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Thermal Comfort Assessment in an Educational Institution in Barranquilla

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Abstract

Motivation, performance and learning velocity of students is influenced by thermal comfort, for this reason educational institutions have been investing in air conditioning equipments whit the consequent increase in power consumption. This trend is being accentuate in cities with tropical climates. Currently, standards such as ISO 7730, EN 15251, and ASHRAE 55 are being used to evaluate thermal comfort in existing buildings, to design air conditioning systems and establish parameters (operating temperature and comfort equations) in new buildings. Many comfort studies have been carried out in different climates and seasons around the world and differences have been found in the operating temperature interval that provides comfort, due to this is being recommended to conduct comfort studies in different climatic zones and educational entities to have different databases that allow having reliable comfort temperatures and revise the standards. The following work is intended to evaluate thermal comfort, using the ASHRAE 55 standard, in educational classrooms in the city of Barranquilla, specifically in the postgraduate building

Keywords: thermal comfort, tropical climates, ASHRAE 55.
