

**ANALISIS KENYAMANAN TERMAL PADA HUNIAN DI DAERAH
URBAN KABUPATEN BANTUL BERDASARKAN *THERMAL
SENSATION VOTE (TSV) DAN PREDICTED PERCENTAGE
DISSATISFIED (PPD) MODEL***

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INTISARI

Kawasan permukiman di perkotaan menghadapi isu yang sangat nyata dan global mengenai perubahan iklim. Temperatur lingkungan tempat tinggal di Kabupaten Bantul yang berada di atas rata-rata tingkat kenyamanan merupakan salah satu dampaknya. Maka dari itu, kenyamanan termal dari suatu ruang tempat tinggal merupakan salah satu hal yang perlu diperhatikan.

Metode yang dilakukan untuk mengidentifikasi kenyamanan termal yaitu dengan melakukan pengukuran variabel termal yang berpengaruh antara lain pengukuran temperatur udara-kelembapan (luar dan dalam) dan pengamatan terkait insulasi pakaian dan metabolisme penghuni serta survey TSV pada rumah hunian di Kabupaten Bantul.

Rumah hunian ini berada pada iklim tropis, sehingga pendekatan arsitektural dilakukan pada bangunan tersebut. Melalui hasil analisis PMV dan PPD berdasarkan ASHRAE 55 Standard serta survey TSV, dapat diidentifikasi bahwa rumah hunian di Kabupaten Bantul memiliki perbedaan tingkat kenyamanan termal ruang pada satuan waktu berbeda. Pada pagi hari nyaman (*neutral*), pada siang dan sore hari sedikit hangat (*slightly warm*) dan pada malam hari nyaman (*neutral*).

Kata kunci: Pengukuran temperatur udara-kelembapan (luar dan dalam), survey TSV, PPD, standard ASHRAE 55

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ANALYSIS OF THERMAL COMFORT IN RESIDENCES IN THE URBAN AREA OF BANTUL DISTRICT BASED ON THERMAL SENSATION VOTE (TSV) AND PREDICTED PERCENTAGE DISSATISFIED (PPD) MODEL

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ABSTRACT

Urban residential areas face very real and global issues regarding climate change. Residential environmental temperatures in Bantul district which are above the average comfort level are one of the impacts. Therefore, the thermal comfort of a living space is one of the things that needs to be considered.

The method used to identify thermal comfort is by measuring influential thermal variables, including measuring air temperature and humidity (outside and inside) and observations related to clothing insulation and occupant metabolism as well as TSV surveys in residential houses in Bantul district.

This residential house is in a tropical climate, so an architectural approach was taken to the building. Through the results of PMV and PPD analysis based on the ASHRAE 55 Standard and the TSV survey, it can be identified that residential houses in Bantul district have different levels of room thermal comfort at different time units. In the morning it is comfortable (neutral), in the afternoon and evening it is slightly warm (slightly warm) and in the evening it is comfortable (neutral).

Keywords: Air temperature-humidity measurements (outside and inside), TSV survey, PPD, standard ASHRAE 55

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