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In some countries, summer over-heating is a big problem in a building's energy balance. Ventilated façades are a useful tool when applied to building design, especially in bioclimatic building design. A ventilated façade is a complex, multi-layer structural solution that enables dry installation of the covering elements.

The objective of this paper is to quantify of the improvement in the efficiency of the thermal behaviour of buildings when this sort of façade is installed. These improvements are related to the ventilation capacity of the additional structure to the shield mainly for saving cooling power in summer in warm countries. This effect is due to convection produced in the air gap of the façade. This convection depends on the air movement inside the gap and the heat transmission in this motion. These quantities are mathematically modelled by Computational Fluid Dynamics (CFD) techniques using a commercial code: STAR CCM+. The proposed method allows an assessment of the energy potential of the ventilated façade and its capacity for cooling.

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