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THE HEAT LOSSES EXPERIMENTALLY IN THE EVACUATED TUBES SOLAR COLLECTOR SYSTEM IN BAGHDAD-IRAQ CLIMATE

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ABSTRACT

In this paper has been tested experimentally the thermal losses in solar water heaters with (32) evacuated tubes and tank capacity (263 liters) that have used in the design of a solar energy system for heating a meeting hall of specified area, where the test was in the evening and during the night, heat loss that cause decrease the temperature for hot water in the solar heater storage tank in the evening and during the night as well as it has tested the gain of heat experimentally from solar radiation energy during the day that made rising to the hot water temperature in the solar heater storage tank. where this test was during the winter season and for three consecutive days in February without work the space heating system in environmental conditions in Baghdad in Iraq, in this testing have used data logger with the use of two thermo couples (type k) to measure the temperature of water in the middle of the storage tank solar water heater and the ambient temperature.

KEYWORDS: Evacuated Tube Collector, Hot Water Temperature, Solar Energy, Storage Tank