

Plasma Heating System for Thailand Tokamak I

Thailand Tokamak I (TT-1), the first tokamak in Thailand, is a small size tokamak, currently under a reconstruction by Thailand Institute of Nuclear Technology (TINT). TT-1 core components, namely vacuum chamber and magnet coils, are previously parts of HT-6M tokamak and are donated from Institute of Plasma Physics, Chinese Academy of Sciences (ASIPP), China. Four sub-systems of TT-1 are under development and reconstruction. Once finished, the TT-1 will be the fundamental infrastructure for fusion research in Thailand. For tokamak fusion, ion temperature is one of key factors among other two, which are ion density and confinement time according to Lawson's criterion. Despite of lacking of auxiliary heating system in the first phase of TT-1 operation, in this contribution, we present a plan for plasma heating system for TT-1 in order to achieve higher ion temperature. Simulation results of various heating schemes, i.e. ECRH, ICRH, and NBI, etc, will also be presented in this contribution.

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