

## **ITER Press Release**

### **ITER Organization and Japan sign first Procurement Arrangement**

#### **Superconductor Manufacturing on Industrial Scale**

The ITER Organization is moving on from designing to procuring. On Wednesday, 28<sup>th</sup> November, the Director General of the ITER Organization, Kaname Ikeda, and the Director for International Affairs Department, Japan Atomic Energy Agency (JAEA), Toshi Nagaoka, signed the first Procurement Arrangement between the ITER Organization and the Japanese Domestic Agency at the Chateau de Cadarache. This Procurement Arrangement is for part of the conductor for the 18 Toroidal Field (TF) Coils that will confine the plasma within the ITER machine. "Being the first Procurement Arrangement, it clearly signals that ITER procurements have begun and on a big scale", Kaname Ikeda, ITER Director General, said.

With the manufacture of approximately 400 tons of niobium3-tin ( $\text{Nb}_3\text{Sn}$ ) conductor cables it is one of the largest superconducting cable procurements in history. "The amount of material that is going to be manufactured is certainly unprecedented in its scale and it signals the first step in the construction of the ITER magnets", Neil Mitchell, responsible officer for the ITER Magnet System said.

The ITER TF coils are designed to have a magnetic energy of 41 Giga Joule and a maximum magnetic field of 11.8 tesla. Their design is the result of an international research and development effort. The manufacture of these strands with about 10000 micron-scale filaments per strand is extremely complex and uses cutting-edge technology. The cable has been developed through a series of tests on different designs. Performance checks and quality control during the production process will be of the highest importance for the success of ITER.

About 90% of the ITER components and structures are provided "in kind" by the Members, through the Domestic Agencies. Following this Agreement, ten of the 18 coil winding packs for ITER will be produced in Europe, including one spare. The nine to be produced in Japan are the subject of today's signature.

Toshi Nagaoka expressed his satisfaction at being part of the first signing ceremony and stated that signature of the Procurement Arrangement will now allow the Japanese Domestic Agency to start the procurement for ITER.

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Notes for editors:

More information on the ITER project and fusion energy can be found on [www.iter.org](http://www.iter.org)

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## **BACKGROUND TO THE NEWS RELEASE**

ITER will be the world's largest experimental facility to demonstrate the scientific and technical feasibility of fusion power. Fusion is the process which powers the sun and the stars. When light atomic nuclei fuse together to form heavier ones, a large amount of energy is released. Fusion research is aimed at developing a prototype fusion power plant that is safe and reliable, environmentally responsible and economically viable, with abundant and widespread fuel resources.

The ITER project is sited at Cadarache in the South of France. The construction costs of the facility are estimated at 5 billion Euros over ten years, most of which will be awarded in the form of contracts to industrial companies and fusion research institutions. Europe will contribute roughly half of the costs of its construction, while the other six Parties to this joint international venture (China, Japan, India, the Republic of Korea, the Russian Federation and the USA), will contribute equally to the rest.

Each Party has set up a Domestic Agency to organize and carry out procurement of their in kind contributions to ITER. The Domestic Agencies employ their own staff and have their own budget and will place contracts with suppliers.