UNIVERSITI TEKNOLOGI MARA

DEVELOPMENT OF A AULECOM - AUTOMATIC LEMANG COOKER MACHINE

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ABSTRACT

This thesis introduces a novel prototype lemang cooker machine to solve the drawbacks of conventional lemang baking methods. The current procedures require a lot of labour, use heat sources inefficiently, and produce inadequate amounts of lemang. The goal is to use SolidWorks 2021 to design and analyse an automatic lemang cooker, then build a proof-of-concept machine. The prototype has a half-stove design that runs on mechanical motions managed by a microprocessor, doing away with the need for human help. The body and stand are made of mild steel, and the construction process includes welding, drilling, cutting, wiring, and testing. The outcomes show that up to five lemang can be successfully prepared at once by the automatic lemang cooker. Compared to conventional procedures, this represents a major advance as it requires less labour and increases manufacturing efficiency. A contemporary approach to lemang cooking apparatus is demonstrated by the integration of cutting-edge SolidWorks 2021 technology. In summary, the thesis effectively tackles the difficulties posed by customary lemang baking, offering a cutting-edge technological remedy that simplifies the procedure and raises general effectiveness.

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CHAPTER ONE
INTRODUCTION

1.1 Background of Study

In the world we live in, technological advancements have an impact on and alter daily life for people. One example of the use of technology is the development of the mode of human transportation from using horses to pull a carriage to using diesel power engines.

Conventional techniques are often substituted or adapted to make daily tasks easier. The process of baking lemang is one of the instances where technology has an impact on human activity or way of life. The traditional approach of using firewood as a heat source has a number of drawbacks in terms of time, money, labour, and environmental impact as shown in Figure 1.1. Due to these issues, several inventors developed innovative solutions to utilize technology in order to solve the issues. As a result, a number of mechanical lemang baking designs have been developed in Malaysia, where lemang is a favourite among the Malay races, especially around the time of the Hari Raya Festival.

Figure 1.1 Baking lemang [1]

The objectives of the design were similar in that they sought to address the drawbacks of the traditional way of baking lemang. The only variations between the designs would be in how versatile they were in terms of functionality, how much lemang