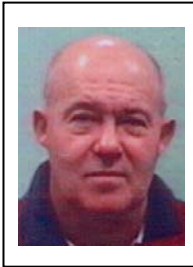


Comparison between Theoretical and Field Thermal Performance of Lightweight Earth Blocks (TMTimbercrete)



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ABSTRACT

This paper compares the field thermal performance of an experimental building constructed with lightweight earth block walls (TMTimbercrete) with that of a similar Brick Veneer building and then compares the performance of both buildings with that predicted using the CIBSE admittance procedure. The Timbercrete blocks are made of cement, sand and cellulose fibre and have a density of around 950 kg/m³. Both the field results and those predicted by the admittance procedure indicate that in a hot period the Timbercrete building has much the same average performance as the Brick Veneer building but has a much lower diurnal swing.

KEY WORDS :

Thermal Performance, Lightweight Masonry blocks, Timbercrete, Thermal Monitoring, Admittance Method