World Academy of Science, Engineering and Technology
International Journal of Mechanical and Mechatronics Engineering
Vol:10, No:02, 2016

3 Phase Induction Motor Control Using Single Phase Input and GSM

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Abstract : This paper focuses on the design of three phase induction motor control using single phase input and GSM.The controller used in this work is a wireless speed control using a GSM technique that proves to be very efficient and reliable in applications.The most common principle is the constant V/Hz principle which requires that the magnitude and frequency of the voltage applied to the stator of a motor maintain a constant ratio. By doing this, the magnitude of the magnetic field in the stator is kept at an approximately constant level throughout the operating range. Thus, maximum constant torque producing capability is maintained. The energy that a switching power converter delivers to a motor is controlled by Pulse Width Modulated signals applied to the gates of the power transistors in H-bridge configuration. PWM signals are pulse trains with fixed frequency and magnitude and variable pulse width. When a PWM signal is applied to the gate of a power transistor, it causes the turn on and turns off intervals of the transistor to change from one PWM period.

Keywords : index terms— PIC, GSM (global system for mobile), LCD (Liquid Crystal Display), IM (Induction Motor)
Conference Title : ICAM 2016 : International Conference on Automation and Mechatronics
Conference Location : Paris, France
Conference Dates : February 22-23, 2016