

A Method of Effective Planning and Control of Industrial Facility Energy Consumption

Authors : Aleksandra Aleksandrovna Filimonova, Lev Sergeevich Kazarinov, Tatyana Aleksandrovna Barbasova

Abstract : A method of effective planning and control of industrial facility energy consumption is offered. The method allows to optimally arrange the management and full control of complex production facilities in accordance with the criteria of minimal technical and economic losses at the forecasting control. The method is based on the optimal construction of the power efficiency characteristics with the prescribed accuracy. The problem of optimal designing of the forecasting model is solved on the basis of three criteria: maximizing the weighted sum of the points of forecasting with the prescribed accuracy; the solving of the problem by the standard principles at the incomplete statistic data on the basis of minimization of the regularized function; minimizing the technical and economic losses due to the forecasting errors.

Keywords : energy consumption, energy efficiency, energy management system, forecasting model, power efficiency characteristics

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