



The ITER project

The Broader Approach

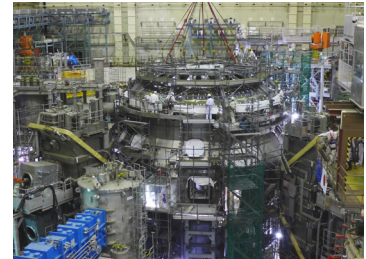
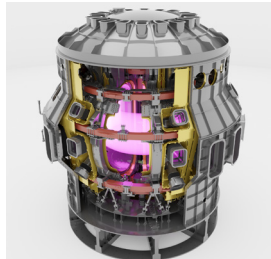


The EU and Japan collaborate on fusion as two of the seven partners of the ITER project but also under a separate agreement, signed in 2007, called the **"Broader Approach"** covering cooperation on **three fusion-related projects in Japan**.

The activities are complementary to ITER and are designed to develop fusion power technology and DEMO, the future fusion energy reactor that will demonstrate the commercial production of fusion electricity.

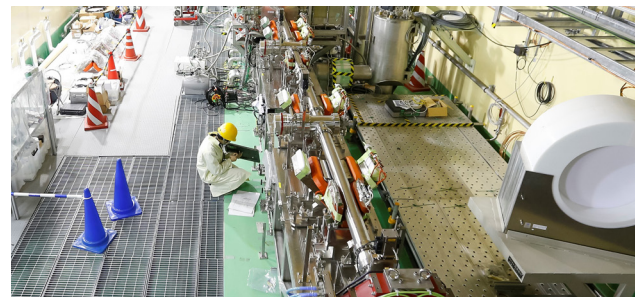
1 The JT-60SA Reactor

JT-60SA is a fusion device in Naka, Japan. It is the largest and most advanced tokamak (an acronym that stands for Toroidal Chamber with Magnetic Coils, a magnetic confinement plasma device), in the world, about half the size of ITER. The JT-60SA will allow understanding how plasmas can be highly confined over long durations, a knowledge needed for future fusion energy reactors.



2 The International Fusion Materials Irradiation Facility (IFMIF)

A fusion energy reactor such as DEMO will need materials that are resilient enough to maintain their mechanical properties while withstanding the radiation conditions inside a fusion reactor. In order to characterize those materials, the IFMIF/EVEDA programme is focused on the technical validation and design activities of an accelerator-driven neutron source research facility under construction in Aomori, Japan.



3 The International Fusion Energy Research Centre (IFERC)

IFERC is located in Rokkasho (Japan) and houses a number of projects to support ITER and DEMO. The work includes the construction of a remote operation room from which ITER can be operated and its data can be analysed in real-time, and a centre that coordinates scientific and technological activities for the development of DEMO, with state-of-the-art supercomputer.

