CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

A diesel furnace is a piece of equipment that produces heat by burning diesel. Furnaces in general are designed to produce heat that can be used directly in the heating and melting of structures. In the foundry lab, a diesel furnace had been used for studies of sand casting in the mechanical field. This project is to develop another diesel furnace for foundry usage and focusing on the top head of the diesel furnace.

1.2 PROBLEM STATEMENT

The centre hole of the top head is too small which give operators problems on stirring the metal and putting bigger piles of metals in the furnace. Furthermore, it is too heavy to be lifted for cleaning. The top head need to be light in weight for better maintaining procedures.
1.3 OBJECTIVE

The objective for this project is to design and manufacture the top head of a diesel furnace that is easy to operate and suited the furnace.

1.4 SCOPE

In this project, scope needed to specify the range in the completion of the project. The centre hole of the top head has a diameter of 250 mm and it must be as wide as the crucible inside the furnace. The diameter of the top head must be the same as the shell of the furnace so it can be fitted.

1.5 FLOW CHART

A flow chart, or flow diagram, is a graphical representation of a process or system that details the sequencing of steps required to create output. This flow chart was present steps or process of final year project that I will present in this semester. Figure 1.0 shows that process to complete my final year project.
Figure 1.0: Flow Chart