THERMAL COMFORT OF FEMALE STUDENTS IN AN AIR-CONDITIONING LABORATORY

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APRIL 2009

ACKNOWLEDGEMENTS

First of all, thanks to Allah S.W.T that gives me the opportunity to finish this project within the time given. I take this opportunity to express my gratitude to the people that contribute in making this project a success.

My heartfelt thanks go to my supervisor, Prof Dr. Azni Zain Ahmed for guiding me through this project from the beginning till the end. She plays a major role in this project. Without her guidance, this project may not be complete.

I would also like to take this opportunity to appreciate to my friends that has giving me good co-operation in sharing their suggestion and data. Not forgetting to my family that always prays for me and inspired me by giving some advices. Lastly, thanks to anyone that contribute in doing this project, whether directly or indirectly.

Noor Hafizah Abdul Halim

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ABSTRACT

In order to achieve the thermal comfort, there are several factors that need to be studied and understand. For this research, the factor is environmental factors such as air temperature, relative humidity, mean radiant temperature, and air velocity. Other factor is personal factor such as activity level (met-value) and clothing insulation (clo-value). In this research, it was found that the temperature range for students was from 22°C to 24°C which was almost the same as the acceptable air temperature for thermal comfort in air-conditioned room which is 21°C. For relative humidity, the RH range was from 52% to 58%. The humidity become higher whiles the temperature increasing. In this case, the humidity was lower because the temperature was low in air-conditioned room. The mean radiant temperature is considered as the same as air temperature. The range value of air velocity was between 0.05 m/s and 0.22 m/s which were quite the same as the acceptable air velocity in air-conditioned room. Thermal comfort study is a research that needs to be done continuously. Thermal comfort is due to climate that always changing depends on the weather. But it is if in the outdoor room. In this research, it is due to the air-conditioning system whether it is functioning or not. This studied need to be done from time to time in order to get the latest thermal comfort parameters value. In taking the data needed, the latest and acquire equipments need to be used. For that, thermal comfort study would be better and accurate.