

## **Influence of circuit and operating parameters on short circuit currents in a system with a six-phase turbogenerator.**

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Simulation modeling of processes of simultaneous and transient (sequential) short circuits in a power system that includes a six-phase turbogenerator T3V-1200-2 has been performed. The short circuits at the terminals of the three-phase winding of the generator and at the terminals of the high-voltage windings of step-up transformers are considered. Different operating modes of the machine, different values of the impedance of the external network, and a different number of generators were taken into account. The influence of these factors on the shock currents of the machine and on the duration of time intervals during which there are no transitions of phase currents through the zero value is determined.

*Key words: synchronous generator, six-phase turbogenerator, transient short circuit, sequential short circuit, simulation modeling.*