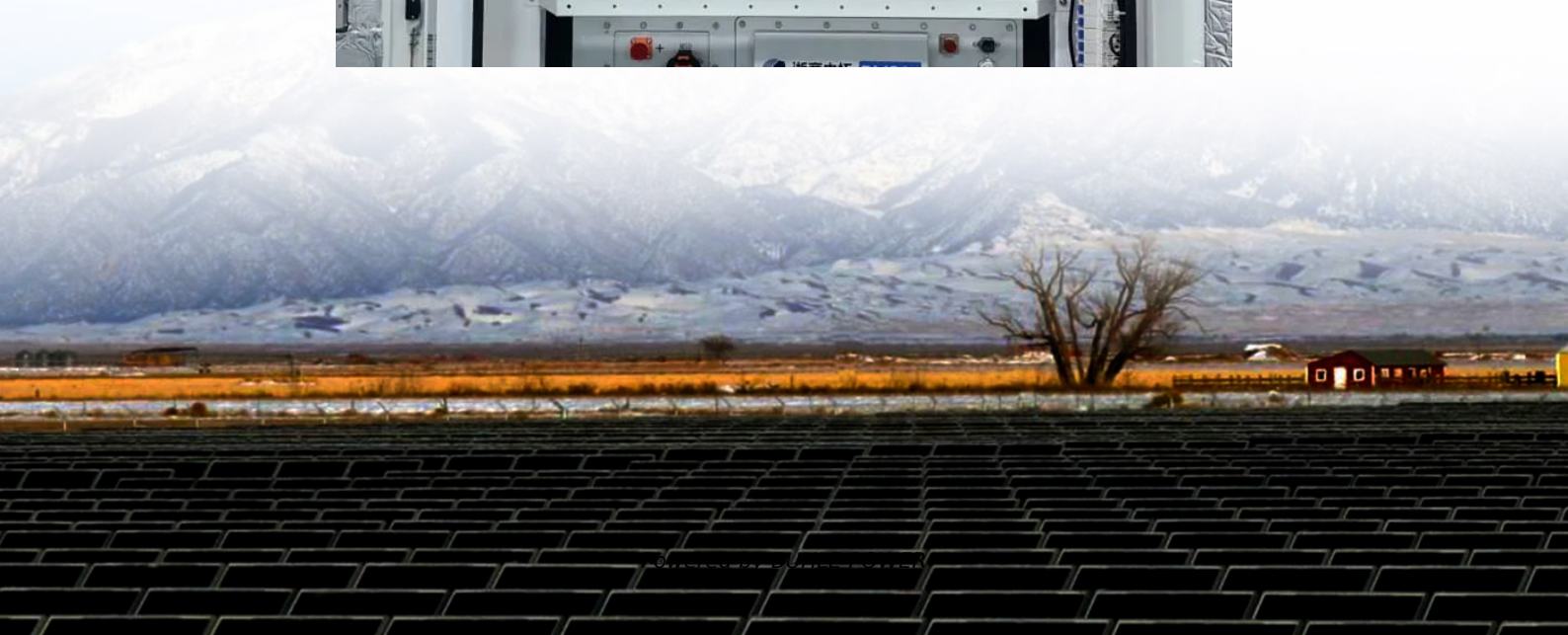


High-performance solar curtain wall design





Overview

What are curtain wall systems?

This CPD session explores curtain wall systems, their benefits, and challenges such as solar heat and glare. It covers sunshading technologies, regulatory requirements, and design strategies to optimise thermal performance, daylighting, and occupant comfort in high-rise office and residential buildings.

Do semi-transparent photovoltaic curtain walls improve thermal performance?

Semi-transparent photovoltaic (STPV) curtain walls play a crucial role in building decarbonization. Nonetheless, Previous studies mainly concentrated on improving the electrical, daylighting and thermal performance of STPV curtain walls separately, ignoring the interdependencies among these performance factors.

What is a PV curtain wall?

The PV curtain wall usually consists of a sheet of laminated glass embedded with solar cells, a cavity filled with air or argon, and a piece of glass substrate .

Are STPV curtain walls a balance between occupants' comfort & energy conservation?

This study aims to achieve a balance among occupants' comfort, building energy conservation, and PV power generation through the partitioned optimal design of the STPV curtain walls.



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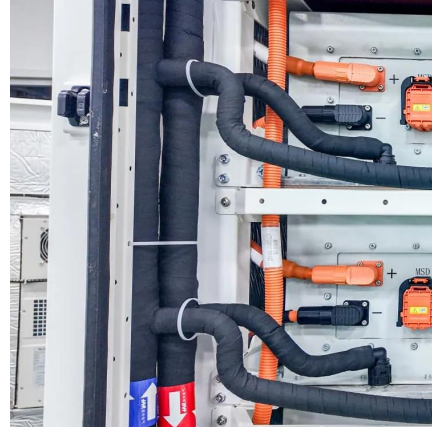
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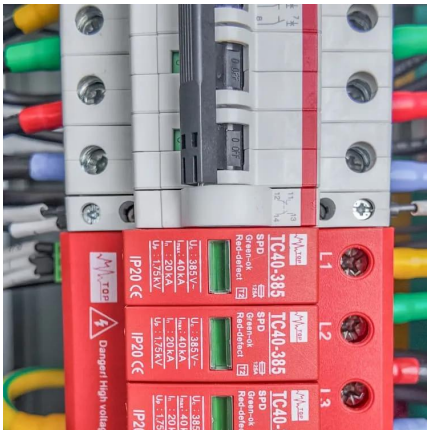
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