

Experimental Analysis of Evacuated Tube Solar Water Heater Using Twisted Tape

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Abstract: *Alternative energy sources possess ample amount of energy which is available at free cost and it is pollution free too. The solar energy is one such energy which can be used for cooking, heating, for other household purposes and for industrial purposes like power generation purpose. The objective of present work is to develop evacuated tube solar water heater and analyse thermal performance using twisted tape insertion. Fabrication of two evacuated tube solar water heater is done and observation under same conditions are noted one without twisted tape and other with twisted tape and all observation are compared. Result of comparison shows that using twisted tape inserts, heat transfer in the tube is more and thus the water at the outlet has more the temperature compared to evacuated tube without twisted tape insert.*

Index Terms- Alternative Energy Sources, Solar Energy, Evacuated Tube Solar Water Heater, Twisted Tape.