FEM-based Analysis on the Operation of Three-Phase Induction Motor connected to Six-Phase Supply System

Part 1 – Operation under healty conditions

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***Abstract*—The paper presents a comparative analysis of a three-phase induction motor that operates connected to the industrial supply system and separately to a six-phase supply source, as well. The design of the electric machine is made in such a way to fit for both situations. The six–phase supply, which is composed of two distinct three-phase systems, was configured for two cases: 30° and 60° phase shifting between the systems, respectively. The analysis is based on FEM simulations under steady-state and transient conditions.**

***Keywords*—three-phase induction motor; six-phase supply system; asymmetric configuration; FEM analysis**

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