Relay feedback method under noisy environment

유경환, 김경수, 강호숙, 조준용, 이시내, 이지태, 성수환*

경북대학교

(suwhansung@knu.ac.kr*)

The conventional relay feedback method has several disadvantages. One of them is poor estimation of ultimate data due to chattering of relay for noisy environment. To solve this problems, hysteresis and integral methods are developed. However, the hysteresis method dosen't guarantee an acceptable accuracy of the esimated ultimate information. And the integral method to estimate the ultimate information has not good accuracy for a large sampling. To overcome these disadvantages, a new relay feedback method was developed in this research. It finds accurate instance at which the relay on‑off changes on the basis of the previous on cycle data. The proposed method provides better accuracy in estimation the ultimate data compared with previous methods by estimating effects of noise efficiently even in the case of large sampling time.