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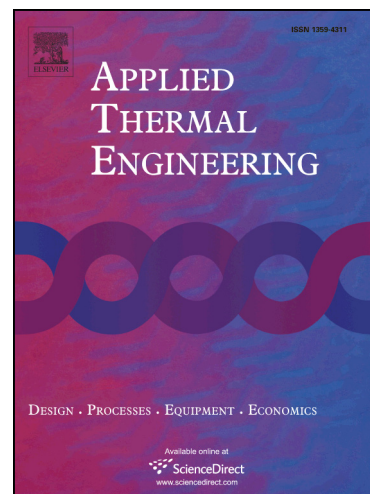
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# Thermal performance of a room with a double glazing window using glazing available in Mexican market

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## Abstract

A thermal evaluation of a four configurations of double glass window (DGW) coupling to a room is presented. The DGW consists of two vertical semitransparent walls separated by a 12 mm air gap. The effect of varying the ambient temperature and the incident solar radiation in the warm climate conditions in México is analyzed. Numerical simulations were conducted for four configurations; *Case 1*: clear glass + air gap + clear glass (Reference); *Case 2*: clear glass + air gap + absorber glass; *Case 3*: clear glass + air gap + Low-e glass; and *Case 4*: clear glass + air gap + reflective glass. Optical transmittance and specular reflectance were measured individually and in one sample piece for each case. The results showed that *Case 4* reduces the heat flux to the indoors by up to 73%, with respect to *Case 1*. Moreover, *Cases 2* and *3* had a similar behavior, obtaining a reduction of indoor heat flow close to 33.5% with respect to *Case 1*. *Case 4* is the best option for energy savings in a warm climate, where it is possible to save up to \$20.29 USD per kWh per year, in comparison

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