

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

Several laboratory experiments have been conducted to investigate the effects of using POFA with the addition of limestone as a partial cement replacement material towards concrete compressive strength and corrosion resistance.

In this study, there are only two different percentages of POFA namely 0% and 20% from the total weight of cement whereas for the replacement of cement with limestone, there are two different percentages of limestone namely 5% and 10% from the total weight of cement. Concrete with grade 30 was produce by using POFA and limestone as a replacement material.

In order to determine the effect of POFA with the addition of limestone as a partial cement replacement with a different percentage, three types of testing was conducted. Tests that were conducted include compressive strength test, water permeability test and impressed voltage test.

In this chapter 3, all the experimental plans and the implementation of the experiment throughout the study were discussed. This chapter will also discussed about the material that had been used and method of testing that involved to done the experiment.

3.2 FLOWCHART OF RESEARCH

In Figure 3.1, it shows the flow chart that shows the overview of the overall of the project process. In the first stages, it is the process of discussing the proposed title of the project with the supervisor and selecting the best title and the objectives of the study. After a suitable title and objectives have been chosen, all the information or the details about the selected title was been searched and gathered in order to know more about the title. The information is obtained from the journals, books, internet and newspaper. After the completion the literature review, then only, the experimental setup can be done. In this step, the material will be prepared as well as grinding the POFA into fine material. The sample will be prepared according to the percentage of partial replacement of cement with POFA and limestone. Next, the experimental works can be done. The experiments that will be done are compressive strength test, water permeability test and impressed voltage test. After all the lab work or the experiment had been completed, the result data gathered from the experiment will be analysed. The conclusions and recommendations can be made after analysis the data. Then only, a report will be prepared and being submitted to the supervisor. Finally, from all the findings that have been obtained from the study, the findings were being presented in order to fulfil the requirement of Final Year Project (FYP).

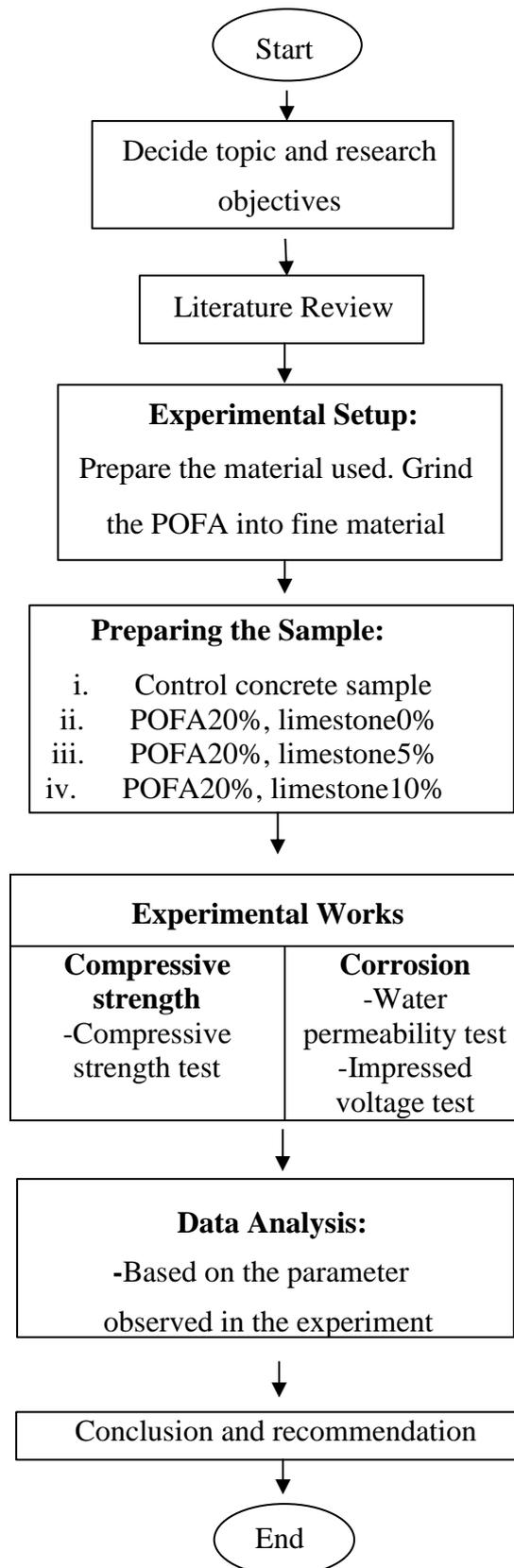


Figure 3.1: Flowchart of research methodology