BOILING WATER TEMPERATURE SENSING

Prepared by: Abailim Christian Izunna

ABSTRACT

The method of sensing the temperature of boiling water was achieved using the available 10-bit ADC module in the PIC16F877A microcontroller which converts the analogue voltage produced by the sensor into digital value. Thermocouple (sensor) consists of two wires, each made of a different homogeneous metal or alloy. The wires are joined at one end to form a measuring junction. There is a difference in temperature between the two ends. This difference in temperature creates a small current and when there is a difference in temperature between the two ends of this circuit, a small voltage usually in kilovolts is formed within the circuit.

The goal of this project is to detect the temperature of boiling water and display the temperature on the LCD. Microcontroller (PIC16F877A) works as a main core unit for this project. All the output results are displayed through 16X2 LCD screen. Due the PIC16F877A is supported in mikroC, thus the whole program is designed from this software by using C language. Library routines in mikroC gave plenty assistance in designing program code such as LCD display, initialization of LCD pins.

Overall, all the project outcomes fit to the specified aim and objectives.