

Racing Engine Dynamometer Control

Project Overview

High speed (300Hz) PID control of fact acting hydraulic servo valve to control engine speed on Froude Consign water dynamometer.

System monitors, records and displays data from the engine – speed, torque, power, fuel flow etc. whilst controlling set speed. The high speed PID loop must respond to changes in speed and throttle demands but also running engine response.

Automatic tuning, development and power tests may be run where the system has full control and take s the engine through a series of pre-defined throttle/speed set points logging the torque and power produced characteristic.

The engine will be shut-down in a controlled manor if any critical safety limits are monitored.

The system has comprehensive channel calibration, cell and engine database administration, data logging, recall, analysis and reporting functions

