## Abstract

Two of control techniques of the Model Predictive Control (MPC) methodology, which are Dynamic Matrix Control (DMC) and Generalized Predictive Control (GPC), with IMC-PID are disputed in this paper. The main characteristics of these important control techniques, widely used in industry, are presented. The optimum solution of the predicted control inputs and outputs are obtained by minimizing a cost function that contains the squared errors between the reference trajectory and predictions output on the prediction horizon. These controllers are applied on a Process Control Module (PCM), a system with pure time delay, and tested in the light of disturbance rejection and tracking performance for the constant and variable trajectory.