

## **Dedication**

Every challenging work needs self –efforts as well as guidance of elders especially those who were very close tour heart. Our humble effort we dedicate to our sweet and loving

Mothers & Fathers

Whose affection, love, encouragement and prays of day and night make us able to get such success and honor, along with all hard working and

Respected

Teachers.

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## **Abstract**

During the last years the combination of fuzzy logic and PD controller has come into fashion in temperature control. Nevertheless, or better, for exactly that reason it is necessary to investigate this combination critically and to expose the advantages and weaknesses objectively. Also this project describes control of water temperature heater in industrial scope using Fuzzy PD controller. The separately excited temperature that makes the system imperil can be controlled from below and up to desired value. By sensing the heater temperature using temperature sensor. Then obtaining the error value by subtracting the desired temperature from the measured one. Optimization of PD parameters is obtained automatically by using block called check step response characteristic in MATLAB Simulink library. The optimized  $K_p$  and  $K_d$  multiplied by the error and change in error values respectively and fed them as inputs to the fuzzy logic controller For enhancing the response of PD controller. The model is simulated using MATLAB.