Implementation of Fuzzy and PID Controller to Water Level System using LabView

Abstract

The paper is about the water level control system which is required in many industrial processes like water treatment plant, the idea of the process is to keep the tank water level at the desired set point. First we implemented the conventional proportional – integral - derivative (PID) controller to eliminate the steady state error, then it was used Fuzzy logic controllers which gives more performance and stability. It is noted from the results that the Fuzzy Logic controller is more enhanced than PID controller in which its no overshoot, faster settling time, better set point tracking and produced lower performances like integral of time and absolute error (ITAE) integral of time and squared error (ITSE),and integral absolute error (IAE), integral squared error (ISE). Both PID and fuzzy controller are implemented using LabView software

References

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Index Terms

Computer Science  Fuzzy System

Keywords

Proportional-integral-derivative (PID) controller  Fuzzy Controller  LabView