

Double-layer solar curtain wall





Overview

The development of energy-saving technologies for buildings is an important means of achieving carbon neutrality. The respiration-type double-layer glass curtain wall (RDGCW) is a kind of enclosure stru.

Can a double-layer curtain wall improve indoor thermal comfort?

In terms of improving glass structure, Xiangfei Kong et al. adopted a double-layer curtain wall with natural air circulation and louvre system to optimize indoor thermal comfort by changing air circulation and adjusting the shading curtain's angle and installation position, however, this design allows the chamber to overheat in summer.

What is a double-layer glass curtain wall (rdgcw)?

A DSF with the natural ventilation mode is called a respiration-type double-layer glass curtain wall (RDGCW). Because the RDGCW is easy to construct and maintain, it is used more widely used in China than the forced ventilation or mixed ventilation. However, the airflow entering the air gap of the RDGCW is extremely unstable.

How does a glass curtain wall system work?

A vent is opened in the middle of both sides of the side panel, with (1) as the air inlet and (6) as the air outlet. Air flow in the new glass curtain wall system is generated by a fan to take away the heat generated by the solar cell and improve the photovoltaic cell's efficiency while still utilizing the heat.

What is a glass curtain wall system based on transmission solar concentrator?

A new type of glass curtain wall system based on transmission solar concentrator is proposed. The device effectively improves the incidence of solar radiation on the unit area of the battery and maximizes the use of excess solar radiation to generate electricity and heat while continuing to ensure indoor lighting.



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An experimental study on the performance of new glass curtain wall

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