**CHAPTER 1. INTRODUCTION**

**1.1 INTRODUCTION TO THE PROBLEM**

LPG mainly composed of propane or butane ,and is flammable mixture of hydrocarbon

gases used as fuel in heating applications , in cooking,for rural heating,conversionto

gasoline,refrigerators, vechiles etc.LPG includes mixture that mostly propane mostly

butane,due to its vast usage changes of accidents also increases.As we all see there are many

news related to accidents caused by cylinder blast due to leakage.our project prevents such

problems and provides safety to consumers.onthe identification that level of LPG is reached to

specify level then it send SMS to registered mobile phone and it alert the person at home by

active alaram which includes a buzzer simultaneously and also it automatically turn off MCQ6

gas sensor .so to resolve the system we planed to provide this system with mentioned

characteristics.

**1.2 MOTIVATION**

There have been attempts to tackle this problem by various authorities.our

proposed system will automatically offed when there is leakage in gas. sensor will be used to

detect the gas leaking.Thus we have going to implement the project named**”SMART GAS**

**REGULATOR”**

**1.3 PURPOSE OF THE PROJECT**

As we all see many news related to accidents caused by cylinder blast due to leakage. Our project prevents such problems and provides safety to consumer. On the identification that level of LPG is reached to specify level then it sends SMS to registered mobile phone and it alert the person at home. Also it turns off the regulator valve so that the gas emission stopes and leakage can be controlled by MQ6 sensor detection. So we provided automated system for our busy life.

**CHAPTER 2**. **LITERATURE ON SURVEY**

**2.1 MARKETING SURVEY EXISTING SOLUTION**



FIGURE 2.1 SURVEY PICTURE

We went to our nearby houses to conduct survey to know the reviews on our project. They gave many solutions to overcome the accidents of gas blasting.

FROM SURVEY WE POINTED SOME SOLUTIONS:

* Overcome from accidents of gas leakages in houses and industries too
* A automated regulator valve which will turn off when there is a gas leakage
* Otherwise alert the person when there is gas leakage

From the above reviews we are going to innovate a device which is named as **smart gas regulator**

**2.2 PROJECT OBJECTIVE**

The purpose of this project objective is now a days so many accidents are

Happening due to leaking of gas.so to prevent that incidents we preparing the regulator by

Inserting the sensor to detect the leakage and that will off the gas automatically and also it

Givemgs to mobile phones ,ring the buzzer .By this we can prevent the accidents, this project

used mostly for busy people who are going to jobs etc.

**CHAPTER 3. PROPOSED DESIGN**

Our proposed system consists of mainly

* power supply
* MQ6 sensor
* Regulator
* Digital switch

**POWER SUPPLY:** We are using 230 volts power supply which is rectified to 12V DC then further through voltage. Regulator it is used as per used as per requirement.

**MQ6 SENSOR :**We are using MQ6 gas sensor in our project for detecting the gas leakage. These are used in gas leakage detecting equipments in various applications and are suitable for detecting LPG.The enveloped MQ-6 has 6 pin, 4 of them are used to fetch signals, and other 2are used for providing heating current



FIGURE 3.1-MQ6 SENSOR

**REGULATOR:** The primary function of a regulator is to reduce high-presure gas in a cylinder. A regulator is not a flow control device.It is used to control delivery pressure only. This can be automatically turn off by sensor detection.



FIGURE 3.2 : Smart gas regulator with out automated



FIGURE 3.3: Valves which are used in regulator that can be turn off by sensor detection

**CHAPTER 4. METHODOLOGY**

**EXISTING METHOD:**  In all existing methods different gas sensing technologies are used. However, most of the accidents happen because of our negligence to not switch off the regulator. The detection of gases and its monitoring has already been done. However, no control action is being taken. no control.

**PROPOSED METHOD:**  The proposed method takes an automatic control action upon detection of gases. The regulator valve would be switched off which would completely stop the flow of the leaked gas. It also has various ways to alert by sounding off the buzzer and also sending notifications to the user through the app. The app being used in accordance with the current technology and would reach a larger audience.

**CHAPTER 5. CONCLUSION**

Things is a novel way to ensure that this project will have future scope and is scalable because it

could be merged with Our method will detect the leakage of LPG and also stop its leakage by

controlling the regulator. We all other homeautomation systems. The android app developed

would ensure that we can check the status and control use LPG cylinders in our homes but we

have no satisfactory safety measures. Using the Internet-of-the device from any remote location,

thus helping us prevent accidents.



FIGURE 5.1 REGULATOR

**CHAPTER 6. REFERENCE**

* (PDF)smart gas regulator
* LPG leakage detection
* Gas monitoring system