Abstract

A comparison between performances of fuzzy PID self tuning temperature controller and a conventional on-off temperature controller for cold store was done. A fuzzy PID self tuning temperature controller was designed to replace the conventional on-off temperature controller to maintain the inner temperature of a cold store kept at the desired value. Both temperature controllers of the conventional system and the fuzzy PID self tuning were designed and evaluated using MATLAB/SIMULINK software. The simulation shows that the fuzzy PID self tuning controller was found to be more consistent and effective in maintaining the inner temperature of the cold store, at the desired value than the conventional on-off controller. Both simulation results provide full graphical development which is analyzed and have been compared. The effectiveness of the fuzzy PID self tuning control system and its ability to maintain the inner temperature of the cold store consistently than the conventional on-off controller is shown.