



Project: International Thermonuclear Experimental Reactor (ITER)

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ITER Project Overview and India's Contribution



Abstract:

- The worldwide research on controlled thermonuclear fusion has culminated in the dream project called International Thermonuclear Experimental Reactor (ITER) where the ultimate test of burning plasmas will be carried out in a fusion reactor. ITER is being built in France with 'in-kind' commitments from its seven partners (China, EU, India, Japan, S. Korea, Russia and the US). A unique and challenging feature of the ITER project is its splitting into various procurement packages being executed all over the world and with the requirement that all these systems integrate well with each other. The system-level challenges add another key feature, in the sense that many systems are significantly large or high capacity in some sense and hence require extensive R&D to mitigate risks.
- ITER-India is a special project within the Institute for Plasma Research, Gandhinagar delegated to deliver 9 packages each of which is a mix of precision, heavy, R&D intensive and interface intensive system under built-to-print and functional systems category.
- The overview covers some historical highlights, current status and how ITER-India is meeting the challenges of this unique project.

About the Speaker:

- Dr. Shishir Deshpande did Masters in Physics at Nagpur, India (1984) and his doctoral research at the Institute for Plasma Research (IPR) at Ahmedabad, India (1992). Later, as a group leader for Tokamak Modeling (1995- 2007) has worked mainly in the area of tokamak plasma physics which include modeling of the experiments, theory and simulations of plasma edge physics, plasma-surface interactions and multi-scale modeling. He was involved in the conceptualization of the tritium-breeding blanket activity (2006-08). From 2007-2019 he was the Project Director for ITER-India, a special project within IPR (for execution of in-kind deliveries from India for ITER).

