

Influence of the energy release source model in the discharge chamber in high density gas on the shock wave propagation

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The influence of the energy release source model on the parameters of a shock wave propagating along the radius of a cylindrical the discharge chamber filled with high density gas (5 MPa) at a current rise rate $dI/dt \approx 10^{10}$ A/s [1] is considered.

It is shown that the refinement of the energy release source model [2] taking into account the type of material and wire mass in the area of the discharge channel between electrodes in the discharge chamber qualitatively improves the description of hydrodynamic fields and refines the shock wave parameters with comparison with the experimental results [3].

- [1] Rutberg P G, Bogomaz A A, Pinchuk M E, Budin A V, Leks A G and Pozubenkov A A 2011 *Phys. Plasmas* **18**
- [2] Bogomaz A A, Budin A V, Pinchuk M E, Rutberg P G and Savvateev A F 2004 *High Temp. Mater. Process.* **8**
- [3] Budin A, Losev S and Pinchuk M 2006 *Instrum. Exp. Tech.* **49** 549–552