DESIGN ACTIVE FAULT TOLERANT CONTROL IN
STEAM CONDENSATE TANK AT PT BADAK BONTANG
NGL KALIMANTAN TIMUR WITH FAULT AT THE
SENSOR

Name : Rhadityo Shakti Budiman
Student Number : 2410 100 038
Department : Engineering Physics
Supervisor : Dr. Bambang Lelono W, S.T, M.T

Abstract
Active fault tolerant control is a control algorithm that
works when there is an error that occurs in a system. In this final
project is related to errors in the level sensor transmitter in the
steam condensate tank at PT Badak NGL Bontang. The first step
in this final project is build simulation in MATLAB with the same
data process as in the real plant. Control signal reconfiguration
method is part of the active fault tolerant control for estimate the
fault with additional references signal. Additional references no
other signal is the residual of the sensor errors are estimated
using the observer. Observer constructed by using pole placement
algorithm. Errors are given like bias error and sensitivity error
which is characteristic static of sensors. The simulation results
obtained show that the active fault tolerant control is built to
accommodate the sensor faults better than the conventional PID
control system.

Keywords : Active Fault Tolerant Control, Pole Placement, Steam
Condensate Tank