Accepted Manuscript

A methodology to evaluate the indoor natural ventilation in hot climates: Heat Balance Index

J.A. Castillo, G. Huelsz

PII: S0360-1323(16)30522-4

DOI: 10.1016/j.buildenv.2016.12.027

Reference: BAE 4757

To appear in: Building and Environment

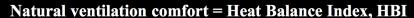
Received Date: 30 June 2016

Revised Date: 25 November 2016 Accepted Date: 17 December 2016

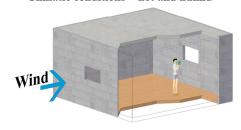
Please cite this article as: Castillo JA, Huelsz G, A methodology to evaluate the indoor natural ventilation in hot climates: Heat Balance Index, *Building and Environment* (2017), doi: 10.1016/i.buildenv.2016.12.027.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

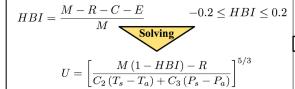




Climatic conditions = hot and humid



Equation Range



(M) Metabolic heat production; (R, C and E) heat transfer by Radiation, Convection and Evaporation; (U) air velocity; (T_0) Air Temperature; (T) Skin Temperature; (P_0) Partial pressure of water vapor at T_{zi} ; (P) Vepor saturation pressure at T_z ; (C) is constant; and $C_3 = 26.903309 - 0.857729 T_a - 0.002587 RH$; and (RH) relative humidity.

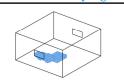
Application example



Comfort by U



Cold discomfort by high U



Well ventilated percentage using CFD

Download English Version:

https://daneshyari.com/en/article/4917430

Download Persian Version:

https://daneshyari.com/article/4917430

<u>Daneshyari.com</u>