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(57) Abstract :

The present invention relates to a system (100) for volt/hertz speed control of the squirrel cage induction motor (SCIM) for minimum current operation to improve its efficiency. A three-phase SCIM (1) is used in the scalar control scheme supplemented by a MTPA controller (2) to run the motor at minimum current point in any operating condition. To generate the stator command voltage for minimum current operation of the motor, the slip speed command is provided to the MTPA controller (2) along with the reference stator voltage . In the proposed system (100) the command voltage is only dependent on the slip speed and actual source voltage. Both these parameters are available in the control method itself. Additionally, current sensor is not required to operate the motor (1) in MTPA condition.

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