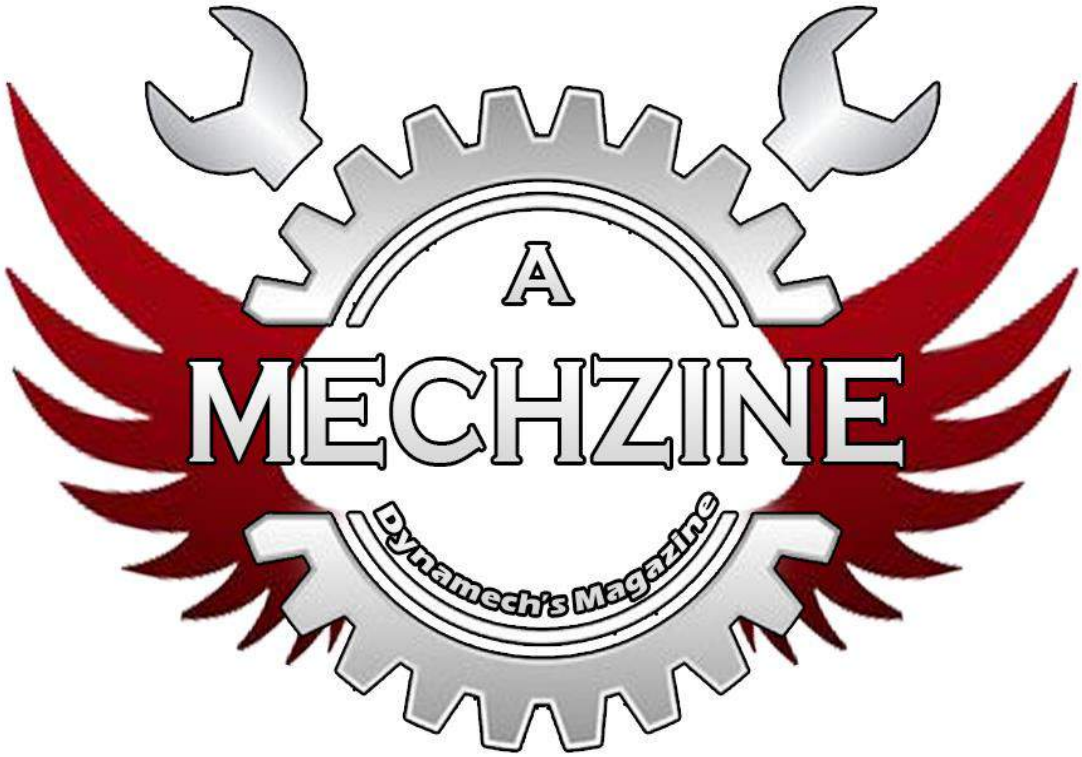

HALF YEARIY MECHANICAL MAGAZINE

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GEETHANJALI

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Editorial Message

Hailed as the first draft of creativity and innovation, a magazine presents a social and tasteful conversation of a powerful organization, where the refined imaginative sensibilities and abilities of its young personalities go to the front. It holds mirror to the bunch exercises and activities embraced by the foundation to etch the multifaceted characters of adolescents besides being a media platform. On this earth shattering event of drawing out the magazine, we, the publication group, appreciatively recognize the unmistakable assortment of commitments made by the students and the staff.

"All progress comes beyond comfort zone"

Editorial Board

VISION-MISSION

VISION

To evolve as a prospective learnig centre for producing quality human resourses.

MISSION

DM_1: Impart Technical knowledge through effective teaching-learning practices

DM_2: Provide congenial academic environment for honing technical skills

DM_3: Develop professional and entrepreneurial skills through collaborations

DM_4: Promote leadership skills along with social and ethical values

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates of B.Tech in Mechanical Engineering program shall able to

PEO1: Analyze Mechanical Engineering problems and provide sustainable solutions.

PEO2: Pursue successful professional career in industry, academia or research.

PEO3: Engage in continuous learning to keep abreast with emerging technologies with the sense of professional ethics.

PEO4: Contribute in multi-disciplinary teams through effective inter personal skills.

RIDDLES AND SILLY QUESTIONS

1. Why is number six afraid?

2. What did number 1 say to 7?

3. Which is the most self-centred letter of the alphabet?

4. Which letter is always trying to find reasons?

5. Which letter is not me?

6. What letter can do the work in one day that you can do in two days?

7. Why is the A like a flower?

8.I come from a mine and get surrounded by wood always. Everyone uses me. What am I?

9."What letter of the alphabet has got lots of water?"

10. I go up and down the stairs without moving What am I?

11. What animal has no wings, but yet will fly?

12. 28..What's the word inside the riddle?

13. Gods' arrows cannot be counted?

14. When is the best time to have lunch?

15. The following numbers share a unique property: 1961 6088 6119 8118 6699 6009. What is it?

16. A dog had three puppies, named Mopsy, Topsy and Spot. What was the mothers name?

17. The more you take, the more you leave behind. What am I?

G. PRATHAP (142U1A0313), IV ME

Tidal Energy

Coastal areas with huge and flowing tidal waters carry vast potential energy. 11th Century England was the first to harness this energy, using water wheels to produce mechanical power. These days the rise and fall of tides have become the basis to produce electrical power similar to the principles of hydroelectric power generation.

Origin

The daily rise and fall in the level of ocean water relative to the coastline is referred to as tide. Tides originate from the motions of the earth, moon and sun. The gravitational pull of the Moon and Sun along with the revolution of the Earth result in tides. (The magnitude of the gravitational attraction of an object is dependant upon the mass of an object and its distance.) The moon exerts a larger gravitational force on the earth, though it is much smaller in mass, because it is a lot closer than the sun. This force of attraction causes the oceans, which make up 71 percent of the earth's surface, to bulge along an axis pointing towards the moon. Tides are produced by the rotation of the earth beneath this bulge in its watery coating, resulting in the rhythmic rise and fall of coastal ocean levels.

The gravitational attraction of the sun also affects the tides similarly, but to a lesser degree. As well as bulging towards the moon, the oceans also bulge slightly towards the sun. When the earth, moon and sun are positioned in a straight line i.e on the occasion of a full or new moon, the gravitational attractions are combined, resulting in very large spring tides. At half moon, the sun and moon are positioned at right angles, resulting in lower neap tides. Coastal areas experience two high and two low tides over a period of 24 hours and slightly above.

Generating tidal energy

The technology required to convert tidal energy into electricity is comparable to technology used in traditional hydroelectric power plants. The first requirement is a dam across a tidal bay or estuary. However building a dam is expensive and the best sites are those where a bay has a narrow opening, thus reducing the length of dam required. Gates and turbines are installed. When there is adequate difference in the levels of the water on the different sides of the dam, the gates are opened. This causes water to flow through the turbines, turning the generator to produce electricity.

Electricity is generated by water flowing both inwards and out of a bay. There are periods of maximum generation every twelve hours, with no electricity generation at the six-hour mark in between. The turbines may also be used as pumps to pump extra water into the basin behind the dam at times when the demand on electricity is low. This water can later be released when the demand on the system is very high, thus allowing the tidal plant to function like a "pumped storage" hydroelectric facility.

Uses and economy

The friction of the bulging oceans acting on the spinning earth results in a very gradual slowing down of the earth's rotation but this is not expected to impact us for billions of years. Therefore, for practical purposes, tidal energy can be considered a sustainable and renewable source of energy. It can prove to be a valuable source of renewable energy to an electrical system. The demand of electricity from a grid varies with the time of the day. Tidal power, although variable, is reliable and predictable and can make a valuable contribution to an electrical system, which has a variety of sources. Tidal electricity provides a good alternative to conventional methods of generating electricity, which would otherwise be generated by fossil fuel (coal, oil, natural gas) etc, thus reducing emissions of greenhouse and acid gases.

D. SAI ABHISHEK (152U1A0307) III ME

Green Manufacturing:

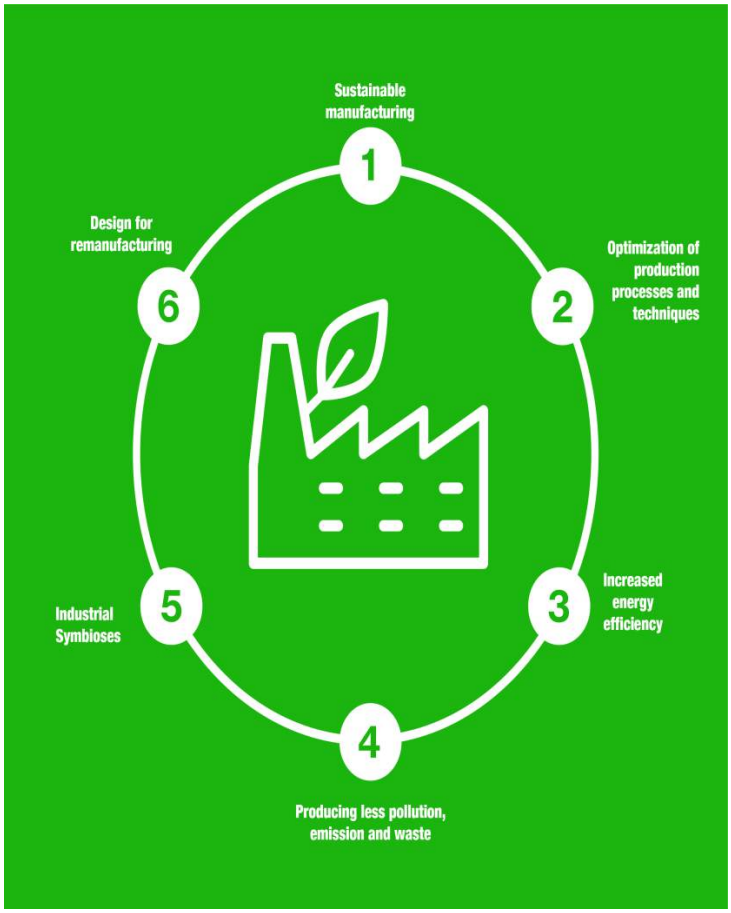
What is green manufacturing?

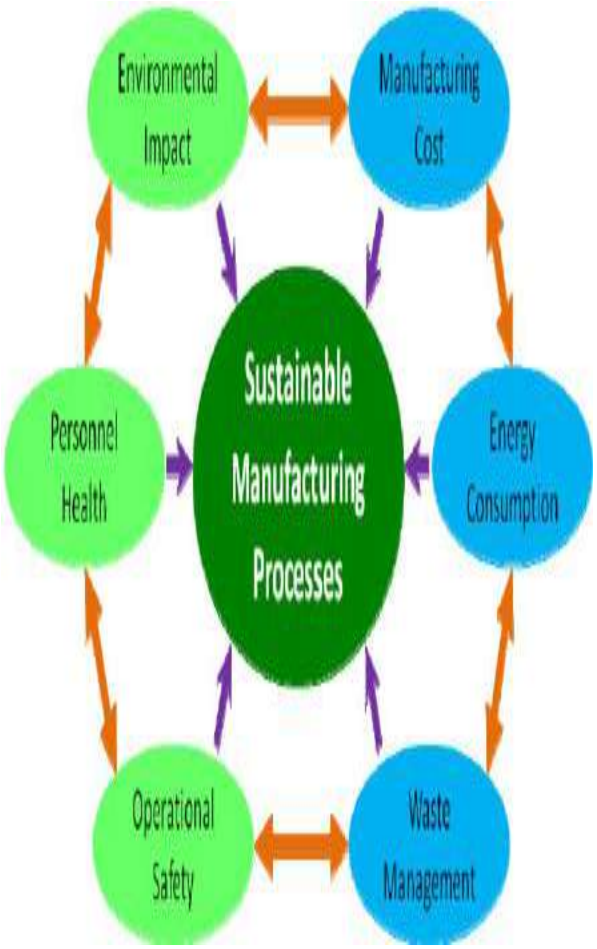
(Katz)

“Manufacturing giants General Electric, DuPont and Toyota have been at the forefront of selling green. In doing so, many of these companies also work with the government to help develop policy. For instance, earlier in the year a group of manufacturers and big business, which includes GE and DuPont, formed an organization that calls for a cap on carbon dioxide emissions.”

“Last December, Nissan Motor Co. Ltd. rolled out its green marketing campaign, Nissan Green Program 2010. Primary program goals include CO2 reductions to meet upcoming U.S. and European emissions standards and the development of various alternative-power technologies.

“ As CARB (California Air Resources Board) began discussing their ideas of enacting more stringent emission limits for manufacturers in 2010, Toyota quickly reacted by first studying whether or not meeting these levels was technologically feasible, value impact of meeting such levels three years early," Boyd says





While recent pressure to become green may have increased the desire of companies to waste less, they also want to decrease waste to ensure greater profit margins. If something is sold at the same price but less material, labor and effort is needed to produce it, then this is seen as a gain for the company. While waste minimization for a company often requires an investment of capital and time, it is almost always paid for with increased efficiency and more goodwill towards the company as well.

Different processes used to reduce waste:

Resource Optimization: using raw materials more effectively

This method is very useful for many manufacturing companies to take advantage of.

For example: The reuse of scrap metal is very useful because most metal properties allow it to be melted and used for the same purpose.

Improving quality control measures

Investing more time in process monitoring, such as, making sure the product is made complete and green throughout the whole process

The design of the process and the product that will be used to produce the selling product is the most important part of manufacturing. Focusing on the management of the process and products being used will take up much time and capitol, but the return on investment should forecast to a much higher return.

P. KARTHIK (162U1A0336) II ME

G. VAMSI KRISHNA(162U1A0314), II ME

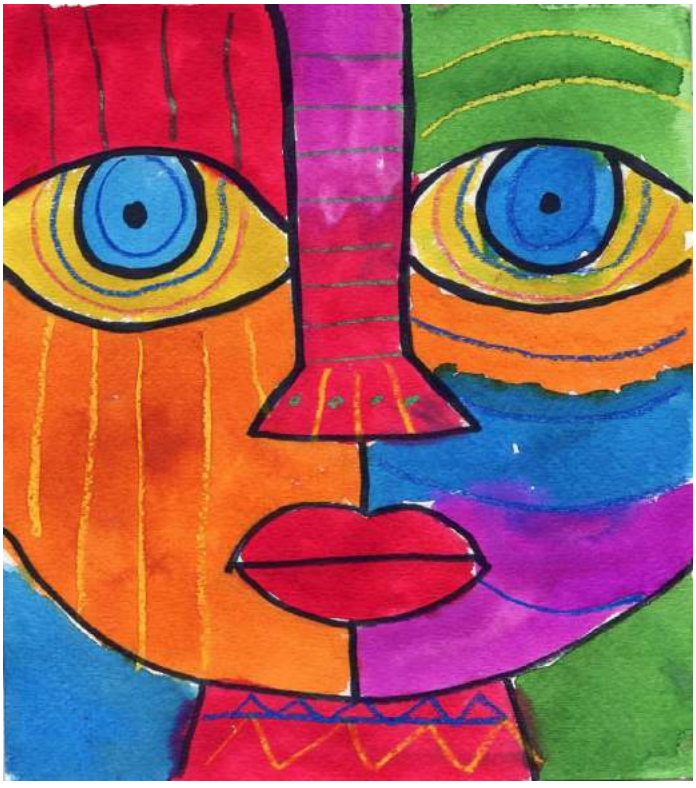
M. GOWTHAM(172U1A0316), I ME

SK . SHAHUL AHAMAD(162U1A0349), II ME

B. PAVAN(172U1A0302), I ME

MD. SHAKEER AFRIDH(142U1A0327), IV ME

SK ABDUL REHMAN(162U1A0342), II ME



M. BHARATH(152U1A0321), III ME

V. HEMANTH (162U1A0355), II ME

Stories

1. THE GOLDEN TOUCH

The Moral : Greed will always lead to downfall.

There once was a king named Midas who did a good deed for a Satyr. And he was then granted a wish by Dionysus, the god of wine.

Excited about his newly-earned powers, Midas started touching all kinds of things, turning each item into pure gold.

But soon, Midas became hungry. As he picked up a piece of food, he found he couldn't eat it. It had turned to gold in his hand.

Hungry, Midas groaned, "I'll starve! Perhaps this was not such an excellent wish after all!

Seeing his dismay, Midas' beloved daughter threw her arms around him to comfort him, and she, too, turned to gold. "The golden touch is no blessing," Midas cried.

N . HIMAVANTH REDDY(162U1A0330) II ME

2. THE PROUD ROSE

The Moral : Never judge anyone by the way they look.

Once upon a time, in a desert far away, there was a rose who was so proud of her beautiful looks. Her only complaint was growing next to an ugly cactus.

Every day, the beautiful rose would insult and mock the cactus on his looks, all while the cactus remained quiet. All the other plants nearby tried to make the rose see sense, but she was too swayed by her own looks.

One scorching summer, the desert became dry, and there was no water left for the plants.

The rose quickly began to wilt. Her beautiful petals dried up, losing their lush color.

Looking to the cactus, she saw a sparrow dip his beak into the cactus to drink some water. Though ashamed, the rose asked the cactus if she could have some water. The kind cactus readily agreed, helping them both through the tough summer, as friends.

K. ARAVINDKUMAR(142U1A0319) IV ME

3. ELEPHANT AND FRIENDS

The Moral : Friends come in every shape and size.

A lone elephant walked through the forest, looking for friends. She soon saw a monkey and proceeded to ask, 'Can we be friends, monkey?'

The monkey quickly replied, 'You are big and can't swing on trees like I do, so I cannot be your friend.'

Defeated, the elephant continued to search when it stumbled across a rabbit. She proceeded to ask him, 'Can we be friends, rabbit?'

The rabbit looked at the elephant and replied, "You are too big to fit inside my burrow. You cannot be my friend."

Then, the elephant continued until she met a frog. She asked, "Will you be my friend, frog?"

The frog replied, "You are too big and heavy; you cannot jump like me. I am sorry, but you can't be my friend."

The elephant continued to ask the animals she met on her way, but always received the same reply. The following day, the elephant saw all the forest animals run in fear. She stopped a bear to ask what was happening and was told the tiger was attacking all the small animals.

The elephant wanted to save the other animals, so she went to the tiger and said, "Please, sir, leave my friends alone. Do not eat them."

Seeing no other way, the elephant kicked the tiger and scared him away. Upon hearing of the brave tale, the other animals agreed, "You are just the right size to be our friend."

T. SUBHASH REDDY(172U1A0339) ,I ME

Poems

The Moon :

The moon has a face like the clock in the hall;
She shines on thieves on the garden wall,
On streets and fields and harbour quays,
And birdies asleep in the forks of the trees.

The squalling cat and the squeaking mouse,
The howling dog by the door of the house,
The bat that lies in bed at noon,
All love to be out by the light of the moon.

But all of the things that belong to the day

Cuddle to sleep to be out of her way;

And flowers and children close their eyes

Till up in the morning the sun shall rise.

N. PRAHARSH(152U1A0327), III ME

Let's Preserve Our Nature :

The sun is shining

The sky is blue

The birds are flying

And the breeze is so cool.

Mother Nature is trying her best

To give nothing but beautifulness

But what do we do?

Make her a mess.

Let's make her the best

By polluting less and less

And preserve her green dress

For our kids and the rest.

R. VENU(162U1A0338), II ME

AMAZING FACTS

1. Kerala tops the highest liquour consuming state in India.
2. Hindi is not the national language of India.
3. Brazil is named after a tree.
4. Apple is 25% of air, that is why it floats on water?
5. The first product to have a barcode was Wrigley's gum.
6. Cricket bats are made of tree called willow.
7. Honeybees can taste with their feet.
8. A football is made of 32 leather pieces.
9. The only part of the body that has no blood supply is cornea of the eye.
10. The strongest muscle in the human body is tongue.
11. The spiral shapes of sunflower seeds follow fibonacci series.
12. From 0 to 1000 the letter "A" only appears in "thousand".
13. Have you ever noticed that the opposite sides of a die add up to seven.
14. Hundred is derived from "hundredth" which actually means 120.

    Zero is not there in roman numbers.

O. VINOD KUMAR(142U1A0333) , IV ME

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO1. **Engineering Knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. **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.

PO3. **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.

PO4. **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.

PO5. **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.

PO6. **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.

PO7 **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.

PO8 **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 **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

PO11 **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.

PO12 **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

At the time of graduation student of B. Tech in Mechanical Engineering will be able to

PSO1: Professional Skills: Utilize the knowledge of materials and manufacturing principles to plan, design and monitor the production operations of an Industry.

PSO2: Design Skills: Employ the governing laws of thermodynamics, heat transfer and refrigeration & air-conditioning to design and develop thermo-fluid system.