FINAL YEAR PROJECT IN FULFILLMENT OF THE REQUIREMENT

FOR THE AWARD OF AN

ADVANCED DIPLOMA IN MECHANICAL ENGINEERING

CALCULATION OF AIR CONDITIONING LOAD BY *ACCAL*

Presented to :

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ABSTRACT

In this report, the basic objective is to present how calculation of heat load for air conditioning system being simplified by using a software, *ACCAL*. In doing so, we have to lay the ground work of subsequent studies in such fields as heat transfer, fundamentals of thermodynamics and QBasic language programming.

Starting with the first chapter, we have explained the need for air conditioning and a discussion about the whole ideas of designing an air conditioning system for buildings especially in Malaysia.

We have attempted to cover fairly comprehensively about the basic subject matter of heat load in chapter two. In this chapter, we have stressed what is the design condition and limit (outdoor and indoor). We also clarify how the weather condition standards obtained. The sources of load components discussed deeply in this chapter.

Chapter three indicates all the equations involve in calculating heat load. This chapter also indicates what standard Table to be used together with the equations. Chapter four discussed the operation and function of the software, *ACCAL*.

Throughout this report we have attempted to maintain an engineering perspective, particularly through solving problems. In chapter five, we have perform an analysis of heat load calculations using the software, *ACCAL* and comparing the results with manual calculation. Chapter six discussed the conclusion of the report.

All units in this report are *English* units. We have therefore included the conversion factors table for converting *English* units to *SI* units *(Metric)*.

Finally, we appreciated any comments, criticism and suggestions from the readers and we hope that our software will contribute to the effective method of calculating heat load.

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