



Contribution ID: 533

Status and

JT-60SA is a highly shaped large superconductor that will contribute to early realization of fusion energy by providing ITER in resolving key physics and engineering issues (e.g., heating, current drive, momentum input, stability, divertor, fuelling, pumping, etc).

Fabrication and installation of components are progressing towards start of operation in 2020. JT-60SA is a joint project of the European Union (EU) (ENEA in Italy, and CEA in France) after the installation of the inter-coil structure at CEA Saclay. The 340-tonne surrounding Vacuum Vessel (VV) has been welded accurately. The manufacture of all the six EF coils have been completed. Commissioning of the cryogenic system from the start of the Superconducting current leads (in total) is planned. The power supply system (ENEA, RFX, CEA) is under development. The Cryostat Vessel Body is also reaching its

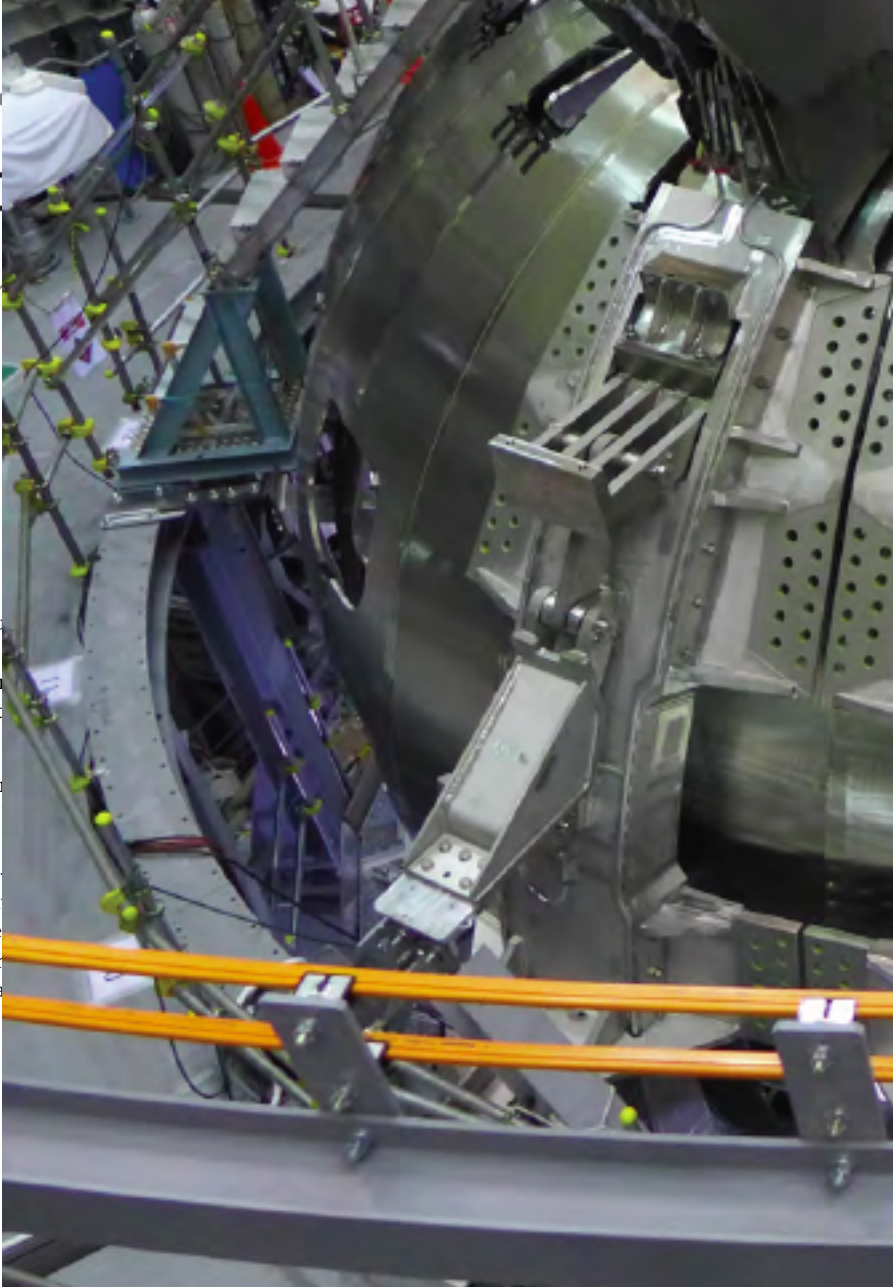


Figure 1: Fig. 1 Four TF coils have been installed around the Vacuum Vessel of JT-60SA (Mar. 2017)

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The JT-60SA Research Plan (SARP) ver. 3.3 was issued in March 2016 by 378 co-authors (JA 160 (16 institutes), EU 213 (14 countries, 30 institutes) and the STP-PT (5)). The main revision point of ver. 3.3 is the update of EU-DEMOs and JA-DEMO parameters. The revision made it clear that JT-60SA covers wide research areas for DEMO, both pulsed and steady-state operations. The fifth JT-60SA Research Coordination Meeting (RCM) was held at QST Naka in May 2016. Contribution of JT-60SA to ITER was emphasized in relation to the expected delay of ITER. The physics R&D priorities in JT-60SA fulfilling ITER needs were suggested by the ITER Organization and discussed by all of the participants. Critical issues, such as disruption mitigation, L-H threshold power, ELM mitigation, diagnostic R&D, should be tested in JT-60SA. It became a consensus of the JT-60SA research unit to modify the basic strategy of the Integrated Research Phase II (~2030) of JT-60SA so as to start with full coverage of Tungsten divertor and Tungsten first wall and accompany the initial heating experiments of ITER.

Eligible for student paper award?

No

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