

UNIVERSITI TEKNOLOGI MARA

**PLASTIC MELT MOLDING
MACHINE**

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ABSTRACT

The project is about a machine that can melt shredded plastic and molding it to make plastic extrusion. This project is based on a few problem statements such as the problem of having high cost of plastic injection machine. Then the need of having cash flow for students to make money by selling plastic extrusion to the market. The methodologies of this machine are to make plastic extrusion 40*40mm by heating some shredded plastic inside the machine through a heating element and inject it by compressor into the mold by using the correct molding technique to make about 0.5 m height of plastic extrusion. After the molding process it going to go through a cooling down process by cooling element which is water pump is used to provide flowing water to reduce the temperature of plastic extrusion. The significant of this project is to create a simple plastic injection machine to solve the problem statements stated and helping the small business to afford a small plastic injection machine. The expected result is a plastic extrusion about 0.5 m height and 40*40mm for length and width. The plastic extrusion is expected to use as a raw material in making a lot of furniture and other stuff.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The course of plastic injection moulding shaping traces all the way back to 1872 when the main embellishment machine was concocted and protected. Isaiah and John Hyatt were the creators of this machine that was utilized to form buttons, brushes, and comparative things. This obvious the start of the plastics producing industry.

The underlying moulding machine depended on a genuinely basic instrument. The cycle was worked on by German researchers who figured out how to make less combustible arrangements by creating solvent types of cellulose acetic acid derivation.

During the 1930s, a troublesome period for some individuals across the world, the plastics business saw tremendous improvement. It was as of now that polyvinyl chloride, polystyrene, and polyolefins, probably the most popular thermoplastic materials and plastic injection moulding were created. [1]

1.2 Problem Statement

There are a few problem statements that need overcome. Firstly, pollution cause by plastic waste starting to get worse and concerning. Plastic that we use hard to degrade and need to recycle. Waste management are getting higher and need a lot of budget to manage. Plastic lifespan is long enough to pollute the environment before degrade.

1.3 Objectives

The main objectives of this project are:

- a) To design and analyze the machine of plastic melt molding.
- b) To fabricate the actual machine of plastic melt molding machine.