Monitoring and Fault detection of the Stator short circuit fault in induction motor based on the FuzzyLogic approach

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Abstract : the diagnostic of the induction machinesbecomes more and more important. This made necessarythe monitoring function condition of these machines forimproved an exploitation of the installation. The aim ofthis work is the proposal of a monitoring strategy based onthe fuzzy logic, that informs us about the healthy and faultoperating condition of short-circuit between turns of thestator windings. The principle adopted for the strategysuggested is based on monitoring of the average root meansquare (RMS) value of the stator current, which will beuseful as input data with the fuzzy logic block andconsidered to making decision on the machine state.

Keywords : Induction Machine Monitoring, Detection, Fuzzy logic, RMS, modeling, Simulation.