ABSTRACT

A space within the scope of design should ensure the safety of its users from any disturbance. The comfort of a space, influenced by variables such as air temperature, air movement, humidity, and solar radiation, affects thermal comfort conditions. One of the spaces that specifically requires thermal comfort conditions is within the learning environment. A case study addressing this issue of thermal comfort was conducted at SMAN 10 Tangerang Selatan, located in one of the hottest areas in Indonesia. This research will process data from direct observations regarding thermal comfort using a Multifunction Environment Meter. This data will then be processed with the CBE Thermal Comfort Tool to obtain PMV (Predicted Mean Vote) and PPD (Predicted Percentage Dissatisfied) values. After obtaining these data results, an analysis will be conducted to discuss the review of thermal comfort in the case study object. The Predicted Mean Vote (PMV) values obtained average at +1 (slightly warm) and even reach a value of +2 (hot), with a value of 0 (neutral). The Predicted Percentage Dissatisfied (PPD) for 10 classrooms is relatively higher than the ASHRAE-55 standard value (2017), which ideally should be at a maximum PPD value of 20%.

Keywords: Thermal Comfort, Multifunction Environment Meter, CBE Thermal Comfort Tool, Predicted Mean Vote, Predicted Percentage Dissatisfied