

THE IMPLEMENTATION OF A NOVEL PI CURRENT CONTROLLER FOR INDUCTION MOTOR DRIVE SYSTEM

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Abstract: *The paper presents the implementation and the experimental results of a new space vector-based discrete PI current controller for three-phase PWM inverters fed induction motors. Motor currents are regulated by generating appropriate inverter output voltage vectors via software implemented PI controller and SVPWM strategy. According to the experimental results, the current error is very small during both transient and steady-state operations. Good current response and low total harmonic distortion in output current are attained during steady-state operation.*

Key words: *current vector control, microcontroller, PI regulation, SVPWM, three-phase inverters.*