

Project Report Title : Hydraulic cylinder control system with force feedback
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Abstract

This project concern hydraulics cylinder control system with force feedback that have Tele; Master send command signal to control Slave. For objective, to send a signal command from Slave to Master.

Method of operation, set AC servo motor for Master and hydraulics cylinder for Slave. Use LabVIEW program for control and communicate with DAQ card. This project has 2 experiments; 1. Control by send position from Master and send position feedback by Slave (Position-Position: P-P) that use the different degree between Master and Slave to send command to Master. 2. Control by send position from Master and send force feedback by Slave (Position-Force: P-F) use pressure into the hydraulics cylinder's Slave for send force feedback to Master. For both experiment that have to offset friction force into the hydraulics cylinder and not have to offset.

Operating result found that the experiments, for have offset friction force that start and go to set point faster than not have to offset friction force into the hydraulics cylinder. And summarize, the experiment that offset friction force have efficacy more than not have offset into the hydraulics cylinder.