

Bujak, J.W. Analysis of Heat Energy Consumption in the Premises of a Hospital. *Ochrona Srodowiska* 2010, Vol. 32, No. 1, pp, 45–48.

Abstract: The object under study is the Provincial Hospital in Wloclawek, with 650 beds, which was analyzed for heat energy consumption in the time span of 2003 to 2006. Heat energy consumption for the systems of central heating, domestic hot water preparation and technological steam production was measured separately to calculate the mean yearly heat energy consumption for each of them as a function of the number of hospital beds. The heat consumption values per bed obtained *via* the above route may be of significant help in designing new hospitals (with a bed number ranging between 600 and 700) and modernizing the existing objects. Another major area where these values are applicable includes, *inter alia*, forecasting the heat demand for a variety of purposes, assessing the thermal power of the heat source, determining individual heat distribution centres, or establishing the capacity of the connection lines. The findings of the study about the so-called constant and low-temperature annual consumption of domestic hot water are expected to be particularly useful for the optimization of heat energy demand in large hospitals – those under construction and the existing ones.

Keywords: Hospital, heat energy consumption, heat energy demand, central heating, domestic hot water, technological saturated steam.