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CONTROL OF DOUBLY-FED INDUCTION MACHINE IN EXCITATION AND SYNCHRONIZATION MODES

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Abstract

Excitation and synchronization algorithm for smooth connection of doubly-fed induction machine (DFIM) to the grid is presented. Designed algorithm ensures coincidence of voltage induced in the stator with the grid voltage in amplitude, frequency, and phase. It is important for the DFIM applications in both drives and power generation systems. The efficiency of designed excitation and synchronization algorithm in electromechanical system with the DFIM is experimentally confirmed. References 4, figure 1.

Key words: doubly-fed induction machine, vector control, generator excitation, synchronization.

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