

EXPERIMENTAL RESEARCHES OF ELECTRICAL EXPLOSION OF THE WIRE SPIRAL TURNED IN THE TORUS AND DIPPED IN WATER

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The previous experiments with electrical explosions of the wire spirals turned in a torus have shown that the lifetime of gained plasmoids is much higher in comparison with the plasmoids gained at electrical explosions of wires with other configurations. The probable reason of this phenomenon is presence of a powerful toroidal magnetic field inside a spiral before its explosion, but that stability of plasmoids provided with a shaped ring vortex is not excluded. Revealing of the mechanism is of interest from the point of view of a potential opportunity transmutation nucleus of chemical elements at electrical explosion of the wire spirals turned in the torus, as if the toroidal magnetic field promotes pinch of a lifetime of gained plasmoids thus the toroidal current layer with extremely high density of an electric current should be shaped. In this case the opportunity of electronic screening of charges of nucleus down to nuclear gauges is not excluded. Dipping of the wire spirals turned in the torus in water essentially changes parameters of electrical explosion that allows revealing new properties of this process and establishing the possible mechanism of occurring processes.

The experimental installation contained the capacitive store of electrical energy connected through the current circuit changer with replaceable cartridge. In cartridge the wire spiral turned in the torus was established. This spiral was disposed inside a vacuity filled with water. Parameters of electrical explosion processes of wires were varied.

The experimental results as video recordings processes, current and voltage impulses oscillograms, oscillograms of electromagnetic electrical explosions of electromagnetic and ultrasonic processes, and also measuring of a radioactive phone are represented in report. Alongside with the data on explored processes the results of check experiments with wire of various configurations, including the spirals, which had not been dipped in water, are represented too.