

**UNIVERSITI TEKNOLOGI MARA**

**SAFETY COOKING GAS TROLLEY**

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## **ABSTRACT**

Liquefied petroleum gas (LPG) cylinders are commonly used in the home for household uses such as cooking. The weight of a filled LPG cylinder at home is approximately 29.5 kg. Meanwhile, an empty LPG cylinder weighs between 16 and 20 kg. The LPG cylinder has a diameter of 33 cm and a height of 61cm. To maintain high-pressure gas, the LPG cylinder is built of steel. The users of cooking gas cylinder will face the problem when there is a stair. It is hard to carry up and down the stairs with the standard wheel type on the market. The objective for the project is produces motorized trolley tires and adding clamp to prevent from fall. Many types of fabrication process are involved to fabricate the gas trolley such as welding, cutting, machining, and finishing. The result for the project is the user will use this trolley easily even though there is a stair.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of Study**

Liquefied petroleum gas (LPG) cylinders are commonly used in the home or restaurant for cooking activity. There are many types of weight for the LPG cylinders. The lightest weight of the LPG cylinders is 10 kg and the heaviest LPG cylinders is 14 kg. Most of the users use the heaviest cylinder which is 14 kg because it can be used for a long term rather than 10 kg cylinder [1]. The LPG cylinder has a diameter of 33 cm and a height of 61cm. LPG cylinders was using the low carbon steel as the material. It is because of the durability, light weight, and safe operations [2]. In Malaysia, the distribution of LPG cylinders is in high demand. The delivery of LPG cylinders necessitates the delivery personnel to replace the empty cylinder with a filled one. Typically, delivery men manage the delivery process manually, such as lifting the full cylinder from the transporter and delivering it to the customer's location. The delivery man must return the empty cylinder to the transporter after replacing the filled cylinder. The delivery personnel must raise and hold the LPG cylinder from the ground level to the upper level using the stairs in the case of non-elevator residences.

### **1.2 Problem Statement**

The problems that all people face when dealing with the cooking gas are carrying gas cylinders up and down the stairs. Users need to carry by hand to climb the stairs because the actual product in market cannot climb the stairs.

Other than that, the product that already in the market did not fully safety and durable to be use. The product don't have chain to support it from fall.