Abstract

The Proportional-Integral-Derivative (PID) control is a control strategy that has been successfully used over many years. Simplicity, a wide range of applicability and near-optimal performance are some of the reasons that have made PID control so popular in the academic and industry researches. Recently, it has been noticed that PID controllers are often poorly tuned (obtaining the controller parameters k_p, T_i, and T_d) and some efforts have been made to systematically resolve this matter. In the research a brief summary of PID theory is given, then some of the most used PID controller tuning methods are discussed, simulated, and practically compared together to choose the best one.