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EXPERIMENTAL STUDIES AND ECONOMIC CONSIDERATIONS ON A THERMOSOLAR PILOT SYSTEM DESTINED FOR HOUSE TEMPERATURE MAINTENANCE

ABSTRACT

The "Politehnica" University of Timisoara has built a thermo solar system implemented on the ground floor and first floor of a building. The system is made up of solar water collectors, an air-water heat exchanger, a bedrock heat accumulator and a minimal thermal loss enclosure. The statistical processing of the measurements performed during spring and autumn 2000 resulted in determining the average features of the system and in the evaluation of its efficiency in maintaining the enclosure's temperature, enclosure assimilated to a living space. The efficiency of the system is 30%. During spring and autumn, the enclosure's temperature is maintained at a level of 20 [°C] by solar and electrical gain, with a 60% solar energy ratio. With the help of the state in promoting solar energy, the investment's writing-off period would be 18 1/2 years, and the user's benefit, B = 2117 €.

KEYWORDS

[solar](#), [energy efficiency](#), [solar collectors](#), [demo solar house](#), [return investment period](#)

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