



IRRIGATION SYSTEM USING SOLAR POWER



A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project work titled "IRRIGATION SYSTEM USING SOLAR SYSTEM" is the bonafide work of DHARMAJESUSHARON.A (710419105011), GOVINDASAMY.A (710419105015), NAVYA.K.P (710419105027), VENNILA.M (710419105040) who carried out the project work under my supervision.

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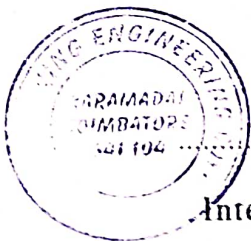
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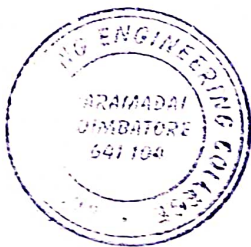
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ABSTRACT

Agriculture is the source of living of majority Indians and it also has a countless influence on economy of the country. The objective of our project is to reduce this manual involvement by the farmer by using an automated irrigation system which purpose is to enhance water use for agricultural crops. The inspiration for this project came from the countries where economy is based on agriculture and the climatic conditions prime to shortage of rains & scarcity of water. The farmers working in the farm lands are only dependent on the rains and bore wells for irrigation of the land. Even if the farm land has a water-pump, manual involvement by farmers is required to turn the pump on/off when needed. The project is intended to cultivate an automatic irrigation system which controls the pump motor ON/OFF on sensing the moisture content of the soil. In the field of agriculture, use of appropriate technique of irrigation is essential. The advantage of using this technique is to reduce human intervention and still certify proper irrigation. A software application was developed by predetermining the threshold values of soil moisture, temperature and water level that was programmed into an arm controller. This paper presents the controlling and monitoring the level of water and detecting the soil moisture content.




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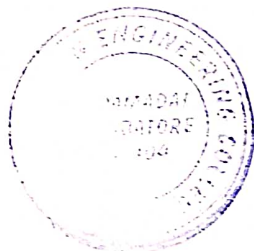
CHAPTER 7


CONCLUSION

The main applications for this project are for farmers and gardeners who do not have abundant time to water their crops/plants. It also covers those farmers who are wasteful of water during irrigation. The project can be extended to greenhouses where manual management is far and few in between. The principle can be extended to create completely automated gardens and farmlands. Collective with the principle of rain water harvesting, it could lead to massive water savings if applied in the right way. In agricultural lands with severe shortage of rainfall, this model can be effectively applied to attain great results with most types of soil.

By using the automatic irrigation system it optimizes the usage of water by reducing wastage and reduce the human intervention for farmers . The excess energy produced using solar panels can also be given to the grid with small modifications in the system circuit which can be a source of the revenue of the farmer, thus encouraging farming and same time giving a solution for energy crisis. Solar pumps also offer clean solutions with no danger of borehole contamination.

Here is an idea which helps not only farmers even for watering gardens also, which senses soil moisture and switches the valve automatically when the power is ON.




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