INPUT WEIGHTING FOR SISO SYSTEM WITH FEEDBACK PID CONTROLLER

Sarawut Sujitjorn^{1*}, Parinya Punarasart², Yotin Prempraneerat³ and Deacha Puangdownreong⁴

Abstract

This paper describes experimental studies of a regulating and tracking control strategy in which the attempt to improve the system performance is externally issued to the control loop. The control method can be viewed as the input compensating technique. The results illustrate strengths and weaknesses of the method. The method is quite attractive to industrial applications since it introduces minimum disruption to an existing control system.

Key words: PID control, input weighting, tracking, regulating.

¹ Ph.D., member IEEE, Asst. Prof., School of Electrical Engineering (Chair), also with the Center for Scientific and Technological Equipment, Suranaree University of Technology, Nakhon Ratchasima, Thailand.

² B.Ind.Tech., Department of Electrical Engineering, Faculty of Industrial Technology, South-East-Asia University, Bangkok, Thailand.

³ Ph.D., Assoc. Prof., Department of Control Engineering (Head), Faculty of Engineering, King Mongkut's Institute of Technology, Ladgrabang, Bangkok, Thailand.

⁴ B.Eng., Post-graduate Student, Department of Control Engineering, Faculty of Engineering, King Mongkut's Institute of Technology Ladgrabang, Bangkok, Thailand.

^{*} Corresponding author