



SREE VAAGESWARI EDUCATIONAL SOCIETY VAAGESWARI COLLEGE OF ENGINEERING

(Affiliated to JNTUH, Hyderabad.)

(Approved by AICTE New Delhi & Recognised by the Govt. of Telangana State)

3.2.1 Institution has created an eco system for innovations, and has initiatives for creation and transfer of knowledge. (Write description in maximum of 500 words)

INSTITUTION INNOVATION CELL

Innovation is conversion of idea leading to improvement in way of doing things depending on availability of resources with guidance from those who are more experienced around us.

Objectives of the Cell

- To motivate students to bring out their hidden talents in various disciplines of Engineering,
- To provide platform to realize and believe in themselves.
- To empower students to become young entrepreneurs.
- To create an innovative environment for the students to discover, develop, deploy and express their skills and talents.
- To motivate students to take part in Hackathons & prototype development, Technical Tutorials.
- To encourage students to carry out their hidden talents in various disciplines of Engineering.

IIC – Council

Sl. No.	Name of the Person	Designation
1	Dr. Ch. Srinivas, Principal, Vaageswari College of Engineering	President
2	Dr. N. Chandramouli, Professor & Head, Dept. of Computer Science Engineering	Innovation Activity Coordinator
3	Dr. K. Chandramouli, Associate Professor, Dept. of Electrical and Electronics Engineering	Social Media Coordinator
4	Mr. A. Venkat Reddy, Associate Professor, Dept. of Electronics and Communications Engineering.	Start-up Activity Coordinator
5	Mr. K. Rajesh, Associate Professor & Head, Dept. of Civil Engineering	Internship Activity Coordinator
6	Dr. E. Hari Prasad, Assoc. Professor, Dept. of Business	IPR Activity Coordinator



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	Management	
7	Dr. J. Sandhya Reddy, Assoc. Professor, Dept. of Chemistry	NIRF Coordinator
8	Dr. D. Surender Professor, Dept. of Electronics and Communication Engineering	ARIIA Coordinator
9	Mr. G.S. Arun Kumar Asst. Professor, Dept. of Electrical and Communications Engineering	Co-Ordinator

Innovations Ambassadors

1	Mr. R. Ganesh Dr. E. Rakesh Reddy	Dept. of Civil Engineering
2	Md.Siraj Mr. K Sridhar Reddy	Dept. of Computer Science Engineering
3	Mr. M. Ramana Reddy Mrs. Mounika	Dept. of Electrical and Electronics Engineering
4	Mr. D. Vijay Kumar Mr. R. Sainath	Dept. of Mechanical Engineering
5	Mr. Bharvendra Mr. Surender	Dept. of Electronics and Communications Engineering

The institution is providing training programs to students in addition to that innovation to idea development, entrepreneurship for employability and CRT programs for skill development

The Institution provides contributing environment for promotion of Innovation and Incubation. All required facilities are provided and Guidance is extended to the students for their research and innovative projects. Students are encouraged to involve actively in the usage of Technology for societal needs. Required level assistant is extended for preparation of required documents, publication of research papers and also for obtaining patents.

Awareness meets, workshops, seminars and guest lectures are organized to develop entrepreneurial skills. The institution is providing opportunities to students to interact directly with the outstanding entrepreneurs who are excelling in their areas. Marketing awareness programmes are also conducting to inculcate marketing skills which highly useful to market their products.



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Students are encouraged by arranging needed financial support to undertake major and minor research projects which are useful to their professional career in particular and society in general.

The institution is also conducting workshops on trending technology to create awareness. Students are encouraged to hold model expos which help them to gain hands on experience and good industrial knowledge and awarded with cash prizes for best ones.

Students are encouraged to map their latest innovative ideas and innovations for society use. Students carried out their innovations in designing and fabricating the vehicles and participated in various competitions.

During the last five years PhD faculties published various research papers in reputed and indexed journals and working actively in the research in their domain areas.

The institution has been conducting contests on emerging trends and HACKTHONS through which students will be exposed to latest industrial requirements.

The institution extends needed financial support to students who participates contests and competitions held by other organizations to exhibit their ideas and models. This helps the students to grab the opportunity to acquire additional skills and market their products. The Local Entrepreneurs are invited to address the students and inspire them to move towards startups.

This institution invites eminent experts as guest lecturers from other academic institutions and industries to facilitate the students in multi-disciplinary areas and establish networking with the other organizations.



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The institution started Industry-Institute Partnership Cell (Training and Placement Cell). This Cell facilitates interaction with industries and corporate establishments for the following activities:

- A large number of job-oriented skills are offered to students in cooperation with industry experts
- Campus Recruitment Training (CRT) Programs are organized for students of this college and other neighbor colleges.
- A liaison between the Institute and industry is established for consultancy.
- Summer training of students to familiarize them to practical industrial problems.



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SOLAR WATER HEATER WITH ALUMINIUM FOIL

The IIC of Vaageswari College of Engineering has been encouraging its students to undertake innovate activities. Four Students, Mr. Shaik Mujaheed (20S41A0312), Mr. A. Raviteja (20S41A0302), Mr. M. Manoj (20S41A0323) and Mr. S. Vishal (20S41A0330) of B. Tech Mechanical Engineering, have invented the “Solar Water Heater with Aluminium Foil” under the guidance of Mr. B. Laxminarayan, Assistant Professor, which is highly useful to households, small firms in getting heat water during the winter season.

Abstract of the Project

The Solar Water Heater with Aluminium Foil project represents a significant stride towards sustainable and eco-friendly domestic water heating. As the world intensifies its commitment to reducing dependence on conventional energy sources, harnessing solar power for residential use becomes imperative. This project embraces a pragmatic approach by incorporating aluminum



foil into a simple yet effective design, aiming to enhance both heat absorption and retention. The overarching goal is to create a solution that is not only environmentally conscious but also economically feasible.

This report provides a comprehensive exploration of the project, detailing the materials utilized, the methodology applied, and the projected advantages of this innovative system. By tapping into solar energy for water heating, we aim to contribute to global energy conservation efforts while concurrently fostering a cleaner and greener paradigm for meeting the essential needs of households. The report serves as a guide for understanding the intricacies of the Solar Water Heater with Aluminium Foil project and its potential to revolutionize domestic energy consumption.

Advantages:

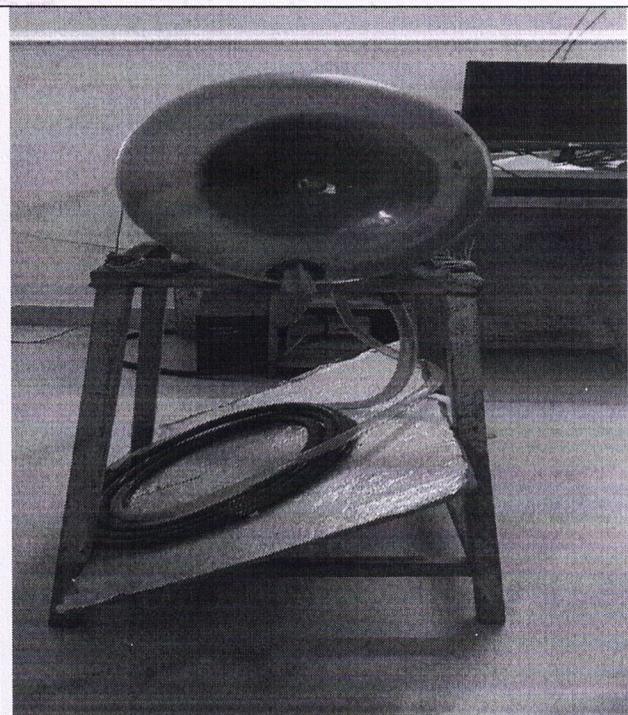
1. **Renewable Energy Source:** Solar water heaters utilize abundant solar energy, providing a sustainable and renewable source for water heating.
2. **Cost Savings:** Significant reduction in electricity or fuel bills, leading to long-term cost savings for homeowners and businesses.
3. **Environmentally Friendly:** Drastically lowers carbon footprint, contributing to environmental conservation by reducing reliance on non-renewable energy sources.
4. **Low Operating Costs:** Solar water heaters have minimal operating and maintenance costs, making them economically viable in the long run.
5. **Energy Independence:** Promotes energy independence by harnessing sunlight, reducing dependence on external energy supplies.
6. **Government Incentives:** In many regions, governments offer incentives, rebates, and tax benefits to encourage the adoption of solar water heating systems.



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7. **Low Environmental Impact:** Minimal environmental impact compared to conventional water heating methods, as it doesn't involve the burning of fossil fuels.
8. **Long Lifespan:** Well-maintained solar water heaters have a long lifespan, providing a reliable and durable solution for water heating needs.
9. **Scalability:** Suitable for both residential and commercial applications, with the ability to scale systems based on specific requirements.
10. **Increased Property Value:** Installation of solar water heaters can enhance the value of properties, making them more attractive to environmentally conscious buyers.

Applications:

1. **Residential Water Heating:** Commonly used for heating water in households, providing hot water for bathing, cooking, and cleaning.



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2. **Commercial Buildings:** Applied in hotels, hospitals, and other commercial establishments to meet high-volume water heating demands.
3. **Swimming Pool Heating:** Solar water heaters are used to heat swimming pools, offering an energy-efficient alternative to traditional pool heaters.
4. **Industrial Processes:** Implemented in various industries for processes requiring heated water, contributing to energy efficiency and cost savings.
5. **Agricultural Operations:** Used for heating water in agricultural operations, such as greenhouse irrigation or livestock care.
6. **Remote Locations:** Ideal for remote areas with limited access to conventional energy sources, offering a reliable off-grid water heating solution.
7. **Educational Institutions:** Applied in schools and universities to showcase sustainable practices and reduce operational costs.
8. **Military Installations:** Utilized in military bases for hot water needs, contributing to energy independence and operational sustainability.

9. **Off-Grid Residences:** Ideal for off-grid homes or vacation properties where access to conventional utilities may be limited.
10. **Water Desalination:** Solar water heaters can be integrated into desalination processes, contributing to freshwater production in arid regions.

In conclusion, this project not only provides a viable solution for energy-efficient water heating but also serves as a beacon for further research and development in the realm of sustainable energy technologies. The journey towards a greener and more sustainable future involves embracing such initiatives, and the Solar Water Heater with Aluminium Foil project contributes meaningfully to this ongoing global endeavor.