CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter discussed about how this research were conducted. All the experimental work in this study was explained which include all the material used. Then, detail explanation on the casting and testing progress were also included.

In this research the laboratory work conducted at Heavy structure Laboratory at University Malaysia Pahang (UMP). All the equipment for preparing the material, casting and testing used in this laboratory.

3.2 EXPERIMENTAL PROGRAMS

Figure 3.1 shows the flow of the research conducted experiment. There are 3 main stage in this research as shown in the figure 3.1. Stages 1 involve doing some studies from the previous research from the journal, article and internet related with this. All the information were gathered and analyse as a reference during conducted this research.
Stages 2 includes prepare all the material were used for prepare the specimen. Firstly, the raw material was prepared. The aggregate were sieve maximum 10 mm using the sieve machine and for make sure that the aggregates in clean from the dust because it will affect the weight of the aggregate in during casting. Then, the sand and cement also were sieved to ensure that no other things on it. Stages 2 also including the casting progress. All the sample casted according to their mix proportion. Casting progress took 28 days for complete all the batches. After the specimens were casting, the concrete were curing using wet gunny. The concrete were curing for age 7 days and 28 days before testing.

Stages 3 is a stage testing the specimens. After 7 days, the concrete cube were testing for compressive strength testing detail explanation about this compression testing was discussed in testing procedure. Then, after 28 days curing age, the concrete cube again tested for compressive strength to know the concrete achieved the concrete grade targeted. The concrete beam was testing under flexural load.
Figure 3.1: Flow chart of project