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Equilibrium of KSTAR Plasma K.-I. YOU, NFRI, D.-K. LEE, S.G. LEE, J.G. BAK, S.H. HAHN, NFRI, L. LAO, GA, KSTAR TEAM — We have installed the EFIT code on our computing system and made some modification to reconstruct the plasma equilibrium of KSTAR (Korea Superconducting Tokamak Advanced Research). KSTAR PF and TF coil systems use a CICC (Cable-In-Conduit Conductor) type superconductor. The CICC jacket material for most PF and all TF coils is Incoloy 908, which is a magnetic material with relative magnetic permeability greater than 10 in low external field. We newly introduced Diamagnetic Loop and variational Motion Stark Effect signals to equilibrium reconstruction. In this paper, we present some results of equilibrium reconstruction with the EFIT code, assess the effects of newly introduced diagnsotics signal on the equilibrium reconstruction and compare the EFIT results with the various diagnostics data in various plasma conditions including H- and L- modes. In addition, we will show the Incoloy908 effects on the plasma equilibrium.

K.-I. You
NFRI

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