

Abstract Submitted
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Numerical modeling of ferrous cylindrical liners compression. I.A. MOCHALOV, V.G. SULTANOV, Probl. Chem. Phys. RAS — A method of describing electroconductivity of metal taking into consideration phase transformations for numerical modeling of compression cylindrical liner is proposed and feature of value changing magnetic field induction is considered. Researched assembling consists of two cored cylinders with tiny walls (one inserted into another). External cylinder (impactor – Cu) closely covered by chemical condensed HE. To create magnetic field inside the liner a tiny impulse solenoid is used, which is wound on the conductive liner (Fe). For searching distributions of liner material parameters (pressure, density, temperature) and magnetic field along radius with respect to time for several variants of liner conductivity type were calculated. In addition, phase diagram of realizable states, dynamics of magnetic field changing and temperature of liner internal surface were calculated.

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