

Intelligent Helmet for Coal Miners

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Abstract--- Our project based on microcontroller and gsm. Our project is security of coal miners. In the coal mine various type of parameters like Methane, Carbon monoxide, Temperature, humidity of safety and monitoring. The sensors are should be fitted on helmet. In the sensors particulars threshold value fitted. Whenever any parameter are crosses the particular value, a buzzers is turned on so it indicated miners to dangers and gsm through message is transfer to mobile of officers. This project is indicated dangers of miners and save the miners life.

In this fig. 1 8051 is used for interfacing of various components. In this temperature is continuing display on LCD display.LCD display interfacing with 8051. Temperature sensor LM35 is connecting with amplifier. Sensors are interface with ADC0808.ADC is convert analog output to digital output. ADC interface with 8051.Gas sensor detect the gas and display the message on lcd display.GSM Module is connected with microcontroller pin3.1 and pin3.2 also buzzer is connected with 8051.In temperature high then particular value buzzer turn on. Automatically message was transferring to officer through mobile.

I. INTRODUCTION

This project advantage is alert dangerous environment situations of coal miners. This project provides safety security system of engineers. In this project gas sensor, temperature sensor and humidity sensor used. Gas sensor interface with microcontroller 8051. If gas leakage then sensor detected gas.Temperature sensor interface with ADC808. Particular value set in the temperature sensor. In this transfer the message gsm modem used. Display the message on the lcd display.Alert of danger for coal miner buzzer also used.

II. DESCRIPTION

when power is on, microcontroller interface with lcd display.Frist command is send to lcd display. Then message is transfer to lcd display.lcd display continous display the message.Temperature sensor interface with adc808 .ADC808 interface with microcontroller send temperature is display on lcd display.Gas sensor in connected to microcontroller and dedcted gas . Gas detected message displaying on lcd. Sending the alert message on mobile through GSM modem.In this buzzer also indicating the danger to coal miners.

REFERENCES

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III. BLOCK DIAGRAM

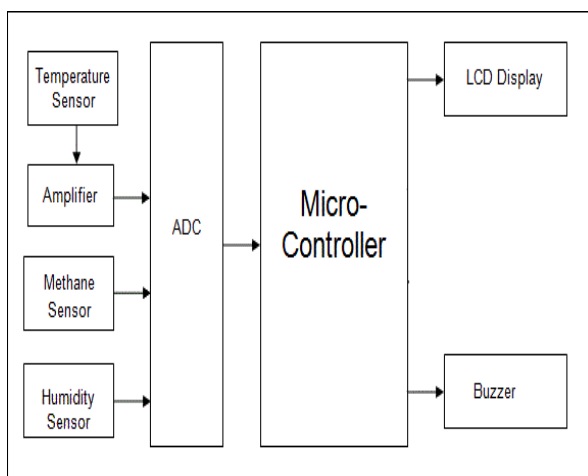


Fig. 1: block diagram