

## Headline

### Two superconductors for EF4 delivered to manufacturer

In December 2010, nine superconductors for the Equilibrium Field Coil No.4 (EF4) were manufactured at the JAEA Naka Fusion Institute, and two of them were delivered to the manufacturer for the first time. Fabrication of EF4 will be started at the manufacturer using the conductors. The rest, one conductor, will be manufactured soon.

Three superconductors for the Equilibrium Field Coil No.6 (EF6) were also manufactured at Naka Fusion Institute, and eleven more conductors will be manufactured for EF6 shortly.



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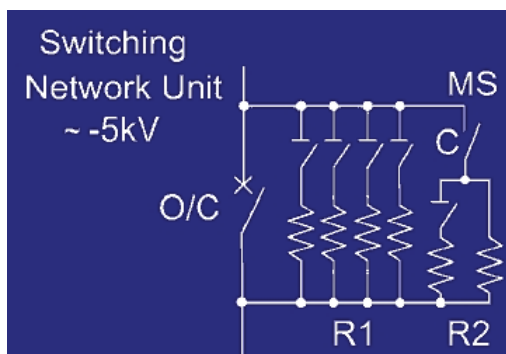
## News

### Procurement Arrangement for Switching Network Unit concluded

In December 2010, the EU in-kind Procurement Arrangement for the supply of the Switching Network Units (SNUs) for the Central Solenoid for the JT-60SA project was signed by the Director of the International Affairs Department of JAEA, K. Hashimoto, and witnessed by the Project Leader, S. Ishida, following the signature by Director of F4E (Fusion for Energy), F. Briscoe.

The procurement activity is going to be carried out by F4E and ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) in Italy.

See also [JT-60SA Newsletter No.6](#) for more technical information on the SNU.

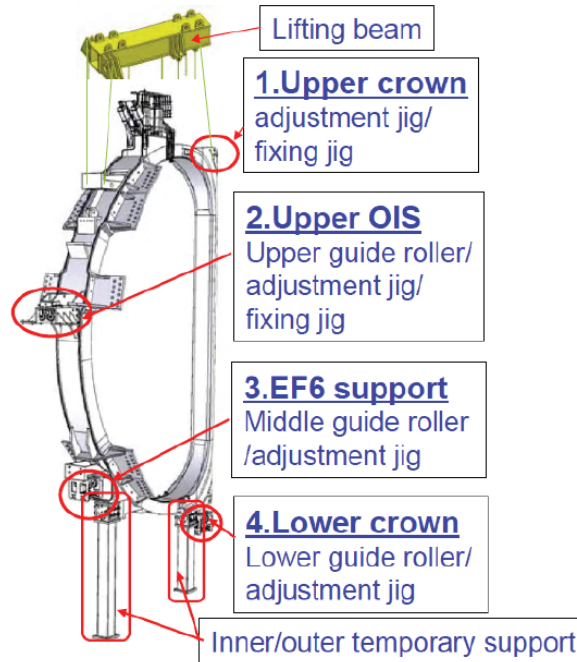


## News

### Assembly tools studied in detail

Based on assembly scenarios of all the components for JT-60SA in the torus hall, the major assembly tools such as the assembly frame and tools were studied in detail, including the metrology concept considering the reference points in the torus hall as well as the marking points of the major components such as the Toroidal Field (TF) Coil as shown here.

The TF Coils are going to be procured in Europe, and assembled into JT-60SA by the JA HT jointly with the EU HT.



TF Coil and its jigs

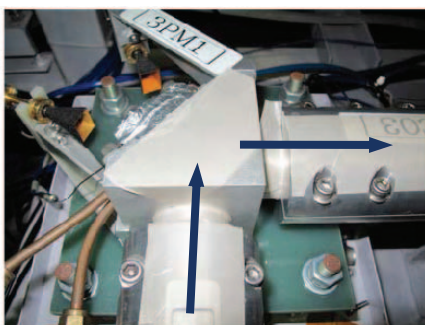
## News

### 99s Gyrotron operation

Gyrotron operation has been continued toward the long pulse operation required in JT-60SA. Recently, the gyrotron has achieved a new pulse duration record of 99 s at an output power of 0.3 MW.

To extend the pulse duration, the gyrotron control system was modified to allow the applied voltage during operation to be changed, thereby maintaining the gyrotron output. In addition, the temperature rise in the transmission line was carefully monitored during the operation by infrared cameras and thermocouples because it was a critical issue for long pulse operation. As a result, the pulse duration was successfully extended to 99 s, which is the upper limit of the present control system.

The development will be continued aiming at an output power of 1 MW with a pulse duration of 100 s.



Transmission direction of electron cyclotron wave

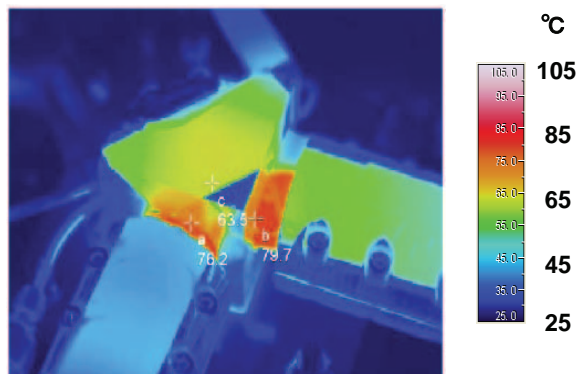


Image of temperature rise in transmission line, taken by infrared camera

## Meetings

### **PLM-21 held in Rokkasho on 12 Jan**

On 12 January, the three BA Project Leaders, P. Garin (IFMIF/EVEDA), N. Nakajima (IFERC) and S. Ishida (JT-60SA) got together for the 21st Project Leaders Meeting (PLM-21) of the Broader Approach activities, at the JAEA Aomori Research and Development Centre in snow-covered Rokkasho. Taking the whole day, common managerial aspects were discussed including future cooperation on the DEMO Design Activity (DDA) in the IFERC project within the other projects.



### **PMs attended DDA Workshop held in Kashiwa from 19 to 20 Jan**

The EU and JA Project Managers (PMs), P. Barabaschi and Y. Kamada, respectively, participated in the workshop on the DDA held from 19 to 20 January in Kashiwa, Chiba prefecture, Japan.

The JA PM presented the Project Plan of JT-60SA, and expressed his expectation of strong collaboration with the DDA team to further develop the JT-60SA Research Plan.

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## Visits

### **EU-PM and Expert of EU HT visited Naka for discussions**

On 25 January, the PM, P. Barabaschi, and L. Zani, an expert from the EU HT headquarters of JT-60SA in Garching, Germany, visited the Naka Fusion Institute to have discussions with the JA HT on workers safety at the Naka Site for preparation of the joint work of TF coil assembly and on detailed specifications of the TF coil, respectively.

## Calendar

March 23, 2011  
8th Meeting of the STP Project Committee  
Naka, Japan

April 13-14, 2011  
11th Technical Coordination Meeting  
Naka, Japan

May 11, 2011  
9th Meeting of the BA Steering Committee,  
Naka, Japan

June 26-30, 2011  
38th IEEE Int. Conf. on Plasma Science (ICOPS2011) and 24th Symp. on Fusion Engineering (SOFE2011)  
Chicago, USA

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

September 21-22, 2011  
12th Technical Coordination Meeting  
Karlsruhe, Germany

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## Local

### **Osakana-ichiba in Hitachinaka, Japan**

There is a Nakaminato fishing port in Hitachinaka city, Ibaraki prefecture in Japan; it is about 30 minutes drive away from Naka Fusion Institute. It is the biggest fishing port in Ibaraki prefecture, and more than a few thousand tonnes of over thirty different kinds of fish are caught and landed throughout the year.

Close to the fishing port, there is Osakana-ichiba (fish market), and it is open 364 days a year, only closed on January 1. Because it is always full of fresh seafood, this fish market is quite popular among not only locals but also tourists, and you will be surprised how many people visit there especially on weekends and public holidays. If you love seafood, you should definitely go there, and have fun looking at a wide-variety of fresh seafood and haggling prices. You can also enjoy tasty seafood cooked there and then, or in several restaurants in the market.



## **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/>