



## **Controlling of S S O tanks with auto chlorination and de-chlorination in Dairy industry**

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*Abstract*-This project involves in controlling of input and output flow of water in tanks Source, Sump and Over Head tank based on the amount of water and along with this we enhanced with the process of auto chlorination in the sump tanks and followed by that auto De-chlorination in the OHT tanks. The process has to be continued for numerous times in a day. So, this is considered to be controlling of whole production process in that industry, because the valuable raw material for the production purpose is steam for both pasteurization and also preserving of products. And so, that steam is only available from the De-chlorinated water of OHT-2,3 tanks. Followed by that, chlorinated water is used for the purpose of maintenance and purifying of equipment for the certain period of time.

### **I. INTRODUCTION**

This project involves in controlling the tanks(Source,Sump and Overhead ) based on the quantity of water in the tank and how much chlorine should be added to the water. The pump which are activated in that time for pumping of water and chlorine by indicating the current process to a maintenance man for the reference. the sequence of water is SOURCE-SUMP(CHLORINE TANK)-OHT 1-OHT 2-FACTORY USE

### **II. PROPOSED SYSTEM**

#### **A. Block Diagram Description**

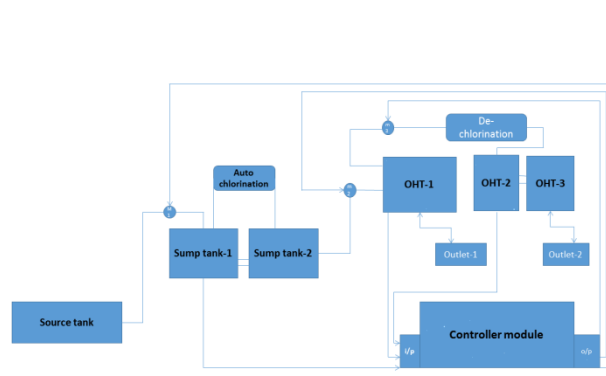


Fig 1:Block diagram of project

This block consists of 3 pumps and 5 tanks with a controller comprising of GSM module for the process of chlorination in automated manner. Source tank is considered to be the input for this process. And followed by that sump tank 1 and 2 is considered to be the intermittent whereas OHT(overhead tank – 1,2,3) is considered to be output which comprising of two outlets. The outlet-1 from the OHT 1 is used for the auxillary purpose in Industry, it is nothing but the chlorinated water is used for cleaning of vehicle, scrap materials, purifying of dairy sleeves. The outlet-2 from OHT-2 and OHT-3 are used for production purpose in that industry.

Controller is getting its input from SSO tanks, and given the output as either it may be LOW or HIGH . Along with that it gives the indication to the specified number in the GSM module. The indication is in the form of “TANK IS LOW” or “TANK IS HIGH” for the specified tanks for the continuous period of time.

## **B. Results and Discussion**

In our project first of all we have to register the required mobile for the prime configuration after than we can add upto 4 mobile numbers which are going to be receive the message about the running condition of the motors. There are four steps to be followed by the controller for starting of the motor.

- 1.Level scanning
- 2.ON /OFF the motor
- 3.Indication via SMS

Once the SIM is registered the next step done by the controller is scanning the level of the tank after the scanning the corresponding process has to be taken place it may be on or off of the motor in case of any dry condition in the source itself the motor gone off using the current sensing unit. And the actions which are taken places are indicated to the persons whose mobile numbers were registered in that controller.

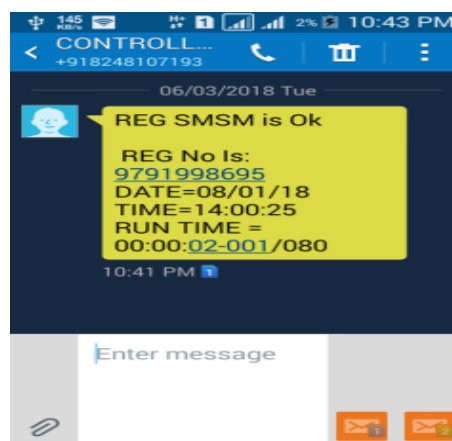


Fig:2 mobile number registration

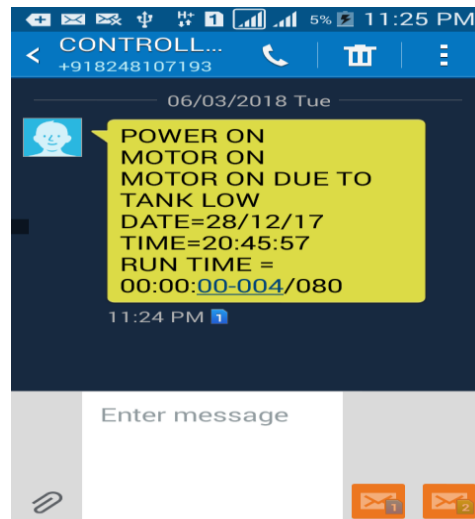


Fig:3 motor on due to tank low

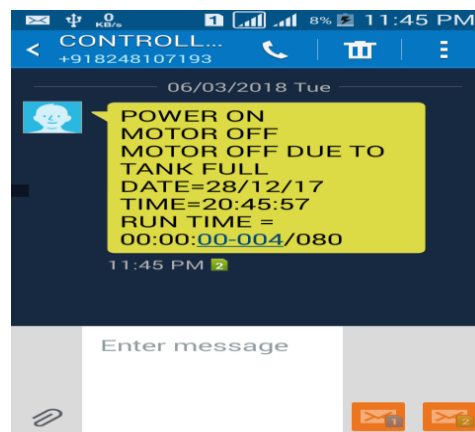


Fig:4 motor off due to tank full

### C. SCOPE OF THE PROJECT

This project involves in controlling the various tanks in an automated manner and to reduce the man power like industries and in our project the tanks involved in chlorination which is a toxic liquid. And another important task is watching the levels of the various tanks because they can be placed in various places it can be far away from the industries and too high. This controller also used for reducing the consumption of power by stopping the machine when not in use. With this the controller stops the motor when it runs in dry condition with indication to the registered people.

### III. CONCLUSION

Today's life wastage of resources in an increasing manner. If this action continues there is no resource for our life, so that it should be controlled. Our project involves in precise control of water in various tanks in an industry. This project can save the wastage of water and energy in an efficient way by using moderate input energy. In future it can be connected to all the electric device in an industry.

#### **IV. REFERENCES**

- [1] Mohamed Abd EI- latifMowad, Ahmed Hafez" smart Home Automated control using Android Application and Microcontroller"-International journal of scientific &Engineering research-2014
- [2] Nupur K. Sonawae, payal D. Wagchavarae, KajalA.Patel"Bluetooth Based Device Automation using cell phone"-International Journal of computer applications &Information technology-2014.
- [3] Hsien-Tang Lin" Implementing Smart Homes with Open Source Solutions" International Journal of Smart Home Vol. 7, No. 4, July, 2013.pp 289-295.
- [4] Rosslin John Robles1 and Tai-hoon Kim1" Applications, Systems and Methods in Smart Home Technology: AReview" International Journal of Advanced Science and Technology Vol. 15, February, 2010.pp 37-47. [3] Sook-Ling Chua and Stephen Marsland and HansW. Guesgen" Beha viour Recognition in Smart Homes Sook" Proceedings of the TwentySecond International Joint Conference on Artificial Intelligence 2011.
- [5] Gowthami, Dr. Adiline macriga "Smart Home Monitoring and Con trolling System Using Android Phone" International Journal of Emerging Technology and Advanced Engineering Website: [www.ijetae.com](http://www.ijetae.com) ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 3, Issue 11, November 2013.
- [5] Saisakul Chernbumroong, Anthony S. Atkins, and Hongnian YuPer ception of Smart Home Technologies to Assist Elderly People" 4th International conference on software, Knowledge information manage and applications (SKIMA 2010). [6] Christian Reinisch, Mario J. Kofler, Wolfgang Kastner"ThinkHome: A Smart Home as Digital Ecosystem" 4th IEEE International Conference on Digital Ecosystems and Technologies (IEEE DEST 2010).
- [6] <http://www.instructables.com>
- [7] <http://en.wikipedia.org/>