Identification of electric power systems' for evaluation of dynamic properties.

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Solution of the problem of dynamic stability's assurance requires designing of adequate mathematical models and methods, which allow to make a justified choice for stabilizing effects according to changing scheme topology and regime parameters.

Methodology for parametrical identification of electric power system was developed in the form transfer functions of regime parameters, which are restored from experimental frequency responses. Processing of each acquired sample makes it possible to identify the system's quantitative characteristics and save its general dynamic properties.

Numerical method, which allows detecting of the dominating zeros and poles of a transfer function in a significant frequency range, based on discrete Fourier transformation was suggested.

Designed methodology is realized in a software, which is employed for practical solution of problems of electric power systems' dynamic properties' control.

Key words: electric power system, transfer function, frequency response, discrete Fourier transformation.