

## عنوان مقاله:

Performance Evaluation of Series and Parallel Two-Stage Absorption Chillers Driven by Solar Energy: Energetic Viewpoint

## محل انتشار:

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## خلاصه مقاله:

In recent years, the use of absorption chillers in air conditioning applications has increased in favor of less power consumption. Since absorption chillers require much less power compared to other common devices in the air conditioning industry, extensive efforts have been made in order to model, design, and optimize these systems. This study has investigated the effect of using solar energy on parallel and series two-stage refrigeration systems. First, both systems were designed, and then by connecting the solar collector to the absorption refrigeration system, the COP of the system and fuel consumption was calculated. Then, the impact of changing the evaporator's temperature on the system's COP was studied. The thermodynamic analysis of the system was conducted and the internal variables, such as pressure and temperature of different parts including the condenser and the evaporator, were calculated. Results indicate that the COP of the parallel cycle with a LiBr-H<sub>2</sub>O working fluid is higher than that of a .series cycle, so this leads to a significant drop in fuel consumption

## کلمات کلیدی:

Absorption chiller, Solar Energy, LiBr-H<sub>2</sub>O refrigerant, absorption refrigeration system

## لینک ثابت مقاله در پایگاه سیویلیکا:

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