

§2. Information on ITER Project

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i) Information on the status of ITER Project was presented by M. Mori in a meeting in August 2007 at NIFS for young researchers and students. The presented information being updated, as of June 2008, including further progress is summarized as following.

The ITER Project to demonstrate scientific and technical feasibility of fusion energy is a core project necessary for proceeding to a construction of a fusion demonstration power plant. Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project (ITER Agreement), which includes ITER construction site, sharing of participating Members' contribution, procurement allocation for Members' in-kind contributions and so on, was signed by seven Members in 2006, and has entered into force on 24 October 2007, and simultaneously the ITER International Fusion Energy Organization (hereinafter referred as the IO) has officially been established. The IO is building up its organizational structure by recruiting professional staff and supporting staff. The number of IO staff increased to 256 at the end of May 2008. Each participating Member sets up its Domestic Agency to make in-kind contribution allocated to the Member and also to be an interface to the IO on personnel participation in the IO. In Japan, MEXT designated Japan Atomic Energy Agency (JAEA) as a Japanese Domestic Agency (JADA) on the day when ITER Agreement entered into force. Based on the designation, JAEA is distributing information of ITER staff recruitment to Japanese and is supporting Japanese people's applications. JAEA has also distributed information on ITER postdoctoral fellowships 2008 being conducted under the Partnership Agreement between the IO and the Principality of Monaco.

In parallel to building up the organization, the IO and the Domestic Agencies (DAs) have prepared and are preparing so called Procurement Arrangements for in-kind procurement. Japan undertakes procurement of equipments and facilities that contain advanced and key technologies necessary for fusion energy systems, such as some part of super conducting magnets, Blanket First Wall, Outboard Divertor Targets, Neutral Beam Heating & Current Drive System, Electron Cyclotron Range of Frequency Heating & Current Drive System, diagnostics systems and detritiation systems, and Blanket Remote Handling System. JADA concluded the procurement arrangement on TF conductor in

November 2007 in advance of other DAs, and has already made contracts with suppliers.

ii) Japanese experts who had attended the November 2007 meeting of ITER Science and Technology Advisory Committee (STAC) meeting, including M. Mori, presented the meeting results on assessment of ITER reference design and ITER project specification document to researchers and students of NIFS, universities and institutes at NIFS in February 2008. Major points presented were the followings.

As for the Project Specification document (PS), which is one of the highest level documents related to ITER, the STAC recommended to the ITER Council that the PS should be approved at that time as a provisional document for execution of all its urgent tasks, although some parts of the PS document as drafted were recommended to be modified according to the STAC comments.

As for the assessment of the reference design, the STAC had identified following 13 high priority technical issues that could lead to risks in high quality ITER performance.

1. Vertical Stabilization:
2. Shape control:
3. Flux Swing etc.:
4. ELM control:
5. Remote Handling:
6. Blanket module RH:
7. Divertor Armour Strategy:
8. 17 MA operations:
9. Coil cold tests:
10. Vacuum Vessel loads:
11. Test Blanket Module Strategy:
12. Hot Cell:
13. H&CD, Diagnostics:

Some details on each issue were also presented in the NIFS meeting. Comments were collected, and have been sent after the meeting to Japanese STAC members for their consideration by a member of a working group for Japanese domestic review on the ITER Baseline documents, which had been set up under ITER • BA Technology Promotion Committee of Fusion Energy Forum of Japan.

The IO set up 13 working groups together with the Domestic Agencies and carried out an investigation of the STAC issues and reported progress and chosen solutions to STAC-3 in April 2008 and STAC-4 in May 2008, where the IO's approach to the solutions was accepted and some further work was encouraged.