

## Supply Air Pressure Control of HVAC System Using MPC Controller

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**Abstract :** In this paper, supply air pressure of HVAC system has been modeled with second-order transfer function plus dead-time. In HVAC system, the desired input has step changes, and the output of proposed control system should be able to follow the input reference, so the idea of using model based predictive control is proceeded and designed in this paper. The closed loop control system is implemented in MATLAB software and the simulation results are provided. The simulation results show that the model based predictive control is able to control the plant properly.

**Keywords :** air conditioning system, GPC, dead time, air supply control

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