Investigation on the Dynamic Characteristics Of Natural Wind For Thermal Comfort Studies.

Abstract

The main purpose of this article is to investigate the dynamic characteristics of natural wind for thermal comfort studies. A primary and secondary data were used. For the primary data, field study was conducted at the Universiti Malaysia Sabah, East Malaysia. The measurements were made under a tree. The site location of the collected secondary data is at Tracy. The site is flat and windy. Wind data of both case studies were recorded using ultrasonic anemometers. The wind speed data were analysed by using descriptive statistics, Weibull distribution and the power spectral analysis. Turbulence intensity was also included. The assessment of rapid increasing wind speed was also addressed in this study. A new method was developed to assess the rapid increasing wind speed for thermal comfort research studies. A comparison was made between both case studies.