Solar Liquid Desiccant Photovoltaic Construction Solution System

Desiccant agents (DAs) have drawn much interest from researchers and businesses because they offer a potential method for lowering environmental impact, ...

air-conditioning using a liquid desiccant system is a possible application for solar PV waste heat utilisation. This system consists of a liquid desiccant dehumidifier unit and an evaporative...

The current paper experimentally studied the performance of solar-driven internally cooled liquid desiccant system for hot and humid climates using CaCl2 as a liquid ...

Therefore, a novel solar-driven liquid desiccant air conditioning system is described and investigated in this study. It combines photovoltaic and thermal solar power, dehumidification, ...

DOI: 10.1016/j.energy.2020.117324 Corpus ID: 216215184; Optimization of the areas of solar collectors and photovoltaic panels in liquid desiccant air-conditioning systems using solar ...

Therefore, this study proposes a novel solar-driven liquid desiccant air conditioning (SLDAC) system, which uses a combined photovoltaic and solar thermal energy ...

Liquid desiccant dehumidifiers are effective in removing moisture from the air by using a liquid solution to absorb water vapour. The liquid desiccant dehumidifier"s performance ...

Regeneration of liquid desiccant is an important desalination process in the LDAC system, which aims at re-concentrating the diluted desiccant solution to renew its ...

Besides traditional liquid desiccants (LiBr, LiCl and CaCl 2), new liquid desiccants which may be used in the liquid desiccant air-conditioning system have also ...

The photovoltaic power generation can be calculated using the following formula: (38) Q PV = A c I ? ? in ? out (39) ? in = ? mp ? bat ? mppt D ? S D (40) ? mp = 1-C r T c-T r ? ...

The purpose of this research is to investigate the feasibility of using PV solar waste heat to regenerate liquid desiccant in the solar air conditioning system. A typical liquid desiccant ...

Liquid desiccant air dehumidification has gained substantial attention recently due to its attractive energy-saving capability, high moisture retention, and low regeneration ...

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We demonstrate use of solar-powered liquid desiccant system to meet water and cooling needs. We predict the liquid desiccant system performance in Beirut climate. We ...

Photovoltaic-electrodialysis (PV-ED) regeneration is a novel method for liquid desiccant cooling system (LDCS), which has a higher performance than the conventional ...

In this work, a solar-powered liquid desiccant air-conditioning system is considered as a suitable system, and the working principle of the air-conditioning system and ...

In this paper, recent theoretical and experimental works on solar TH regeneration method and solar ED regeneration method of the liquid desiccant air-conditioning ...

can be obtained along with concentrated desiccant solution. Below diagram shows schematic of Photovoltaic based ED system. The dilute desiccant from the dehumidifier is drained is ...

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