this study is a more balanced approach. Although its comfort performance is slightly worse than Mode A, it provides overall energy savings considering the HVAC and DSF ventilation fan altogether.

CONCLUSION

Based on the above analysis, effective ventilation is essential for DSF, otherwise there may be many risks such as excessive fan energy consumption, uncomfortable MRT, condensation, and even the glass or structural adhesive damaged due to overheating. But DSF is not a rigid facility, but a complex system. Its performance is influenced and restricted by many factors. Its energy efficiency and comfort need to be refined by careful design and operation.

Compared with the traditional curtain wall, DSF brings different benefits in different seasons: reducing energy consumption of heating in winter and improving indoor thermal comfort in summer. Obviously the benefits are closely related to climate change. China has many climate zones, therefore there is no "apply-to-all" design standards for DSF in China. The design of DSF should be based on the environmental conditions and is evaluated and analyzed in different perspectives as follows:

Table 8 Design perspectives of DSF

GENERAL	
Outdoor climate conditions	Indoor noise
Outdoor air quality	Indoor daylighting
Building fire protection	Building Structure
Initial investment	Usable floor area
DETAIL	
Type of DSF	Size of DSF
Glazing material	Blinds material and Size
Ventilation rate and ventilation efficiency	Vents design
Temperature control in cavity and glazing	Condensation on glazing
Heat recovery	Ventilation strategy

The operation of DSF focuses mainly on ventilation management. As a rule of thumb, ventilation is always on in summer and off in winter. However, the winter in southern China is warmer, similar to swing season, DSF may need to be ventilated at the right time based on well-design. Generally, it is recommended that the ventilation period should be selected in afternoon of the hottest months to achieve greater returns.

Regularly check ventilation performance of DSF to ensure that the ventilation rate always meets the design requirements. In addition, it is important that periodically monitor the cavity temperature of DSFs that are facing west in the summer afternoon, so as to take remedial measures to avoid dangerous extreme temperature caused by heat accumulation.

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