ABSTRACT
In cement plants, material for cement production will be carried by the conveyor belt, which causes the DC motor speed is unstable belt. Have to reasoning design parameters of DC motor speed control with PID control. We have many reasoning control parameters using the method of trial and error, by selecting the three coefficients of PID controller (Kp, Ti, Td) But the controller design with Trial and error method can not control the parameters reasoning robust. On research conducted coefficient tuning Kp, Ti and Td with Heuristic methods, robust conditions obtained when the value of Kp = 1, Ti = 0.2 and Td = 0.1. Result of the control parameters are designed maximum still has a high overshoot of 67.14 %, settling time 3250 seconds and reaches steady state error of 3.71 %.

Keyword : speed, DC motor, tuning control method, Heuristic.