

- The shevaduns of the existing buildings be optimized. We should find solutions for the problems of water penetration and the humidity of its walls.
- By the right design, it is possible that, in addition to the stored cold air at night at the shevadun spaces, we can direct the excess cold air of the cooling devices such as coolers which are wasted from the chinks of the windows, to inside the shevadun, in order to use it after storage.
- By considering the low velocity of the air movement inside the trapdoors that is the result of the suction and pressure of the trapdoors, there is a potential that by using the mechanical devices such as fans, we can use the cool air of shevaduns in the upper rooms more efficiently.
- Today, most of the residential spaces have several stores, according to the high potential of the underground for the passive cooling of the spaces, the effective study and design for using the cool air underground in multi-story buildings for reducing the energy consumption in these types of buildings is very important.

References

- [1] S.Alvares, E.Rodriguez, J.L.Molina, The Avenue of Europe at Expo 92:application of cool towers. In :Alvarez, Lopez de Asian,J,Yannas,S.,De Oliviera Fernandes,E.(Eds),Architecture and urban space: 9th PLEA International conference, Seville, Spain. 24-27 September 1991.
- [2] E. Erell, D. Pearlmutter, Y. Etzion, A multi-stage down-draft evaporative cool tower for semi -enclosed space: aerodynamic performance, *Solar Energy* 82 (2008) 420-429.
- [3] D. Pearlmutter, E. Erell, Y. Etzion, I.A. Meir, H. Di, Refining the use of evaporative in an experimental down -draft cool tower, *Energy and Building* 23 (1996)191-197.
- [4] V. Bansal, R. Misra, G. Das Agrawal, Performance analysis of earth-pipe-air heat exchanger for summer cooling, *Energy and Buildings*, Volume 42, Issue 5, May 2010, Pages 645-648.
- [5] Solaini G, Dall'O' G, Scansani S. Simultaneous application of different natural cooling technologies to an experimental building. *Renewable Energy* 1998; 15: 277-82.
- [6] B. Givoni, semi -empirical model of a building with a passive evaporative cooltower, *Solar Energy* 50 (1993) 425-434.
- [7] designbuilder support software, (2012), retrieved on 15th Jun 2012,from: <http://www.designbuilder.co.uk/>.