Determination of the rotation angular velocity and acceleration of the rotor of a synchronous generator in transient processes by measuring its electrical parameters.

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Paper is devoted to the development of a method for indirect determination of the rotor rotation angular velocity and acceleration for a synchronous machine with a frequency of more than 50 Hz based on the results of measurements of stator's and rotor's voltages and currents and the known electrical and mechanical parameters of the synchronous machine. Approbation of the method was performed on the data obtained during tests on the electrodynamic model of JSC "NTC UES". The developed method can be used for the purpose of emergency control of power systems modes, as well as testing of control systems of power units.

Key words: synchronous machine, rotor speed, digital signal processing.