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Study of Defects Tolerenced Drilling of Composite Material

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Abstract: The main objective of this project is to develop a mechatronics based system, which will detect the level of water and thereby the movement of gates can be controlled in a real-time basis which offers more flexibility. This system consists of a set of sensors connected to a stepper motor through an 8-bit microcontroller (AT89S52). The water level is detected based on the feedback from the mechanism used. Based on this data, the level of dam gate can be controlled using a stepper motor via personal computer.

Key words: Microcontroller · Rack and pinion mechanism · Motors and Sensors

INTRODUCTION

Now a days modernization rapidly entering to everywhere, now we are planning to monitoring as well as control the dam water. Earlier dam water controlled by manual, the controller monitoring the water level and actuating the shutter by mechanical process (manual). But now days we are not using manual effort. We introduce advance technology towards the dams to controlling the system [1].

Based on water level the system itself monitoring the level as well control the shutter by using the sensors and microcontrollers in addition with actuating mechanism of shutter its name is microcontroller based dam water level monitoring and control.

Automation:

- What is automation?

Automation should not be regarded in terms of a specified maximum capital outlay, but as an approach to automation using equipment and control devices that are, in general, both technically and economically, within the scope of the company concerned [2].

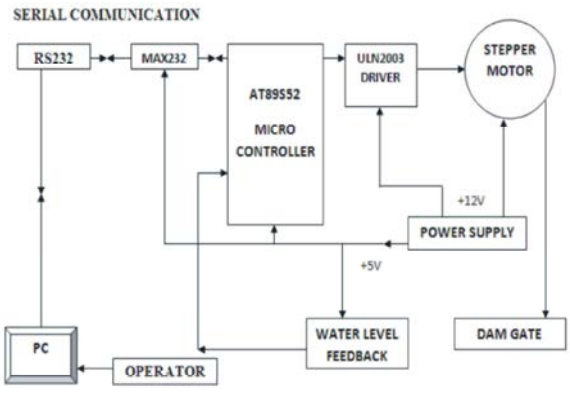
- How to achieve automation?

In our system we can achieve the automation by using the following things in our system.

- Microcontroller(AT 89S52)
- Sensors(ultrasonic waves sensor)
- Motors(DC servomotor)
- Mechanism(Rack and pinion)

Project Description: Microcontroller is taking major role of our system which is getting input signals from sensors based on water level. Then the microcontroller gives signals to run the motor to actuate the shutter as per the program [3, 4].

BLOCK DIAGRAM



Working Principles:

- There are four sensors which used as a level sensor which is fixed in the dam
- If the Sensor senses the water based on the four level as shown figure.

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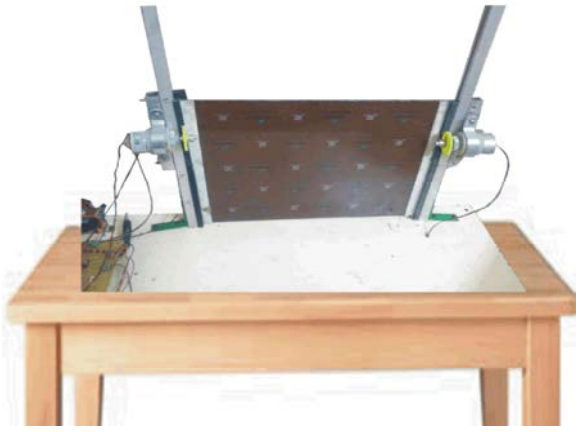
- Now the controller will control the dam shutter.
- There is a display for giving the percentage of dam filled.
- Example 30 %, 43 %.
- Based on the sensor sensed the dam shutter will be opened / closed accordingly.

Overview:



CONCLUSION

In this project we use four number sensor to measuring the water level, where another dam two sensor been used. here four sensor is used for controlling the water level. Then how much water we have to kept in dam and how much water escape from dam the is monitoring by this system this the main objective our work.

Here we have a chance to leant about automation that is electronics core related with mechanical. how the automation obtained for the mechanical systems by the electronics like sensors, microcontroller etc.

REFERENCES

1. Automation production systems and computer integrated manufacturing by Mikell P. Groover.
2. Hydraulics and pneumatics.
3. Mechatronics Singh, Joshi, M.D. Singh and J.G. Joshi, 2006.
4. Microcontroller 8051/8052 by craig steiner.