

Perancangan regulator tegangan generator sinkron 3 fasa berbasis model matching

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=131478&lokasi=lokal>

Abstrak

In Indonesia presently there still exist some power plants with 1960s technology which are operated manually. The aim of this paper is to design an automatic voltage goes back to the reference value when any disturbance occurs. The design result can be applied to newly built power plants as well as to modernize old power plants. The design uses model matching methods. With model matching method the regulator is designed so that the transfer function of the designed control system resembles that of the reference model. Its performance was validated through computer simulation using electrical power nonlinear model of 4th order. from simulation when the reference was changed the following tracking performance was obtained: rise time 1.7 sec, over shoot 7,3 % and settling time 5.7 . sec. On the other hand, from the fault simulation the following regulation performance was obtained: over shoot 4 % settling time 4.7 sec. and steady state error 0%.