**DEVELOPMENT OF THERMAL CONDUCTIVITY MEASUREMENT APPRATUS FOR FOOD GRAINS**

**A RESEARCH PROJECT REPORT**

**SUBMITTED TO THE**

**DR. D. Y. PATIL COLLEGE OF**

**AGRICULTURAL ENGINEERING & TECHNOLOGY,**

TALSANDE-416 112

MAHARASHTRA STATE (INDIA)

*Affiliated to*

**MAHATMA PHULE KRISHI VIDYAPEETH, RAHURI**

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**CANDIDATE’S DECLARATION**

We hereby declare that this research project report

or part thereof has not been submitted

by us or any other person

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**CERTIFICATE**

This is to certify that the research project report entitled **IMPACT STUDY ON ARDUINO BASED IRRIGATION SYSTEM** submitted by partial fulfillment of the requirement for the Degree of **BACHELOR OF TECHNOLOGY** in **AGRICULTURE ENGINEERING** from Dr. D. Y. Patil College of Agricultural Engineering & Technology, Talsande, Kolhapur, affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri is record of bonafied research work carried out by **Miss. Dalvi Komal Namdev, Mr. Kore Shubham Dilip, Mr. Patil Rushikesh Sanjeevkumar, Mr. Kadam Tejas Suryakant** and **Mr. Patil Sourabh Sachin** under my guidance and supervision. No part of this research project report has been submitted for any other degree, diploma or publication in any other form. The assistance and help received during the course of this project work and source of literature have been duly acknowledged.

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**LIST OF ABBREVIATIONS**

|  |  |
| --- | --- |
| **Abbreviation** | **Description** |
| Avg. | Average |
| cm3 | Centimetre cube |
| Cm | Centimetre |
| Deg. | Degree |
| Etc | Etcetera |
| Fig. | Figure |
| G | Gram |
| Ha | Hectare |
| Hr | Hour |
| Hp | Horsepower |
| i.e. | That is |
| Kg | Kilogram |
| m3 | Metrecube |
| Ml | Mililitre |
| M | Metre |
| MT | Metric Ton |
| Min | Minute |
| Rev | Revolution |
| Sec. | Second |
| \* | Multiplication |
| / | Divide |
| = | Equal to |
| % | Percentage |
| < | Greater than |
| ̊ | Degree |

**ABSTRACT**

**IMPACT STUDY ON ARDUINO BASED IRRIGATION SYSTEM**

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**Mr. Kore Shubham Dilip**

**Mr. Patil Rushikesh Sanjeevkumar**

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**BACHELOR OF TECHNOLOGY**

**in**

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**Project Guide : Er. D. A. Patil**

**Department : Irrigation and Drainage Engineering**

The title itself indicates that the system checks the moisture content in the soil, based on that pumping motor will automatically pumps the water into the field. Here we are using soil moisture sensor. By using this sensor, we can find whether the soil is wet or dry. If it is dry, pumping motor will pump the water. In this system, the main controlling device is Arduino. Here different sensor will give the status of the soil and atmosphere to the Arduino, based on that Arduino will display the status of the soil and Arduino on the LCD and switch on or off the pumping motor through relay. The pumping motor will pump the water into the field by using water system until the field is wet which is continuously monitor by the Arduino. In irrigation process, most parameter of monitoring is soil, so we have to monitor the soil condition, whether the soil is dry or Wet. If it is dry, then by using pumping motor, water has to be pumped automatically. The main aim of our system presenting here is to monitor the moisture content in the soil in cultivating field. Based on soil moisture, pumping motor will be automatically switch on or off through relay. This saves the water at the same time and on the other hand the plant can get optimum level of water, so increasing productivity of crop. It also helps in minimizing human intervention.