

عنوان مقاله:

Analysis of Voltage Source Induction Motor Drives Fed from Photovoltaic Generators

محل انتشار:

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خلاصه مقاله:

Static and dynamic performances of variable-speed induction motors fed from photovoltaic systems (PV) using voltage-source inverters and DC-DC converters are analyzed. System equations are transfer to d-q synchronous axes. Matlab facilities are used to solve the overall system and to compute the optimal bonverter duty cycle (for controlling solar panel operating point and improving system stability) and motor slip speed (for limiting motor losses). The impact of command speed variations and load disturbances on system dynamics are analyzed and simulated. In order to limit the nonlinear effects of PV source and the environmental conditions on system behavior, ermissible .operating region (e.g. motor torque and speed) are defined and implemented by the proposed control scheme

کلمات کلیدی:

Photovoltaic (PV), Induction motor, AC drive, Converter and Controller

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