

## Headline

### **First 40° sector of Vacuum Vessel completed at Naka Fusion Institute**

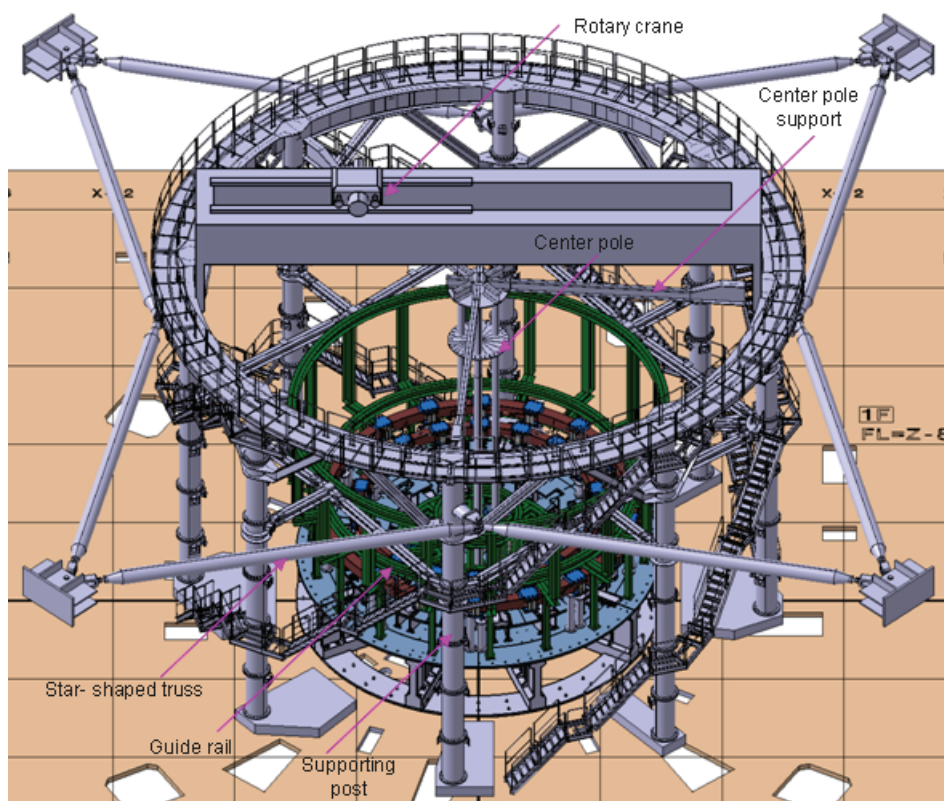


The inboard and outboard segments of the Vacuum Vessel, delivered to the JAEA Naka Fusion Institute in Japan in April, were welded at the Naka site, and completed as the first 40° sector of the Vacuum Vessel, and passed all the necessary inspections. The detailed processes were to 1) adjust the surfaces to be welded of the inboard and outboard segments, 2) weld inner surfaces, 3) perform an X-ray transmission inspection and a liquid dye penetrant inspection in order to examine its feasibility, 4) weld the orifice, 5) set restraining jigs, 6) weld outer surfaces, 7) perform a liquid dye penetrant inspection and an ultrasonic inspection, 8) finish the surface by grinding and buffing, 9) perform a pressure test, an air tightness test and helium leak test. After all the processes were finished, an appearance and dimensional inspection was carried out. The fabrication accuracy was 4 mm, and met its specification.



## News

### Discussion on assembly frame structure make progress



To assemble all the components of JT-60SA, it is necessary to accurately locate heavy components such as the Toroidal Field Coil, Poloidal Field Coil, Vacuum Vessel and Cryostat. For that reason, the temporary use of a special assembly frame, as shown in the picture above, is under discussion. Seismic analysis at the point of assembly of the Vacuum Vessel and Toroidal Field Coil – horizontal load is 0.4 g – was carried out, and it was confirmed that the stress in each part met the specification. Based on this result, the assembly frame structure will be discussed further in detail and streamlined.

## Meetings

### Eighth meeting of STP Project Committee held



The 8th Meeting of the Satellite Tokamak Programme Project Committee (STP-PC) was held by videoconference on 8 June to discuss the impact of the 11 March earthquake on the project as well as the progress of the project reported by the EU and



JA Project Managers. Twenty-nine participants joined the meeting remotely from nine different places in Europe and Japan. The PL presented the overview of the project status including the consequences of the great earthquake at the Naka site, the manufacturing progress and the delivery of key components.

---

## Meetings

### **Design Review Meeting on magnet power supply**



The 5th Design Review Meeting (DRM) on the magnet power supply of JT-60SA Switching Network Units (SNUs) was held by videoconference on 20 June, and 10 experts in total attended the meeting remotely from Germany (Fusion for Energy), Italy (ENEA Frascati) and Japan (Naka Fusion Institute).

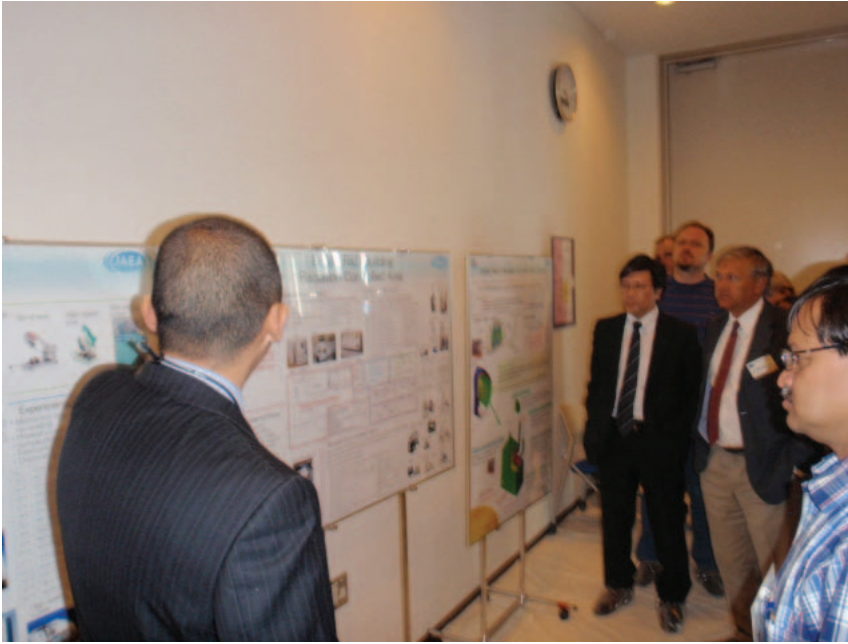
A revised procurement technical specification for the “SNU call for tender” was explained by ENEA, and discussed among the experts taking account of comments made by JA Home Team. An agreement on the revised technical specification was achieved at the meeting.

---

## Meetings

### **ITER Council informed of Broader Approach Activities**





Following the 8th ITER Council held on 14 and 15 June in Aomori Japan, the Council members visited the Broader Approach (BA) site in Rokkasho. At the beginning of the site tour, the three BA Project Leaders, P. Garin from IFMIF/EVEDA, N. Nakajima from IFERC, and S. Ishida from JT-60SA, presented the latest achievements and answered questions about their projects, presided over by the Deputy Director General of JAEA, Y. Okumura. The Council members then divided into two groups and visited the facilities at the Rokkasho site, and received detailed explanations from the researchers there.

---

## Meetings

### **25th Project Leaders Meeting**



Left to Right: N. Nakajima, P. Garin and S. Ishida

On 16 June, the 25th Project Leaders Meeting (PLM) was held at the Rokkasho site in Aomori, Japan.

The PLM noted that the Broader Approach (BA) projects had significantly progressed in the four years since the BA activities started, and had overall entered the assembly or operation phases such as that of the IFMIF/EVEDA Lithium test loop which was launched at Oarai, the high performance computer for IFERC which would be ready for operation at Rokkasho this year, and the assembly of JT-60SA which would begin with the cryostat base at Naka next year.

In terms of the managerial aspects, the PLM also noted that the management tools and schemes on Information Technology and Quality Assurance had been successfully shared among the three projects, and that these were contributing to the management of each project in an efficient manner. Topics of discussions were extended to include the future prospects of the projects in the medium and long term.

It was the last opportunity for the IFMIF/EVEDA Project Leader, P. Garin, to attend the PLM due to his departure from the project and return to France in July. He played a significant role from the beginning in the Project Leaders Meetings, launched just after the start of the BA activities to harmonize the three projects.

---

## Local

### **New monument of Vacuum Vessel at Naka Fusion Institute**



The trial upper half of the 20° sector for JT-60SA was fabricated last year in order to develop the processes for fabricating the Vacuum Vessel including methods of welding, and correcting welding distortion, and it successfully passed an ultrasonic inspection. The series production of the Vacuum Vessel was then started (see report elsewhere in this Newsletter).

The trial upper half (3.31 m in height, 0.57 m inside width and 1.73 m outside width) has now been placed as a monument in front of the JT-60 Control Building at the Naka site. Passers by can look at it and realise how large the Vacuum Vessel and the ports will be, and the experts involved in the project working hard every day can enjoy a view of it from their offices.



## Calendar

September 11-16, 2011  
10th International Symposium on Fusion Nuclear Technology (ISFNT-10)  
Portland, USA

September 12-16, 2011  
22nd International Conference on Magnet Technology (MT-22)  
Marseille, France

September 26-27, 2011  
12th Technical Coordination Meeting (TCM-12)  
Naka, Japan

September 28, 2011  
9th Meeting of the STP Project Committee (PC-9)  
Naka, Japan

October 25, 2011  
9th Meeting of the BA Steering Committee (SC-9)  
Europe

December 6-7, 2011  
13th Technical Coordination Meeting (TCM-13)  
Karlsruhe, Germany

---

## Contact Us

The JT-60SA Newsletter is released monthly by the JT-60SA Project Team.  
Suggestions and comments are welcome and can be sent to [masayasu.sato@jt60sa.org](mailto:masayasu.sato@jt60sa.org).

For more information please visit the website: <http://www.jt60sa.org/>