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Electromagnetic analyses for stray fields due to gaps and ports on the shell of KTX W. YOU, W. MAO, C. LI, M. TAN, TAO LAN, JINLIN XIE, ADI LIU, HONG LI, WANDONG LIU, Univ of Sci & Tech of China, WEIXING DING, UCLA, C.J. XIAO, University of Saskatchewan, INSTITUTE OF PLASMA PHYSICS CHINESE ACADEMY OF SCIENCES COLLABORATION — In KTX reversed field pinch, two poloidal gaps and one toloidal gap on the shell are needed to allow the penetration of poloidal and toroidal fields into the shell. A number of ports on the shell are also needed for different diagnostics. The 3D finite element method was used to analyze the stray fields. By simulation, the eddy current and magnetic field are calculated and the electromagnetic force on the shell is estimated as well. In addition, three different methods to reduce the stray fields are presented and the difference among these methods is discussed.

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