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CALCULATING THE PARAMETERS OF SYMMETRY-COMPENSATING DEVICES FOR TWO CONSUMERS CONSIDERING THE CONTRIBUTION OF EACH

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Abstract

The method of calculating the parameters of symmetry-compensating device is offered for three-phase power supply system with a cascade connection of two asymmetrical loads. The character of reactivity in phases of each load relies arbitrary. The solution is carried out by the search engine optimization with the algorithm of conjugate gradients. The value of the objective function is calculated using the visual model, provided with the virtual measuring devices of symmetrical components. The types of symmetry-compensating devices elements are defined *in the optimization process due to the process properties to displace incongruous elements. Optimization is carried out in the space of optimization variables, representing the resistances of symmetry-compensating devices elements. Before running the model, these parameters are counted to determine the actual parameter of symmetry-compensating devices. Solution of the problem by the proposed method provides the full reactive power compensation mode in the system, taking into account its concrete contribution to the generation by each load.* References 7, figures 3.

Key words: : three-phase system, reactive power, compensating device, search engine optimization.

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