ON THE UNSYMMETRICAL REGIME OF INDUCTION MACHINE

BY

AL. SIMION and LEONARD LIVADARU

Abstract. A mathematical model corresponding to the two-phase induction machine is proposed connecting the applied voltages with winding total fluxes and eliminating the currents. The four equations system, two for stator and other two for rotor represent at the same time the mathematical model *in two axes* of the polyphase induction machine. This model proves to be convenient for the analysis both of transient and steady state regimes either symmetric or unsymmetric ones. It is also established the electromagnetic torque of the induction machine for determining the mechanical characteristics corresponding to representative unsymmetrical regimes. The deduced mathematical expressions are subsequently validated by simulation.

Key words: induction machine; two-phase servomotor; unsymmetrical regime.