International Journal of Advanced Research Methodology in Engineering & Technology,
Volume 1, Issue 1, December 2016

DESIGN AND FABRICATION OF BREATHABLE AIR LEVEL MONITOR REGULATING SYSTEM

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ABSTRACT

In closed and engaged hall or rooms sometimes oxygen level is decreased. So, it's difficult to breathe normally. So, we had implemented an oxygen sensor to monitor the oxygen level. In this project w design and fabricate a system which automatically monitors the oxygen and carbon dioxide levels. If the oxygen level decreased beyond the set level, the microcontrollerAT89C51 sends the signal to actuate the generator and oxygen generator will generate oxygen to the closed hall. We use a zeolite material that is used for air fresher and odours controller.

Key Words: oxygen sensor, zeolite, AT89C51 microcontroller.

1. INTRODUCTION

Objective of this project is to maintain the oxygen level in closed hall or rooms sometimes engaged people which lead to breathe air with low level oxygen. It causes oxygen level in human blood is low or the carbon dioxide level is high which leads too many respiratory diseases like. The disease mainly affects men 20 to 50 years old people. It may also occur in children. To avoid that a novel project is designed and developed this is described in detail. The system continuously and automatically monitors the oxygen and carbon dioxide levels. If the oxygen level decreased beyond the set level the oxygen sensor is sent the signal into microcontroller. Then AT89C51 microcontroller signal to actuate the oxygen generator.

2. METHODOLOGY

This project working following steps, the first supply 240 v send the transformer. In this transformer 240V is step down to 15v supply. This supply is sent to regulator the regulator is converting in to +5v supply. The sensor is sensing the oxygen level which is sent ADC converter. Then the digital output is fed to AT89C51 microcontroller. The level is displayed using LCD and when the oxygen level is reached the minimum set value a pulse is sent to relay driver. Then the relay drivers switch ON the relay. Oxygen is filled into the room. When the oxygen level reached the maximum set value the relay driver is switched OFF by sending a control pulse by the microcontroller.

1.1 PROJECT WORKING DIAGRAM

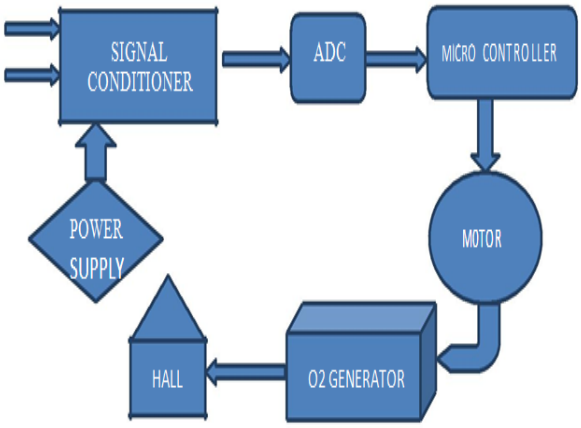

Figure 1:1 Block diagram of the regulating system

1.2 CIRCUIT DIAGRAM

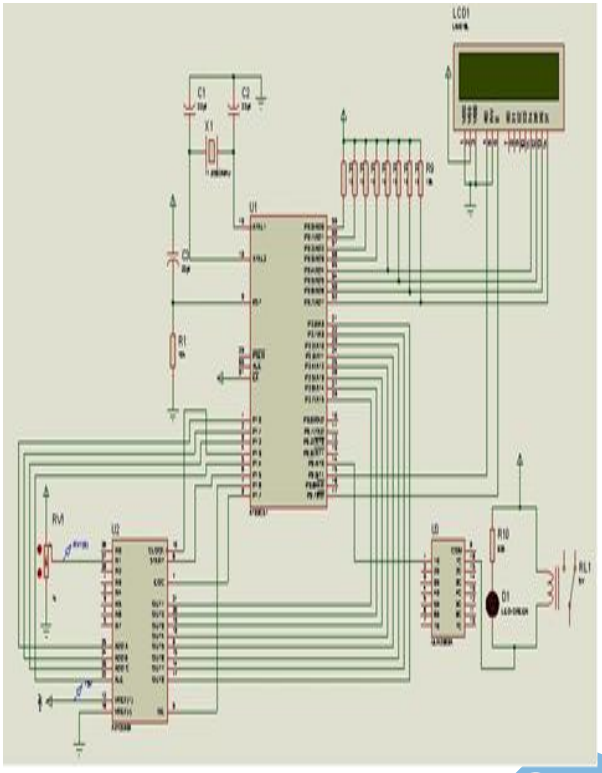

Figure 2:2 Circuit diagram of the AT89C51 microcontroller

3. CONCLUSION

It has been shown that a "Design & Fabrication breathable air level monitor regulating system" with silver zeolites will produce 99% oxygen. Using this new technology, a hospital and portable oxygen concentrator designs were developed. Currently no oxygen concentrator, portable or large, is able to produce99% oxygen. The technology of pressure swing adsorption utilizing two types of silver zeolites presented here might possibly cause a revolution within the oxygen industry. Overall, it is now possible to deliver 99% oxygen to patients in a hospital, and those who want to enjoy a life without the restriction of limited oxygen supply in bottles of oxygen. Both models would be highly competitive in each respective market and would save consumers from the large expensive and heavy equipment of liquid oxygen supply. This is technology that will truly change the lives of millions of patients and those needing oxygen around the world for years to come.

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