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## INDUSTRIAL BOILER AUTOMATION BY USING EMBEDDED SYSTEMS

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## Abstract

Each and every part of our life is somehow linked with the embedded product. Embedded systems are the product of hardware and software code sign embedded system is becoming an integral part of engineering design process for efficient analysis and effective operation. From data analysis to hardware work, everywhere embedded products are main interest because of its reliability and time bound perfection. There is not much time with anyone now a day to give enough in all aspects, so demand of embedded systems which serve as we want is high on demand. The present project describes the design of an embedded system for the control of temperature with continuous monitoring in single system using sensors, microcontroller and LCD it describes the controlling action incorporated in the hardware to control any device connected when specific conditions are met. System this project can be used in industrial application for the measurement of temperature of any furnace and accordingly control the operation of various boilers by automation. A software program is written and embedded on a micro controller for the purpose. A temperature sensing unit will be interfaced to the microcontroller for this purpose. In this project one microcontroller interfaced to various devices are used. A temperature sensor is interfaced to sense the current temperature of the boiler (prototype) continuously. Also a keypad is interfaced to it for entering the set point of temperature. If the temperature exceeds the Set point level then automatically the furnace fuel valve will be closed and when it is cooled up beyond set point temperature again it will start its operation. The cooling unit will be on to perform the cooling of the furnace. Whenever the temperature falls below set point temperature it will go off. Also the temperature will be continuously displayed in the display device.

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Keywords: peripheral interface controller, factory talk studio, boiler, inter lock system, proteus.

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