

Solar air conditioning decompression





Overview

Can solar energy-based desiccant integration improve air conditioning performance?

Gao et al. (2021) reported a review study about desiccant integration for performance improvement in conventional air conditioning system. They investigated various studies for solar energy-based desiccant integration with SHRW and evaporative cooling provisions with outdoor air.

Does a solar collector system provide sufficient thermal energy for desiccant regeneration?

The solar collector system provides sufficient thermal energy for desiccant regeneration in all the considered configurations. Thus, negligible auxiliary electrical heating demand is observed. The investigation of considered systems in the present study is extended with the tropical and Mediterranean climatic conditions also.

Does a desiccant absorption-based air conditioning system work?

Ali et al. (2022) experimentally investigated the performance of a desiccant absorption-based air conditioning system of 2-kW cooling capacity. An SHRW in line with absorption chiller was used to decrease the process air temperature transiting out of desiccant.

When was solar-driven desiccant air conditioning invented?

One of the earliest experimental studies on solar-driven desiccant air conditioning systems was carried out by Lof in 1955 with tetra ethylene glycol solution. Since then, many early researchers have made significant efforts to develop and study desiccant-based systems for air conditioning applications [1, 2, 3].



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[Simulation study of solar-powered liquid desiccant radiant air](#)

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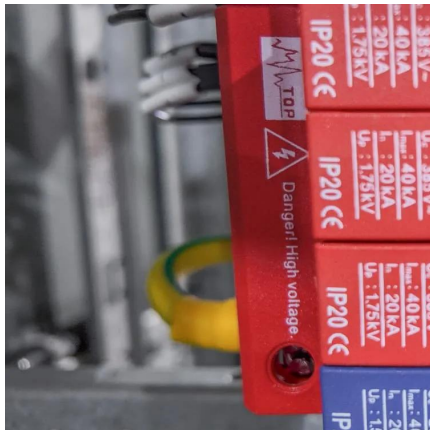
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