MECHANICAL CHARACTERISTIC OF THE TWO-PHASE INDUCTION MACHINE EXPRESSED BY MEANS OF THE MATHEMATICAL MODEL IN TOTAL FLUXES

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Abstract. Starting from the mathematical model of the two-phase induction motor, called "in total fluxes", which has been deduced for the general case, some particular steady state regimes by means of the representative phase vectors are presented. This approach gives some new expressions for the developed electromagnetic torque, which are quite different from the classical well known equations. For balanced steady state regime, the mechanical and angular characteristics are deduced. The results recommend this model due to some advantages such as increased accuracy in comparison with the traditional approaches.

Keywords: two-phase induction machine, steady state regime, mechanical characteristic, angular characteristic.