

*Gerasimov A. S., Smirnov A. N.*

**Modeling of a gas-turbine units for the analysis of electromechanical transients.**

Necessity of the detailed accounting of modern gas turbines and their regulation systems in the power systems' digital models built for the analysis of electromechanical transients is proved. On example of Dzhubginskaya TPP the influence of accounting of gas turbines detailed models on an assessment of dynamic stability of the generating equipment is shown. The assessment of efficiency of speed regulation of gas power units depending on the size of an inertial constant of generating units regarding ensuring of stability of the generating equipment in case of close short circuits is executed.

*Key-words: Electromechanical transients, model, gas-turbine unit, turbine, speed regulator.*

*Gerasimov Andrey Sergeevich*, PhD. tech., Docent, Deputy General Director – Director of the Department of System Research and Development Perspective, Head of Department Electric Power Systems of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: gerasimov@ntcees.ru

*Smirnov Andrey Nikolaevich*, Deputy Head of Department Electric Power Systems, Head of Laboratory Researches of Electric Power System of the Scientific and Technical Center of Unified Power System (STC UPS).

E-mail: smirnov\_a@ntcees.ru