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Simulation of non-stationary plasma processes in the discharge chamber of multi-chamber arrester for lightning protection of power lines.

A mathematical model of thermal, electromagnetic and gas dynamic processes taking place in a discharge chamber of a multi-chamber arrester is described. Basic assumptions, model equations, a computational domain and boundary conditions are given. Results of calculation namely the distributions of plasma temperature and overpressure in the discharge chamber at different time points are shown. The analysis of the results is presented.

Key words: lightning protection, arrester, arc extinction.

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