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USAGE OF GENETIC ALGORITHMS FOR ESTIMATION OF THE INDUCTION MOTOR RESISTANCES

ABSTRACT

Induction motors are used in electrical drives where simple reliable and robust machine is the first requirement. For the modern adjustable speed drives, induction motor drive model stator, rotor and mutual resistances and inductances must be known. In the used method based on genetic algorithms the main goal is to estimate equivalent circuit parameters with the minimal estimation error between the calculated motor characteristics and catalogue one. The idea is using induction motor steady-state equivalent circuit to estimate motor parameters so that calculated values would be very close to known catalogue data. In this paper the results of the implementation of the purposed method for the different induction drives will be present.

Keywords: Induction motor, parameter estimation, genetic algorithms.