

Name : Nawaporn Waurajitti

Thesis Title : The Reduction of Effect of Parameters Deviation by
MRAC. Method.

Thesis Advisors : Asst. Prof. Dr. Somchai Chartrattana
Asst. Prof. Vach Vivak

Academic year : 1992

Abstract

This thesis presents the method of reducing the effect of parameter deviations in cascade position control of DC.Motors. The "Model Reference Adaptive Control (MRAC.)" is employed in the speed loop to keep the control parameters of the speed loop constant when the MRAC. reaches steady state. The control parameters of the position loop are chosen according to the well known "Modulus-Hugging method". The Assumption used in designing position controller is that the speed loop under MRAC. behaves like first order system connected in series with speed sensor, which can be characterised as an integrator .

Experimental results from the test shows that MRAC. can effectively reduce the sensitivity of the system to the change of machine parameters.