

ABSTRACT

Thirty-three Thai workers who worked in glass factory were selected for this study. The climate condition of the factory was hot-humid. All selected workers were acclimatized to heat, have good health, no evidence of heat disorder and put on the same work cloth. Subjects were divided into 2 groups. The first group consisted of 17 female workers performed light work which had estimated metabolic energy about 93.08 Kcal/hr and the second group consisted of 16 male workers performed moderate work which had estimated metabolic energy about 201.97 Kcal/hr. Heart rate of the subject was monitored before work, while working and at rest. Environmental condition data in working area of the subject was collected and calculated in terms of average WBGT which the subject gained and the thermal sensation of the subject was interviewed before work, while working every half an hour and at rest every minute. The study revealed the Thai thermal standard (B.E.2534) and the result of the study was not significantly different (P -value < 0.005) and it was found that average WBGT which the subject who performed light and moderate work gained significantly correlated with incremental heart rate due to thermal (ΔHR_T) and thermal sensation (P -value < 0.005 both). Thermal sensation of the subject showed a significant correlation with incremental heart rate due to thermal (ΔHR_T) of the subject who performed light and moderate work (P -value < 0.005). The study also showed that the recovery time of the subject who performed light and moderate work were 3.70-9.90 minute and 3.50-13.00 minute respectively.