International J. of Math. Sci. & Engg. Appls. (IJMSEA)
ISSN 0973-9424, Vol. 6 No. I (January, 2012), pp. 95-103

CONTROL SYSTEM - AN INTRODUCTION WITH THE APPLICATION OF TRANSFER FUNCTION

N. A. PATIL[1] AND SUCHETA MOHARIR[2]

[1] Professor, Department of Applied Sciences (Mathematics) & Humanities, Shri Sant Gajanan Maharaj College of Engineering, Shegaon - 444203, Dist-Buldhana, Maharashtra, India

[2]Assistant Professor, Department of Applied Sciences (Mathematics), St.Vincent Pallotti College of Engineering and Technology, Nagpur, Maharashtra, India,

Abstract

The transfer function plays an important role in the linear theory. In the linear case the transfer function $F(s)$ of a control system is usually expressed as the ratio of two polynomials in the Laplace operators with real coefficients. The Laplace transform together with the Fourier transform, has been applied to the formulation of the fundamental limitations on the transfer function, like the number of sign changes or step response extrema. This paper will discuss the extended definitions of the common Laplace and Fourier transforms provide a useful framework for some applications of transfer function. These extended definitions are more general than the conventional counterparts and, thus, may pave the road for many new applications.

Key Words : *Laplace transform, Z-transform, Transfer function, Unity feedback system.*

© http: //www.ascent-journals.com