

**PWM CURRENT CONTROLLER TECHNIQUE FOR
PERMANENT MAGNET SYNCHRONOUS MOTOR SPEED
CONTROL AT CONSTANT TORQUE**

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ABSTRACT

This paper presents the application of Pulse Width Modulation (PWM) current controller technique applied to Permanent Magnet Synchronous Motor (PMSM). The speed is varied at constant torque. The first part of the paper presents the analysis of PWM to determine the right parameter. The advantages of using PWM are that the power loss switching devices is low, the variable frequency gives high motor efficiency, fast control response and lower motor torque ripple. Three different speeds are observed. The simulation is carried out using PSIM, software which has user friendly approach and some basic theories.

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