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RESIDUAL RESOURCE ASSESSMENT OF STEAM TURBINE SHAFTING POWER UNIT № 10 STAROBESHEVSKAYA HEAT ELECTRICAL STATION.

Spend the estimated damage and residual resource of steam turbine of power units is offered by power 200 MWt, Starobeshevskaya Heat Electrical Station which are exploited in base and maneuvering modes. Accounted for repair and refurbishment change rotors high and medium pressure according to the technical audit for the entire period of operation. The boundary conditions correspond to the operating conditions of the power unit: Cold Start and still hot from previous states, as well as steady-state operation. Numerical research of heat and stress - strain state of the rotors showed that the maximum elastic stress intensity conditioned medium pressure rotor observed when starting from the NA-2 in the area of the 13th stage at the root disk (σ i = 254.7 MPa) at the time of entering the rated operation 200 MW. Calculations on the low-cycle fatigue damage to the rotor fixed average pressure at the level of 66%. Allowable additional estimated number of starts will be about 757. Residual life is 50141 hours, and with the simplified formula in stock 28137 hours.

Keywords: Residual resource, high temperature components of the steam turbine, the rotor housing, high-pressure cylinder, middle-pressure cylinder.

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