

Heat Recovery System from Air-Cooled Chillers in Iranian Hospitals

Authors : Saeed Vahidifar, Mohammad Nakhaee Sharif, Mohammad Ghaffari

Abstract : Few people would dispute the fact that one of the most common applications of energy is creating comfort in buildings, so it is probably true to say that management of energy consumption is required due to the environmental issues and increasing the efficiency of mechanical systems. From the geographical point of view, Iran is located in a warm and semi-arid region; therefore, air-cooled chillers are usually used for cooling residential buildings, commercial buildings, medical buildings, etc. In this study, a heat exchanger was designed for providing laundry hot water by utilizing condenser heat lost base on analytical results of a 540-bed hospital in the city of Mashhad in Iran. In this paper, by using the analytical method, energy consumption reduces about 13%, and coefficient of performance increases a bit. Results show that this method can help in the management of energy consumption a lot.

Keywords : air cooled chiller, energy management, environmental issues, heat exchanger, hospital laundry system

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