













3. Heat losses are also reduced as compared to higher flow rate (0.0076 Kg/s) & no glass cover on receiver. There is decrease of 43 % in average heat loss when receiver is covered with glass cover
4. There is decrease of 18 % in receiver temperature with reduced flow rate.

## 8. References

- [1] Tripanagnostopoulos, Y., and M. Souliotis. "ICS solar systems with two water tanks." *Renewable Energy*, (Dec.2006) Vol.31: Issue no.15, pp.1698-1717
- [2] Akuffo, F.O., and E.A. Jackson. "Simulation studies on a compact solar water heater in the tropics." *Solar and Wind Technology*, (1998) Vol 5, issue no6, pp.229-237
- [3] Asif, M. and T. Muneer. "Life cycle assessment of built-in-storage solar water heaters in Pakistan." *Building Service Engineering Research and Technology*, (2006), Vol 27, pp.63-69
- [4] Nahar, N.M. "Year round performance and potential of a natural circulation type of solar water heater in India." *Energy and Buildings*, (March 2003) Vol. 35, Issue no. 3, pp.239-247.
- [5] Nahar, N.M. "Capital cost and economic viability of thermosiphonic solar water heaters manufactured from alternate materials in India." *Renewable Energy*, (Aug. 2002), Vol. 26, Issue no.04, pp. 623-635.
- [6] Zerrouki, A. A. Boumedien, and K. Bouhadeif. "The natural circulation solar water heater model with linear temperature distribution." *Renewable Energy*, (Aug.2002), Vol. 26, Issue no.04, pp.549-559
- [7] Al-Madani, Hussain. "The performance of a cylindrical solar water heater." *Renewable Energy*, (Dec.2006), Vol. 31, Issue no.15, pp.1751-1763
- [8] H. Schweiger, J. Farinha Mendes, Ma. J. Carvalho, K. Hennecke and D. Krüger "Solar Heat for Industrial Processes", *Advances in solar energy*, (2007) , vol.17, issue no. pp. 216–260
- [9] Gordon, J. M. and Rabl, A. 'Design, analysis and optimisation of solar industrial process heat plants without storage', *Solar Energy*, (1982), Vol. 28, no 6, pp 519–530.
- [10] Rabl, A. 'Comparison of solar concentrators', *Solar Energy*, no 18, pp93
- [11] M. Prakash, S.B. Kedare, J.K. Nayak, "Investigations on heat losses from a solar cavity receiver", *Solar Energy*, (Dec. 2009) Vol. 83, Issue no. 12, pp.157–170.
- [12] J. Duffie and W. Beckman, "Solar Engineering of Thermal Processes" John Wiley and Sons, Inc., New York (2006).
- [13] Report by: Graham L. Morrison, "Developments in solar water heating" School of Mechanical and Manufacturing Engineering, New South Wales University, Australia.
- [14] Report by: Simon Furbo, "Present and future SDHW systems technology" Technical University of Denmark.
- [15] MSc Thesis of Mechanical Engg. Dept "High performance in low-flow solar domestic hot water systems", University of Wisconsin-Madison. (1997).
- [16] A Master of Science (Mechanical Engineering) thesis of Paul R. Fraser "Stirling Dish System Performance Prediction Model" university of wisconsin-madison. (2008).
- [17] Draft test procedure for "thermo siphon-type domestic solar hot water systems" developed by MNRE and BIS, (June 2009).
- [18] Draft test procedure for "solar cooker – paraboloid concentrator type" developed by MNRE and BIS, (August 2006).