

# Press Release

FOR IMMEDIATE RELEASE



CS 90 046 📍 13067 Saint Paul Lez Durance Cedex France  
+ 33 (0) 4 42 19 98 18 🌐 www.iter.org

**Contact:**

Neil Calder

Tel: 00 33 (0)6 14 16 41 75

**Comments:**

## ITER Organization and Korea sign Procurement Arrangements for the ITER Vacuum Vessel Cadarache, 19 November 2008

The ITER Organization and the Korean Domestic Agency have today signed two Procurement Arrangements for the supply of two of the nine sectors of the ITER Vacuum Vessel and equatorial and lower ports for all nine sectors. The Vacuum Vessel is the central part of the ITER machine: a double walled steel container in which the plasma is contained by means of magnetic fields. The Procurement Arrangement was signed by the Director-General of the ITER Organization, Kaname Ikeda, and the Director General of the Korean Domestic Agency, Kijung Jung, on the occasion of the third meeting of the ITER Council. The total credit value of these two Procurement Arrangements is ~116 million Euro.

china

eu

india

japan

korea

ru~~ssia~~

usa

The ITER Vacuum Vessel will be the biggest fusion furnace ever built. It will be twice as large and 16 times as heavy as any previously manufactured fusion vessel: each of the nine torus shaped sectors will weigh about 450 tons. When all the shielding and port structures are included, this adds up to a total of 5,116 tons. Its external diameter will measure 19.4 m, the internal 6.5 m. Once assembled, the whole structure will be 11.3 m high.

The primary function of the Vacuum Vessel is to provide a hermetically sealed plasma container. Its main components are the main vessel, the port structures and the supporting system. The main vessel is a double walled structure with poloidal and toroidal stiffening ribs between 60 mm thick shells to reinforce the vessel structure. These ribs also form the flow passages for the cooling water. The space between the double walls will be filled with shield structures made of austenitic stainless steel which is corrosion resistant and does not conduct heat well.

The inner surfaces of the vessel will be covered with Blanket Modules. These modules will provide shielding from the high-energy neutrons produced by the fusion reactions and some will also be used for tritium breeding concepts.

The Vacuum Vessel has 18 upper, 17 equatorial and 9 lower ports that will be used for remote handling operations, diagnostic systems, neutral beam injections and - last but not least - for vacuum pumping.

The remaining seven sectors of the Vacuum Vessel will be provided by the European Union according to the ITER principle of baseline procurement sharing. The EU signature is anticipated at a later date.



## **BACKGROUND TO THE NEWS RELEASE**

ITER will be the world's largest experimental fusion facility and is designed to demonstrate the scientific and technological 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. Europe will contribute almost half of the costs of its construction, while the other six Members 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 Member has set up a Domestic Agency responsible for its contributions to ITER. The Domestic Agencies employ their own staff and have their own budgets, and will place contracts with suppliers to procure in-kind contributions.

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