

Efficiency enhancement of numerical method for solving limit steady-state equations and identification of sensor elements in electric power system.

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A methodical and software and mathematical complex has been developed which provides the increase of efficiency of limit steady-state operating condition calculation by the Newton method at the expense of the first approximation of the eigenvector values specification and the limitation of variables' increments.

The modification of the limit steady-state operating conditions calculation method aimed at the determination of a generalized coefficient characterizing the tenseness of the operating conditions has been suggested.

The search algorithm for determining of "week" inerties in the electric power system has been realized together with the method for sensor nodes determination.

Keywords: limit steady-state operating conditions calculation, generalized operating conditions tenseness coefficient, method of sensor nodes and «week» inerties determination.