

# METHODOLOGY COMPLEX OF HARDWARE-IN-THE-LOOP FUNCTIONAL MODELLING OF GAS TURBINES AND ITS SYSTEMS

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The problems of building of adequate structural complex gas turbine model for hardware-in-the-loop investigation of the automatic control system behavior with system faults are discussed. The structure and technology for creation of the adequate complex gas turbine model with an example of twin-shaft bypass reheat turbo jet for hardware-in-the-loop simulation, including a special complex of models of switching between operation and reconfiguration in FADEC control-and-condition-monitoring systems with system faults are offered.

*Structural complex model, automatic control, condition-monitoring and diagnosis system, gas turbine engines, system faults, hardware-in-the-loop simulation complex, switching model, reconfiguration*

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