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STUDY OF CHANGED MAIN FLUX REACTANCE OF SQUIRREL-CAGE INDUCTION MOTORS USING FIELD ANALYSIS OF THEIR STARTING CHARACTERISTICS

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Authors

O.M. Popovych*, **I.V. Golovan****

Institute of Electrodynamics National Academy of Sciences of Ukraine,
pr. Peremohy, 56, Kyiv, 03057, Ukraine,
e-mail: popovich1955@ukr.net

* ORCID ID : <http://orcid.org/0000-0002-9238-5782>

** ORCID ID : <http://orcid.org/0000-0002-5250-6981>

The regularities in the change of the main flux reactance of squirrel-cage induction motors as slip functions are studied by quasi-3D field analysis to determine the equivalent parameters of equivalent circuit. The comparative analysis of the design conditions and calculated starting characteristics of the motors is carried out. As shown, the use of electromagnetic parameters which are equivalent to the parameters obtained by field model gives more high accuracy of calculation. As grounded, the coefficient of change of equivalent air gap is available and expedient to be taken in account for investigation of the motors. References 8, figures 2, table 1.

Key words: induction motors, parameters of the equivalent circuit, field model, main flux reactance, start.

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