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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)

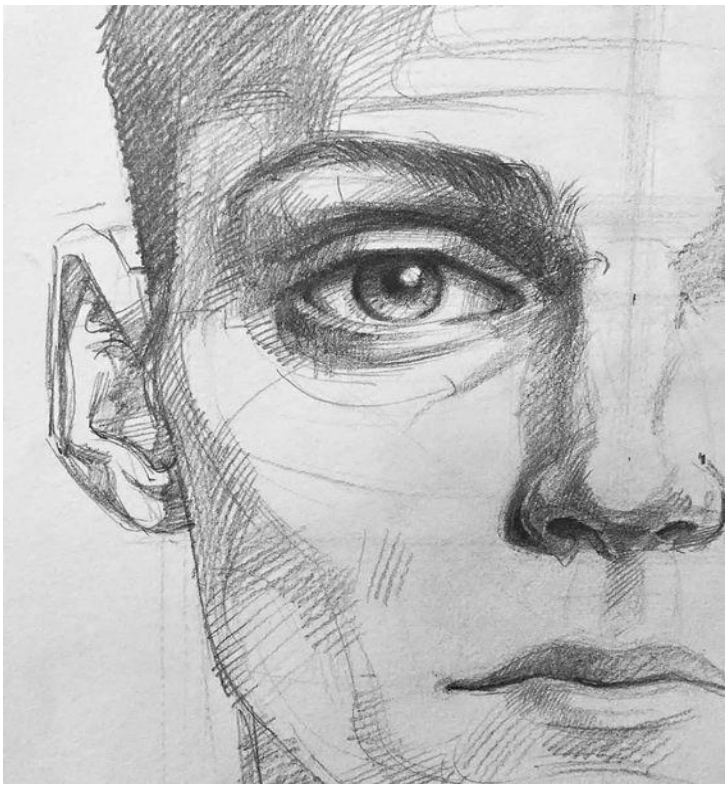
Graduates of B.Tech in Mechanical Engineering program shall able to

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.

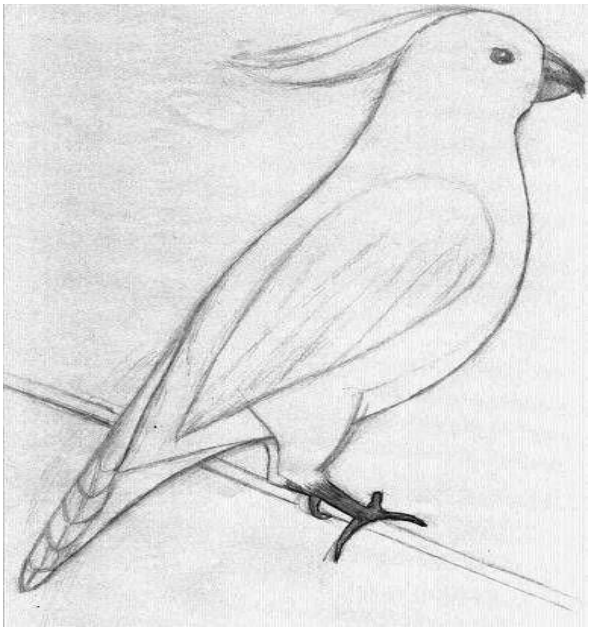
PEO4: Contribute in multi-disciplinary teams through effective inter personal skills.



D. SASI KUMAR (182U1A0313) , III ME

K. CHAKRADHAR (172U1A0314) , IV ME

P. SAI NIVAS (192U1A0316) , II ME



N. KARTHIK (192U1A0311) , II ME

A.SAI KRISHNA(202U5A0301) , II ME

M. VARUN KUMAR (172U1A0322) , IV ME

Poems

The Beauty Of A Tree

Can there be anything more lovely
Than the beauty of a tree?
Her leaves shimmering in the wind,
Dancing so gracefully.

The strength of her mighty roots
That grows deep into the earth.
She's weathered every stormy gale
For all that she is worth.

Standing tall, resilient
With her branches lifted high,
She refused to bow, to break or bend
But reaches upward to the sky.

The beauty of the strength within
As she held her head up high.
Her strong resilient spirit
Grew wings and learned to fly.

N. NAGA PRASAD (182U1A0332), III ME

They Flee From Me

They flee from me that sometime did me seek
With naked foot, stalking in my chamber.
I have seen them gentle, tame, and meek,
That now are wild and do not remember
That sometime they put themself in danger
To take bread at my hand; and now they range,
Busily seeking with a continual change.

Thanked be fortune it hath been otherwise
Twenty times better; but once in special,
In thin array after a pleasant guise,
When her loose gown from her shoulders did fall,
And she me caught in her arms long and small;
Therewithall sweetly did me kiss
And softly said, “Dear heart, how like you this?”

It was no dream: I lay broad waking.
But all is turned thorough my gentleness
Into a strange fashion of forsaking;
And I have leave to go of her goodness,
And she also, to use newfangleness.
But since that I so kindly am served
I would fain know what she hath deserved.

A.SAI KRISHNA(202U5A0301) , II ME

"I loved you first: but afterwards your love"

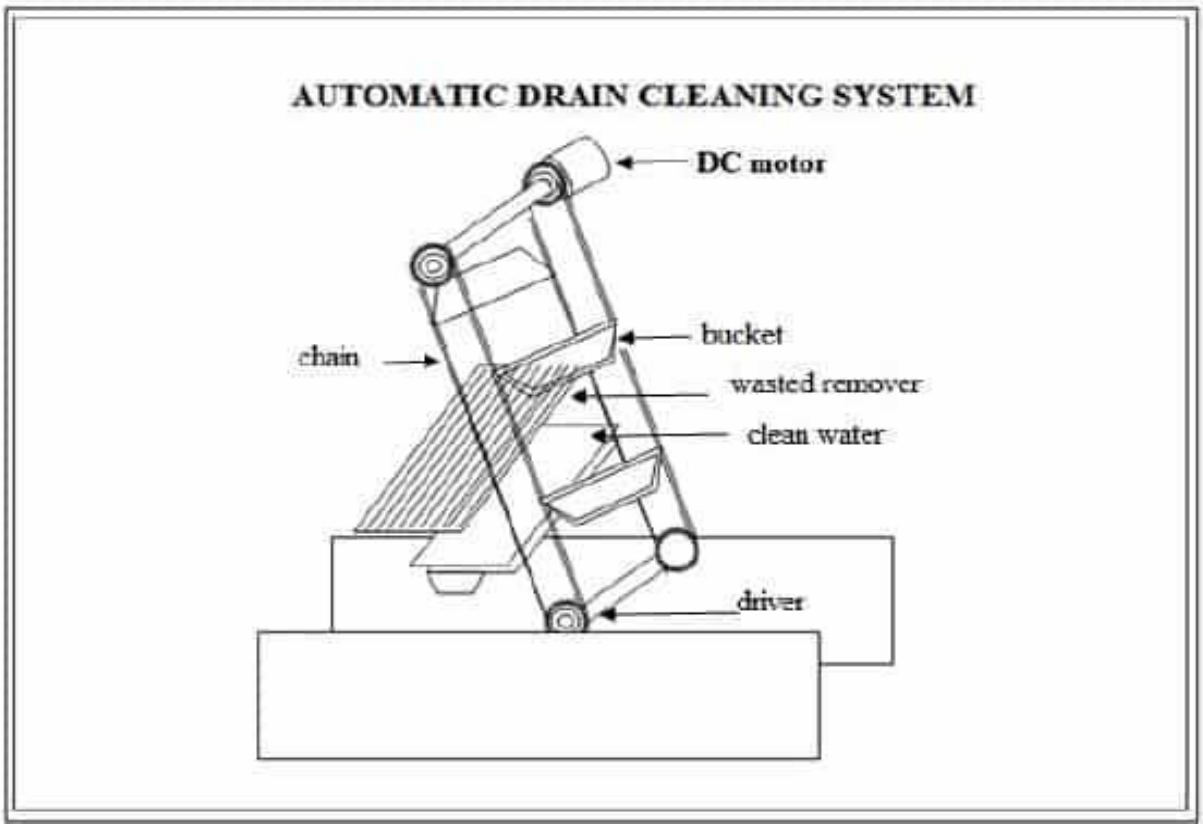
I loved you first: but afterwards your love
Outsoaring mine, sang such a loftier song
As drowned the friendly cooings of my dove.
Which owes the other most? my love was long,
And yours one moment seemed to wax more strong;
I loved and guessed at you, you construed me
And loved me for what might or might not be –
Nay, weights and measures do us both a wrong.
For verily love knows not ‘mine’ or ‘thine;’
With separate ‘I’ and ‘thou’ free love has done,
For one is both and both are one in love:
Rich love knows nought of ‘thine that is not mine;’
Both have the strength and both the length thereof,
Both of us, of the love which makes us one.

M. ADARSH(192U1A0309) , II-II ME

AUTOMATIC DRAINAGE CLEANING SYSTEM

INTRODUCTION

Automatic Drainage Water cleaning and Control System Using auto mechanism proposed to overcome the real time problems. With the continued expansion of industries, the problem of sewage water must be urgently resolved due to the increasing sewage problems from industries of the surrounding environment. The waste and gases produced from the industries are very harmful to human beings and to the environment. Our proposed system is to cleaning and control the drainage level using auto mechanism technique. auto mechanism is the major controlling unit and the drainage level is monitor by municipal . In this system we used motor, chain, driver, bucket, frame.



Automatic drainage cleaning system

The Device Is Place Across Drain So That Only Water Flow Through Lower Grids. Waste Like Bottle, Etc. Floating In Drain Are Lifted By Teeth Which Is Connected To Chain. This Chain Is Attached By Gears Driven By Motor. The Energy Provided To Motor Is Solar Photovoltaic Cell Connected To It. When Motor Runs The Chain Starts To Circulate Making Teeth To Lift Up. The Waste Materials Are Lifted By Teeth And Are Stored In Waste Storage Tank.

ADVANTAGES:

1. Production cost is very low.
2. No need of purchase special machine.
3. It is mainly very useful to hold the lengthy plate(1.5 feet) in particular position.
4. It is compact and portable.

DISADVANTAGE:

- Small vibration occurs due to wire brush wheel attachment.
- In order to avoid vibration the machine should be properly foundation with the floor.

APPLICATION:

This device find place in.

- It is used almost in all types if Drainage (Large , Small & medium).
- This machine is mainly used in cleaning system
- project to use this in efficient way to control the disposal of wastages and with regular filtration of wastages
- This device is suitable to hold flat type plate. (maximum length1.5 feet)

P. SREENIVASULU (202U5A0311) ,II ME

SOLAR DISTILLATION

Introduction

In rural India water sources are limited. Often the only available drinking water is saline, may have an elevated fluoride concentration, and may also have a significant fecal coliform load. This poor water quality often causes sickness among villagers. Solar distillation offers an opportunity to provide a lowtech solution yielding high quality water for people living in rural. In this desert region there are very few overcast days outside of the monsoon season, allowing solar distillation to be viable throughout much of the year. While solar stills are able to remove salts and pathogens, their yields are relatively low and the direct ingestion of distilled water is not necessarily desirable. Instead of directly drinking the distilled water it can be blended with traditional water sources. For instance, mixing the distilled water in a 1:1 ratio with the current supply may significantly reduce deleterious health effects from dissolved salts and pathogens. The appropriate mixing ratio would need to be determined and is likely to vary over an annual cycle.

solar still :A distills water with substances dissolved in it by using the heat of the Sun to evaporate water so that it may be cooled and collected, thereby purifying it. They are used in areas where drinking water is unavailable, so that clean water is obtained from dirty water or from plants by exposing them to sunlight.

Still types include large scale concentrated solar stills and condensation traps**.** In a solar still, impure water is contained outside the collector, where it is evaporated by sunlight shining through a transparent collector. The pure water vapour condenses on the cool inside surface and drips into a tank.

Distillation replicates the way nature makes rain. The sun's energy heats water to the point of evaporation. As the water evaporates, its vapour rises, condensing into water again as it cools. This process leaves behind impurities, such as salts and heavy metals, and eliminates microbiological organisms. The end result is pure (potable) water.

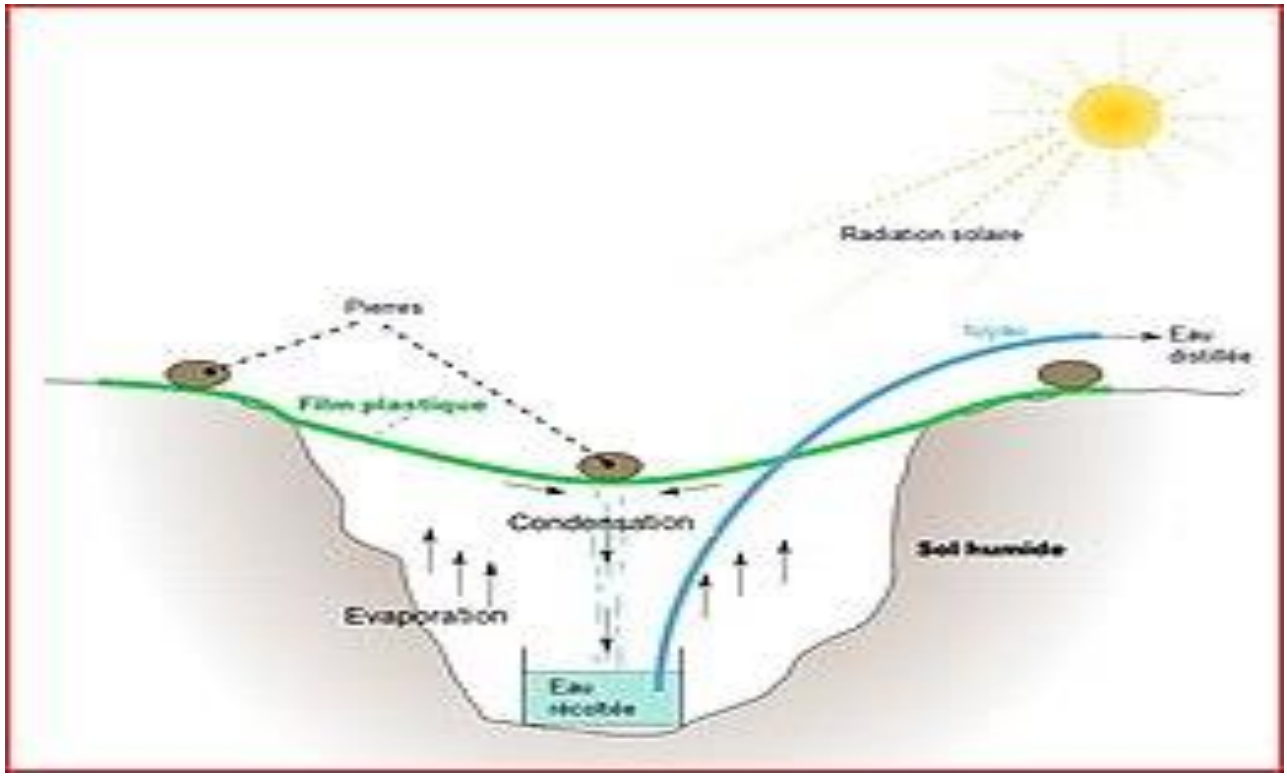
Methods :

Pit still

A collector is placed at the bottom of a pit. Branches are placed vertically in the pit. The branches are long enough to extend over the edge of the pit and form a funnel to direct the water into the collector. A lid is then built over this funnel, using more branches, leaves, grasses, etc. Water is collected each morning.

This method relies on the formation of dew or frost on the receptacle, funnel, and lid. Forming dew collects on and runs down the outside of the funnel and into the receptacle. This water would typically evaporate with the morning sun and thus vanish, but the lid traps the evaporating water and raises the humidity within the trap, reducing the amount of lost water. The shade produced by the lid also reduces the temperature within the trap, which further reduces the rate of water loss to evaporation.

A solar still can be constructed with 2–4 stones, plastic film or transparent glass, a central weight to make the funnel and a container for the condensate. Better materials improve efficiency. A single sheet of plastic can replace the branches and leaves. Greater efficiency arises because the plastic is waterproof, preventing water vapour from escaping. The sheet is attached to the ground on all sides with stones or earth. Weighting the centre of the sheet forms the funnel. Condensate runs down it into the receptacle. One study of pit distillation found that angling the lid at 30 degrees angle captured the most water. The optimal water depth was about 25 millimetres



Transpiration

During photosynthesis plants release water through transpiration. Water can be obtained by enclosing a leafy tree branch in clear plastic, capturing water vapour released by the tree. The plastic allows photosynthesis to continue.

In a 2009 study, variations to the angle of plastic and increasing the internal temperature versus the outside temperature improved output volumes.

Unless relieved the vapour pressure around the branch can rise so high that the leaves can no longer transpire, requiring the water to be removed frequently.

Alternatively, clumps of grass or small bushes can be placed inside the bag. The foliage must be replaced at regular intervals, particularly if the foliage is uprooted.

Efficiency is greatest when the bag receives maximum sunshine. Soft, pulpy roots yield the greatest amount of liquid for the least amount of effort.

Wick

The wick type solar still is a vapour-tight glass-topped box with an angled roof.[7] Water is poured in from the top. It is heated by sunlight and evaporates. It condenses on the underside of the glass and runs into the connecting pipe at the bottom. Wicks separate the water into banks to increase surface area. The more wicks, the more heat reaches the water.

Additives

When distilling brine or other polluted water, adding a dye can increase the amount of solar radiation absorbed.

Reverse still

A reverse still uses the temperature difference between solar-heated ambient air and the device to condense ambient water vapour. One such device produces water without external power. It features an inverted cone on top to deflect ambient heat in the air, and to keep sunlight off the upper surface of the box. This surface is a sheet of glass coated with multiple layers of a polymer and silver.

Applications

Remote sites

Solar stills are used in cases where rain, piped, or well water is impractical, such as in remote homes or during power outages. In subtropical hurricane target areas that can lose power for days, solar distillation can provide an alternative source of clean water.

P . PAVAN KALYAN(182U1A0334) , III 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.