GAS LEVEL DETECTION AND AUTOMATIC BOOKING USING ARDUINO

ABSTRACT

This paper Consists of the GSM-based automatic booking of a new LPG cylinder and also detects the gas leakage. The level of LPG is measured using the load sensor. The output of the sensor is connected with Arduino R3. By the use of the GSM Module, the information is sent to the user by SMS and also automatic booking is done by dialing the registered gas booking number(at certain percentage). Then the gas leakage is detected by the gas sensors (MQ-2). By using this, we can detect the current LPG level and it is continuously displayed on the LCD. We can know the validity of LPG usage from the date of initialization. By use of GSM, the user is alerted by giving the message to their mobile phone when the LPG level is critically low (below 20%). Automatic booking of new LPG by auto-dialing of gas booking number and by this we prevent pre-booking and late booking. Then by detecting the gas leakage, we can prevent the LPG gas burst accidents in the home and in industries also.

INTRODUCTION

In human day to day life, the LPG cylinder plays a major role. The main application of the LPG is that it is used in the place of chloroform carbon which causes great damage to the ozone layer. Though it's one in all the foremost normally used fuels, it's associate explosive vary of one.8%–9.5% the volume of gas in the air. It's packed into three classes per the burden of the LPG within the cylinder: social unit, business, and Industrial. The social unit class of the LPG cylinder contains 14.2 kilo LPG within the cylinder. Similarly, the business and Industrial classes of LPG cylinders contain nineteen and thirty-five kilo of LPG severally. With the rising demand for LPG, users have to be compelled to pre-book their LPG cylinder a minimum of a month before the delivery of the new LPG cylinder. Most of

the days, users find it difficult to figure out what quantity of LPG has left at intervals the cylinder and this causes tons of bothering to them. In such a state of affairs, associate degree efficient technique to watch the amount of LPG within the cylinder is needed, so the users have tuned in to the LPG level at intervals the cylinder. This paper deals with the detection of the gas leakage and the level of gas in the cylinder and automatic booking of the new LPG cylinder. The sensor used in this has high sensitivity and fast response time. The gas sensor detects other gases including cigarette smoke. When the gas has detected the output of the sensor is sent to the microcontroller and the buzzer is turned on and when the weight measured using the load sensor becomes critically low, the alert is sent to the user and the new LPG cylinder is booked. The main application of this proposed system is to overcome the shortcomings such as delay and pre-booking of the LPG cylinder by the consumers.

PROPOSED SYSTEM

Gas level detection and automatic booking are designed with various features that are implemented using Arduino and this device will be a single system with multiple applications for LPG consumers. The device monitors the load if the gas level and displays it within the alphanumeric display incessantly. It also detects the gas leakage by gas senor. This includes an additional feature of booking a new LPG cylinder when the gas level becomes critically low. Then it sends an alert to the registered mobile number by an SMS with the help of the GSM module and the alert database is displayed in the system monitor.

CONCLUSION

This paper consists of two sections transmitter part and the receiver part. In this, the automated booking of the latest LPG cylinder is enforced. With the assistance of the gas device and cargo device ready to able to observe the amount of the gas and also the gas leak. And at last with the application of GSM Module, a new LPG cylinder can be booked by the user. By this system, the users can be aware of their gas level and it also avoids the prior and delays booking of the cylinder.Also avoid the fire accident in homes,industries etc...(by leakage of LPG) Hence this concept can also be widely used in the industries according to their requirements.

THANK YOU