A NOVEL MODEL FOR MOULDING PROCESS IN FOUNDRY USING CAPACITIVE PROXIMITY SENSOR

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A project report submitted in partial fulfillment of the requirement for the award of the degree of Bachelor of Engineering in Electronics and Communication Engineering of the Visvesvaraya Technological University, Belgaum

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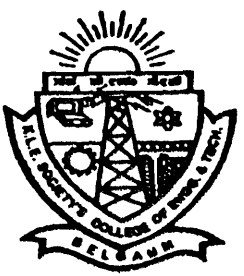

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Abstract

Founding has been used for shaping metals since the earliest days of civilization. A wide variety of sizes and shapes of simple and intricate nature can be produced in different metals. In foundries moulding process is used which a process of preparing cavities of suitable shapes is using patterns formed by manual operations or machines. Basically it is done in a mixing chamber. Two solenoid valves are used to control the mixing process. As valve is an electromechanical device there is every possibility that valve may fail and results in irregular mixture. In conventional system carried out in foundries there is no such device which detects the valve failure. In our approach we are using capacitive proximity sensors to detect the valve failure. Based on sensor output solenoid valves can be controlled by using microcontroller. This system can be effectively used in foundries to avoid irregular mixture and to control valves