

Estimation of Water Level of Drum in Power Plant Using Kalman Filter

김은교, 이광준*

서강대학교

(kslee@sogang.ac.kr*)

In power plant, it is important to control an amount of steam which is cycling in plant. In the same vein, the water level of drum in power plant should be controlled. But it is hard to measure water level precisely because bubbling occurs in drum and the water in the drum usually sloshes from side to side. In this study, kalman filter is used for estimation of water level of drum. The kalman filter is a powerful tool when it comes to controlling and estimating noisy systems. In kalman filter, deciding a noise to signal ratio is most important because it determines performance of kalman filter. Generally, kalman filter is based on time domain because kalman filter is recursive one. But in this study, kalman gain is determined in view of frequency. As same low-pass filter, cutoff frequency is introduced for decision of kalman gain and noise to signal ratio.