Erratum to: Study on dynamic variation of dew point temperature at attached air layer of radiant ceiling cooling panels

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An incorrect version of the abstract was published in the original article and this erratum provides the correct version.

Abstract

Radiant ceiling cooling panels require an accurate and sensitive control system to avoid condensation; this is achieved by adjusting the temperature of radiant ceiling panels in adequate time. This study investigated a prediction model for the dew-point temperature of the attached air layer of the radiant ceiling cooling panels. When the number and position of people indoors change, the model can predict the change in dew-point temperature of the attached air layer for the purpose of adjusting the panel temperature in time to prevent condensation. The influence of different factors on the air dew-point temperature was investigated in this study. The relationship between the main influencing factor and the predicted dew-point temperature of the attached air layer was obtained, and experimental data were used to verify the simulation model. The results show that the distance from the person to the attached air layer, as well as the number of people, have a great influence on the dew-point temperature of the attached air layer. The prediction model of the air dew-point temperature takes the form of a negative exponential function. The distance from the person to the attached air layer is most affected by the prediction model's increase rate of the air dew-point temperature and value of the stable time.

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