

ICC Webinar Series Indian Cryogenics Council



ITER & Associated Cryogenics Saturday, 20th March 2021, 4:00 PM to 6:00 PM

 \mathbf{F} usion, the nuclear reaction that powers the Sun and the stars, is a

potential source of safe, non-carbon emitting and virtually limitless energy. Harnessing fusion's power is the goal of ITER, which has been designed as the key experimental step between today's fusion research machines and tomorrow's fusion power plants.

ITER, "the way" is one of the largest experimental efforts underway in the south of France at Cadarache with an aim to demonstrate nuclear fusion as a clean green source of unlimited energy. India is contributing a great extent to the ITER by providing various in-kind packages to ITER.

The ITER experimental reactor being designed by seven partners representing more than half of the world population will be assembled at Cadarache, South of France in next few years. It is a thermonuclear fusion Tokamak that requires high magnetic fields to confine and stabilize the plasma. Cryogenic technology is extensively employed achieve low-temperature conditions to for the superconducting magnets and vacuum pumping systems. Efficient and reliable continuous operation shall be achieved despite unprecedented dynamic heat loads due to magnetic field variations and neutron production from the fusion reaction.



Webinar link will be shared post registration



Highlights

- * One of the biggest Scientific and Engineering Marvel in the World
- Absolute ∻ Near zero temperature is an integral part of creating miniature sun for an alternate source of energy

Here is an opportunity to hear experts, directly involved in the project, talk about ITER and its extensive Cryogenic Technology

Who can participate

- * Industry personnel: Associated with High-vacuum vessel, Cryogenic systems, Superconducting magnets, Cryolines, etc.
- Research Organizations: ISRO, DAE, \diamond DRDO, CSIR etc.
- * Students and Faculties of Academic Institutes: IISc, IITs, NITs, IISERs etc.
- Post-graduate * Graduate & Students, Research Scholars and Faculties of Universities and Engineering Colleges
- * Those interested in future energy research



Sergio Orlandi Head

Plant Construction Department ITER Organization

Overview of ITER Project



Arun Chakraborty Associate Project Director

India's contribution to ITER

ITER-INDIA



Rajkumar Panjwani

President **Cryo-Scientific Division** INOX-India, Pvt Ltd

Role of INOX in ITER Cryogenics



M.D. Atrey President, ICC Dean (R&D), Professor **IIT Bombay**



Parag Kulkarni Director INOX India



V.V Rao Visiting Professor IIT Kharagpur



V. Narayanan Director Liquid Propulsion Systems Centre(LPSC)-ISRO

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