**Mathematical Models for Accelerating Structures of Safe Energetical Installation***, O.I. DRIVOTIN, D.A. OVSYANNIKOV, NII VM&PU, St. Petersburg University; YU.A. SVISTUNOV, M.F. VOROGUSHIN, D.V. EFREMOV, Institute of Electrophysical Apparatus - Problems of obtaining optimal accelerating structures with quadrupole and alternate-phase focusing is considered. H-resonators as the most compact structures are examined. It is supposed that RFQ and APF H-cavity may be used as basic structures of ion accelerator-driver in the transported atomic energetical installation. The mathematical control model of accelerating cavities with RFQ and APF is suggested. On the basis of this model the software realizing the optimization process is developed. Optimization of different RFQ and APF is considered.

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