DESIGN OF CONTROL PID TO MANAGE WATER TEMPERATURE ON SHOWER UTILIZES MICROCONTROLLER

Student Name : Aryo Pambuko Wicaksono  
ID Number : 2207039001  
Student Name : Evi Astuti  
ID Number : 2207039021  
Counsellor : Ir. Rusdhianto Effendie AK., MT.

ABSTRACT

Mostly water pipe on shower one that is at the houses have utilized control who can manage water temperature. Mostly person is still choose manual trick if wants bath to utilize warming water. Therefore is designed a tool that to manage self acting water temperature utilizes to control PID.

On this final task is worked through about PID control scheme to manage water temperature on shower. This system consisting of circuit power supply, solid state relay circuit, censor circuit, mikrokontroler ATmega16, DAC circuit (Digital to Converter's Analogue), SC circuit (signal conditioning). Power supply giving needed tension on each series, mikrokontroler Atmega16 as center as arrangement on censor series, Solid State Relay circuit as controller of AC voltage, DAC circuit as conversion secretory censor voltage from mikrokontroler, SC circuit as substantiating as censor voltage to be able to been read mikrokontroler.

Of system examination result wholly gets to be known that to heat water as much 6 box deep liters heating with temperature among $30^\circ C - 70^\circ C$ require time which is, for temperature $30^\circ C$ require time 56 seconds whereas for temperature $70^\circ C$ require time 1 minute 9 seconds.

Key words : PID control, Temperature, Shower
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