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**VIDYAVARDHINI'S
NATIONAL CONFERENCE ON
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SOCIAL UPLIFTMENT
VNC - 2020 TASU**

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Signature of Participant

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Dept. of Mechanical Engg.
Vidyardhini's College of
Engineering & Technology
Vasai Road - 401202

Account Name: Vidyardhini's College of

Engineering and Technology

Bank Name: Union Bank of India

Branch: Vidyardhini College Branch, Vasai Rd (W)

Account Number: 320602011001031

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**VIDYAVARDHINI'S
NATIONAL CONFERENCE ON
TECHNICAL ADVANCEMENTS FOR
SOCIAL UPLIFTMENT**

**VNC - 2020 TASU
4TH APRIL, 2020**



Organized by:
**Vidyardhini's College of
Engineering & Technology**
K.T. Marg, Vasai (W) - 401202

Affiliated to University of Mumbai
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**BJIT - BVICAM's International Journal of Information
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Research & Technology** ISSN: 2278-0181

Conference Website: www.vcet.edu.in/vnc2020/**Technically Sponsored By:****IEEE
BOMBAY
SECTION**

About us:

Vidyavardhini means a Body committed to enhancement of Knowledge. Vidyavardhini was established as a registered society in 1970 by late Padmashri H. G. alias Bhausaheb Vartak for the noble cause of education in rural areas.

Vidyavardhini's College of Engineering and Technology, Vasai is located on the sprawling campus of Vidyavardhini, spread over an area of 12.27 acres. It is a short, two minutes walk from Vasai Road (W) Railway Station. The college is also accessible by road from Mumbai.

Vidyavardhini Society received approval from AICTE to start the new college of Engineering & Technology with effect from July, 1994. The college is affiliated to the University of Mumbai for the four year degree program leading to the degree of Bachelor of Engineering in six branches.

Objective of VNC 2020 TASU

Technology has always been potential tool for simplifying the way we do things. Present time demands directing the technological advancements towards addressing societal challenges such as improving health care, education environment, sanitation, agriculture, smart city, etc., VNC 2020 TASU aims to provide an opportunity to researchers, academicians, Industrialist and students to interact and share their ideologies and contributions made for social upliftment with the aid of technological advancements.

Call for paper

We welcome submission in following area

1. Sustainable Computing
 2. High Performance Computing
 3. High Speed Networking and Information Security
 4. Software Engineering and Emerging Technologies
 5. Mathematical, Experimental, Computational and AI, IoT Techniques in Mechanical Engg.
 6. Industrial Engg., ERP, MRP, SCM
 7. Renewable Energy Technologies
 8. Pollution control and Waste Management
 9. Advances in Structural engineering
 10. Present geotechnical practices
 11. Present practices in construction management
 12. Recent developments in Instrumentation, control and automation
 13. Embedded Systems, IoT and VLSI Design
 14. Optical and Wireless Communication for NGN
 15. Antenna and Microwave Devices
- Any other relevant topics

Publication Information

Proceedings of VNC - 2020 TASU will be published with ISBN number

1. Selected Papers will be published in International Journal of Information Technology, Published by Springer Nature, ISSN: 2511-2104 (Print Version), ISSN: 2511-2112 (Electronic Version)

2. All papers will be published in IJERT, ISSN: 2278-0181

Important Dates:

- Submission of full length paper 15th Feb 2020
- Paper Acceptance Notification 22nd Feb 2020
- Submission of Final Version of Paper 29th Feb 2020
- Registration Deadline 5th March 2020
- PPT Submission 20th March 2020
- Conference 4th April 2020

Registration Fee Details:

Category of Delegates / Authors	Indian Authors & Delegates (in INR)
Full Time Students (UG)	1,500.00
Teachers/ Research Scholars/ PG students	2,500.00
Industry	3,500.00

Paper Submission:

Paper submission should be made strictly via Easy Chair the submission link for VNC 2020 "TASU": www.easychair.org/conferences/?conf=vnc2020

Download paper template from:

https://www.vcet.edu.in/vnc2020/Template_For_Full_Paper%20VNC%202020.doc

Contact Us:

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***Best paper award
for each track***

Design and fabrication of solar water heater using Fresnel lens

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Abstract— Global climate change has resulted to hunt for non-conventional energy sources in place of conventional fossil fuel-based energy sources. We are using Fresnel lens as a concentrator because it gives very high concentration on focal point. Fresnel lens is an optical device which concentrates the incoming light onto a spot or onto a line. This means that the temperature at that point will be significantly high. Utilizing this temperature for solar thermal applications will definitely be helpful for solar thermal power plants as the water can directly be converted into steam. This report discusses about the various applications of Fresnel lens and how advantageous it can be to be utilized in solar thermal applications.

Keywords—Fresnel Lens, Copper tube Spiral Collector

I. FRESNEL LENS

Fresnel lens is a component which focuses light onto a single point or a line. There are basically two types of Fresnel lenses. One is the Spot Fresnel lens and the other is the Linear Fresnel lens. The spot Fresnel lens focuses the light onto a spot on the object and the linear Fresnel lens focuses light onto an entire line on the object. The lens consists of concentric groves in spot Fresnel lens and parallel groves in linear Fresnel lens [2].

The groves are the main part of the lens. It focuses light according to its design based on concentric or parallel nature of the groves. Concentric groves focus light onto a single point and parallel lens focuses onto a line. Major development in the field of Fresnel lens PV concentrator systems are being made due to the fact that radiation on the cell increases with increase in temperature. Dual axis tracking, point focus Fresnel lens is used for concentrating the radiation on to the center.

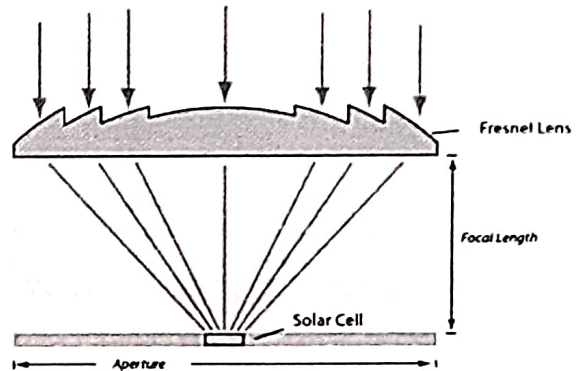


Figure 1: Fresnel lens [1]

II. EASE OF USE

A. Spot Fresnel lens.

The working principle of a lens is based on the law of refraction according to which a light ray travels in a straight path in a homogeneous transparent medium, but when it passes through the interface of a transparent medium having different density; it gets deviated from its original path at the interface. When light enters from rarer medium to a denser medium, it bends towards the normal, but when light enters from denser medium to rarer medium, it bends away from the normal, this phenomenon is due to change in velocity of light in a different medium as the resistance offered by medium also changes.

AS

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VNC - 2020 TASU
27th June, 2020

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Certificate of Participation

This certificate is presented to
Swapnil Ratnakar Mane
 of **Vidyavardhini's College of Engineering & Technology**

for presenting paper titled
Design and Fabrication of Solar Water Heater using Fresnel Lens

in the Vidyavardhini's National conference 2020 "Technical Advancements for Social upliftments" organised by Vidyavardhini's College of Engineering and Technology, Vasai held on 27th June, 2020

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Dr. Harish Vankudre
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