

Monitoring of Stator windings Faults in Induction Machine Using Fuzzy Logic

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Abstract: the monitoring and fault detection of the induction machines drives becomes more and more important. This made necessary the monitoring function condition of these machines for improved exploitation of the industrial process. The aim of this task is the proposal of a monitoring strategy based on the fuzzy logic inference system, that informs us about the healthy function and stator fault condition, especially the open circuit and short-circuit inter-turns of the stator windings. The principle adopted for the strategy suggested is based on monitoring of the average root mean square value of stator current (RMS). Theoretical analysis, simulation results are presented to validate the effectiveness of the proposed method.

Keywords : Induction machine, Monitoring, diagnosis, Detection, Fuzzy logic, RMS