Chirochkin D.O., Tsvetkova-Kanyuk A.O., Kolesnik V.B., Nasirov S.V. METHODOLOGICAL BASIS OF AUTOMATED ANALYSIS OF TECHNICAL AND ECONOMIC INDICATORS OF PRODUCTION

To eliminate the fundamental shortcomings of existing methods of analyzing the TEI and to obtain the information necessary for the automated control system, the automated analysis system must provide for:

division of all analyzed factors into internal (personnel-dependent) and external (independent of personnel: regime, volume, change in assortment, etc.);

- determination of standard indicators as a function of equipment load for real operating conditions and equipment condition;

- calculation of optimal operating parameters with the issuance of necessary recommendations to all categories of workers on maintaining optimal operating modes of equipment;

- preparation of initial data for determining the optimal volume of repair and reconstruction work and carrying it out within the optimal time frame;

- preparation of initial data for assessing the performance of personnel as a whole based on the optimal standard consumption of materials, i.e. based on such consumption;

- preparation of initial data for a quantitative assessment of the activities of various groups of personnel in the service areas of installations and mechanisms, the mode and parameters of which are directly influenced by this personnel.

The following classification of parameters and corresponding indicators is proposed:

- design parameters (indicators) $P_{\rm r}$;

- actual parameters (indicators) of $P_{\rm f}$;

- optimal-normative parameters (indicators) P_{on} .

Design parameters are parameters that would take place if all initial provisions that were the basis for design (construction) were fully achieved during operation. These parameters are laid down at the stage of equipment design and power plant design. Actual parameters are parameters that actually take place on the equipment during its operation.

Difference between actual and design parameters:

 $\Delta P = P_f - P_r$

Determines the general change in the equipment's TEI caused by imperfections in the design, imperfections in operation, and deviations of actual operating conditions from the design conditions. Optimal-standard parameters are used to isolate the influence of each of these factors, as well as to determine standard indicators and optimize operating modes in real operating conditions.

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