CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter discussed the idea and how to implement this research. In this research a single stage deep drawing tooling was used to carry out the experimental work required to produce a cylindrical cup of 50mm (outer diameter) formed from a circular flat blank of 105mm diameter. There are three categories in this methodology, first is the thickness of work piece (mild steel) used, calculation of force to apply at the work piece and the blank holder force which is based on calculation used, then continued with the use of Minitab to analyze the data from experiments to obtain a suitable parameter for the product produced in accordance with the thickness of the work piece.

3.2 PROCESS PLANNING FLOW CHART

Process planning is important in this project in order to make sure this project completed on time. Process planning help to make sure all the tasks run systematically. Figure 3.1 shows an overview of overall steps during this research. Based on the literature review from the journals and books, calculation, the preparation of work piece, and experimental works are developed.
Figure 3.1: Process planning Flow Chart (a)
Figure 3.2: Process planning Flow Chart (b)

3.3 CYLINDER CUP SIZE