

Abstract Submitted
for the DPP12 Meeting of
The American Physical Society

Analyzing the cooperation between field shaping coils and conductive shell of the plasma equilibrium W. YOU, W. MAO, CHENGUANG LI, M. TAN, TAO LAN, JINLIN XIE, ADI LIU, HONG LI, WANGDONG 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 — The copper shell in KTX reversed field pinch plays an important role in plasma equilibrium. By using simulation software, we set up a KTX electromagnetic model and calculate the eddy current distribution on conductive shell with the existence of field shaping coils. According to the current distribution, we have analyzed how both the field shaping coils and conductive shell effect on plasma equilibrium when plasma ramps up. Finally, this paper proposes a method for future design of field shaping coils, which can help to eliminate the eddy current on conductive shell and stray fields can be reduced.

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Date submitted: 20 Aug 2012

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