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Detection and Analysis of Static and Dynamic Eccentricity faults in Three Phase Squirrel Cage Induction Motor by FEM using MagNet v7.11

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Abstract: Three phase induction motor is more common in use for high power applications due to its rugged nature and flexible operating characteristics. Eccentricity is one of the most important and severe fault that occurs frequently in induction motor. So detection and analysis of eccentricity is crucial in industrial application to avoid production loss. This paper investigate how induction motor is modelled using MagNet for the analysis of eccentricity fault. Static 2D and Transient 2D analysis were done for healthy and faulty conditions. Comparison are made between faulty and healthy conditions for the parameters like flux linkage, flux density, stator current and energy.