



Cairo Solar Air Conditioning Temperature





Overview

To determine the success of a solar thermal air conditioning system, climate data was collected for Cairo, Egypt, between May and September 2023.

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Reducing dependency on fossil fuels and the corresponding emissions, absorption chiller systems offer a sustainable and eco-friendly alternative to conventional refrigeration systems. To determine the success of a solar thermal air conditioning system, climate data was collected for Cairo, Egypt.

Integrating a phase change material (PCM) into building envelopes can reduce energy needs in the built environment, and the consequent greenhouse emissions. This research examines the impact of PCM integrated into a traditional wall in Egypt on peak and average cooling energy consumption. A MATLAB.

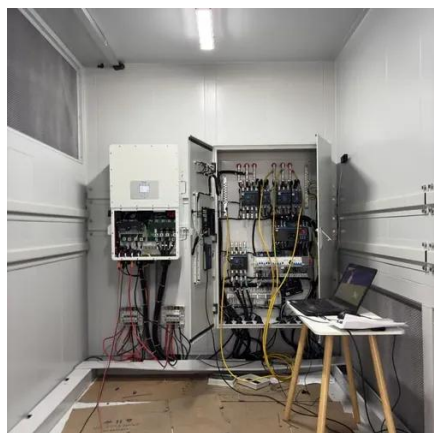
Ensure that your Load or Energy Calculations Are Based on Climate Data from ASHRAE: StationFinder —Search weather stations as published in the 2001, 2005, 2009, 2013, 2017, 2021, or 2025 ASHRAE Handbook—Fundamentals on a map by name or geographic location. Weather Data Viewer —Comprehensive climate.

on site on the map and get nearest weather stations! .

Mechanical Department, Faculty of Engineering at Shoubra, Benha University, Cairo, Egypt. HVAC Technology, Faculty of Technology and Education, Helwan University. *Corresponding author Abstract: Reducing dependency on fossil fuels and the corresponding emissions, absorption chiller systems offer a.



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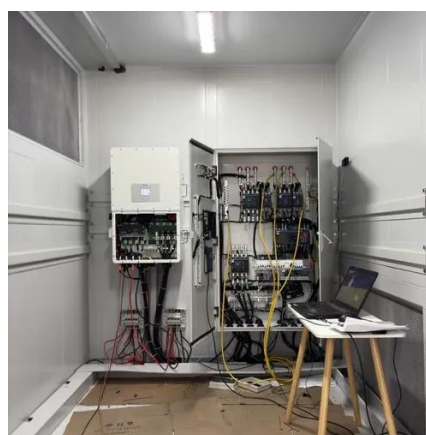


A case study on optimizing industrial air conditioning with thermal

This study investigates the feasibility of implementing a solar-assisted adsorption chiller in an industrial building at the Oriental Weavers International factory located in 10th of ...

[Cairo Weather . PDF . Earth Phenomena . Applied And](#)

1) This document contains monthly climate design data for Cairo, Egypt, including temperatures, wind speeds, precipitation, and solar irradiance values. 2) It provides annual heating/cooling ...



A case study on optimizing industrial air conditioning with thermal

Abstract This study investigates the feasibility of implementing a solar-assisted adsorption chiller in an industrial building at the Oriental Weavers International factory located ...



A simulation-based study to evaluate the cooling potential of ...

Depending on the type of the hydronic system, the room air temperature, the wall surface temperature, or thermal mass will be consequently cooled down. The direct cooling ...

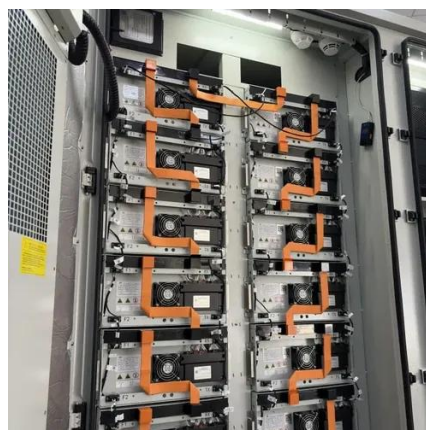


Solar radiation and ambient temperature of Cairo and Aswan ...

Figure 2 shows the fitted monthly average hourly global solar radiation and ambient temperature for a typical clear day in June for Cairo and Aswan.

[ASHRAE climatic design conditions 2009/2013/2017/2021/2025](#)

on site on the map and get nearest weather stations!



Weather Data Center

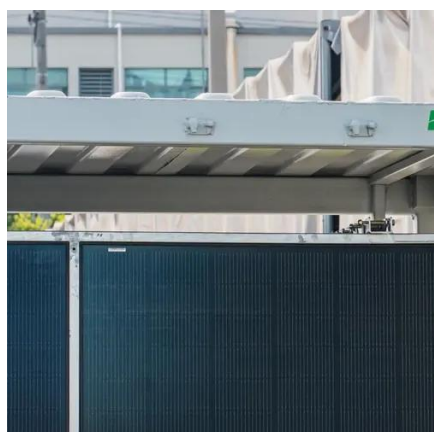
Information includes monthly and annual percentiles, to provide seasonally representative combinations of temperature, humidity, and solar conditions. These data are also available ...



[Cairo Weather , PDF , Earth Phenomena , Applied](#)
...



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Energy Analysis of Solar Central Air Conditioning System

Many factors affecting the performance of the system were studied, including the area of solar collector, inclination angle, temperature of hot and chilled water, and mass flow rate.

Energy Analysis of Solar Central Air Conditioning System

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Implementation of phase change material for cooling load ...

Effect of The Presence of Pcm in The Wall
Effect of The Pcm Location
Effect of Wall Orientations
The Effect of Pcm Layer Thickness
The Effect of Seasons on The Average Heat Transfer
To investigate the effect of changing solar radiation and the ambient temperature over the year, two months were studied, the first month was June to express the hottest month in Egypt and the second one was January to express the coldest month. Noting that the direction of heat flow is changing where the outer surface in June is higher



than the ro See more on link.springer
ResearchGate

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