

DOI: <https://doi.org/10.15407/techned2019.05.049>

THE PARAMETRIZATION METHOD OF GENERALIZED INDUCTION MOTOR USING THE FIELD ANALYSIS FOR DESIGN

Journal	Tekhnichna elektrodynamika
Publisher	Institute of Electrodynamics National Academy of Science of Ukraine
ISSN	1607-7970 (print), 2218-1903 (online)
Issue	No 5, 2019 (September/Oktobor)
Pages	49 – 53

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Abstract

The method of determining and mathematical representation of the relationship of the equivalent circuit parameters of an induction motor (IM) with its design and operational parameters using the results of field analysis has been proposed. This method has created a polynomial mathematical model of a system of electromagnetic parameters of a generalized IM, for design, which together with the IM circular mathematical model is an analogy of a field mathematical model. On the example of calculation, according to the obtained analogy of the IM field mathematical model, the IM design condition determines the degree of its adequacy to the results of the field analysis. References 9, figure 1. table 1.

Key words: induction motor, optimal design, macromodel, parameterization, experiment planning.

Received: 06.12.2018

Accepted: 05.06.2019

Published: 01.08.2019

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DOI: <https://doi.org/10.15407/techne2019.01.034>

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