

**COMPUTER SIMULATION RESEARCH OF ENERGY RELEASE MODES  
IN A DISCHARGE CHANNEL AND ITS INFLUENCE ON THE  
STRESS-STRAINED STATE FORMATION IN A SOLID MATERIAL  
AT ELECTRO-BLASTING TECHNOLOGY**

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In electro-blasting technology for solid destruction the pulse power generators with different types of switches could be used. One of them is the vacuum switch, that easy to operate, has good lifetime of  $10^4$ – $10^5$  commutations in average, could pass of about 100 coulombs of charge, but in most cases could pass only the half-cycle of current in the ringing mode operation. In this paper the influence of the ringing current pulse duration on the stress-strained state formation is investigated. The simulation results of energy release modes in a discharge channel are given. The difference of energy input and the discharge channel pressure amplitude in dependence on the current half-cycles quantity are presented. The crowbar mode of operation is also investigated and comparison with the ringing mode are presented.

**Keywords:** *electro-blasting, pulse power, stress-strained state, discharge channel.*