



**Scienxt Journal of Mechanical Engineering & Technology**  
**Volume-2 || Issue-1 || Jan-Apr || Year-2024 || pp. 1-15**

## *An assessment of the impact of heat transfer enhancement on solar water heating systems utilizing evacuated tube heat pipes*

**\*<sup>1</sup>Rohit Kumar Choudhary, <sup>2</sup>Priyanka Uikey, <sup>3</sup>Rakesh <sup>4</sup>Ravi Raj Singh  
<sup>5</sup>Ravindra Kumar <sup>6</sup>Sagar Kumar Shah**

<sup>\*1</sup> Associate Professor, Bhopal Institute of Technology and Science, Bhojpur Road Bhopal, 462045 M.P. India  
<sup>2, 3, 4, 5, 6</sup> Student, Bhopal Institute of Technology and Science, Bhojpur Road Bhopal, 462045 M.P. India

*\*Corresponding Author: Rohit Kumar Choudhary  
Email: bitshodme1@gmail.com*

## **Abstract:**

The Evacuated tube collector includes a number of rows of parallel transparent glass tubes connected to a header pipe and that are used in region of the blackened warmness absorbing plate we saw in the previous flat plate collector. Different types of glass materials of heat pipe have been used with different profile. Inside the fluid flow (octadecane) nano fluid on heat pipe. We found that they gives better temperature distribution and mass transformation in capillary tube of heat pipe

## **Keywords:**

Heat Pipe, Evacuated Tube, CFD