# ESTIMATION OF ENERGY LOSS IN VACUUM TRANSMISSION LINES BY TAKEN RELATIVISTIC ELECTRONS INTO ACCOUNT

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In multi-MA generators, the voltage across the transmission lines could be as high as dozen megavolts. If these lines are vacuum insulated, such high voltage will result in current loss in the gap between the line electrodes and formation of the magnetically insulated space-charge flows. The kinetic energy of the electrons in these flows will exceed sufficiently their rest-mass energy. In the report we suggest how the energy loss across the magnetically insulated transmission line should be estimated by taken such electrons into account.

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