VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELGAUM

A project report on

"MICROCONTROLLER BASED AUTOMATED DRIP IRRIGATION"

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ABSTRACT

Due to the variable atmospheric circumstances, moisture content of the soil vary from place to place in large farmer field, which makes very difficult to maintain the uniformity at all the places in the field manually. Therefore, there is an intense need to develop Microcontroller based automated drip irrigation system. This system perform mainly two operations, one is maintaining moisture content in the field by controlling the water and other is detecting the breakages occurred in drip pipes. These two operations are accomplished using moisture sensor and water level indicator with microcontroller and associated circuitry. The moisture sensor read the soil moisture content in terms of signal depending on the changes in the conductivity of the soil and gives information to the microcontroller whether the area is wet or dry. Accordingly the microcontroller control the water pump set and valves to route water for a particular area. Water level indicator check the level of water is low or high in the check point connected to the drip pipe. If the water level is low in the check point that indicate breakage in the pipe line, based on this microcontroller takes certain measures to prevent wastage of water and inform to the user by sending the message via GSM modem. The overall working status of the system is displayed on LCD.