Abstract

This paper will present a number of fundamental performance of a diagonal magnetohydrodynamic (MHD) accelerator with various of applied magnetic field. Studies is carried out using air plasma as a working gas in equilibrium condition. The MHD augmented propulsion experiment (MAPX) channel designed by NASA is used in this simulation. To solve the set of differential equations of MHD approximations, the MacCormack scheme is used. Numerical results show the flow performance and electrical performance of diagonal MHD accelerator with various of applied magnetic field.