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JT-60SA Superconducting Magnet System

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The most distinctive feature of the superconducting magnet system for JT-60SA is the optimized coil structure in terms of the space utilization as well as the highly accurate coil manufacturing as follows, thus meeting the requirements for the steady-state tokamak research: A conceptually new outer inter-coil structure is introduced to the toroidal field coils to realize their slender shape, allowing large-bore diagnostic ports for detailed measurements; a method to minimize the manufacturing error of the equilibrium-field coils has been established, aiming at the precise plasma shape/position control; a compact butt joint has been successfully developed for the Central Solenoid, which allows to make the best use of the space for the Central Solenoid to extend the duration of the plasma pulse.

Country or International Organisation

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