

International J. of Engg. Research & Indu. Appls. (IJERIA).
ISSN 0974-1518, Vol.1, No. V (2008),pp 87-98

SYSTEM DESIGN APPROACH OF DIGITAL CONTROLLER APPLICATION TO VECTOR CONTROL INDUCTION MOTOR DRIVE

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Abstract

Innovation in the field of microelectronics and control has resulted in Vector control of Induction motor. The Induction motors are used in many adjustable speed applications. This paper presents step by step procedures and requirements of 3 phase AC Squirrel cage Induction Motor Vector Control Digital Drive. It is the objective to explain that vector approach provides fast transient response and over comes sluggish transient response offered by volts/hertz method of control of AC Motors. Precise operation is required for field oriented control, which consists of computationally intensive process. Hence this requires high performance processor with integration of power electronics peripherals suitable for motor drive.

Keywords : Induction Motor, Modeling, Dynamic Simulation, Computations of Transfer Functions, Trends in Digital Control, Vector Control Drive.