CAN THE SYNTHESIS OF DC MOTOR CASACADE CONTROL PARAMETERS BE THE SAME AS FOR THE FIELD-ORIENTED CONTROLLED INDUCTION MOTOR

Abstract of plenary report[1]

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Abstract: In induction motors, the spatial angle between the stator and rotor flux changes with the load, which creates more complex relations between currents, voltages and fluxes in the machine, as well as oscillatory dynamic responses. Controlling this space angle can ideally be carried out by converting the input stator current into direct i_{1d} - component, responsible for the excitation flux and quadrature component i_{1q}, responsible for the developed electromagnetic torque. This can be achieved by a vector control method that allows for a relatively simple solution to the problem of "coupling" between axes *d* and *q,* thus bringing the dynamic IM model closer to the separately-excited DC motor model.

Key words: induction motor, coupling, decoupling, synthesis, control circuit

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