



10 March 2014, Barcelona

### **Europe signs contract with Ampegon to heat up ITER's plasma**

Fusion for Energy (F4E), the organisation managing Europe's contribution to ITER, has signed a contract with Ampegon to design, manufacture, install and commission the power supplies for the Electron Cyclotron system, one of ITER's heating systems, that will make its hot plasma reach 150 million degrees Celsius .

The company has made history being Switzerland's first ever SME to contribute to the prestigious fusion energy project. According to Professor Henrik Bindslev, F4E Director, "ITER offers a vast range of business opportunities to small, medium and larger companies. Today's signature proves yet again that SMEs have a role to play to the most ambitious international collaboration in the field of energy". Josef Troxler, Ampegon CEO, explained that "the power supplies are a critical element of the machine. We are proud to offer our expertise and be amongst the companies that will build the world's largest fusion project".

### **The role of the Electron Cyclotron as part of ITER's external heating systems:**

The temperature inside ITER needs to reach approximately 150 million degrees Celsius, almost ten times the temperature at the core of the sun. The electron cyclotron is one of the heating systems that will be used to achieve the fusion reaction.

It will operate like a powerful microwave oven. High frequency electromagnetic waves will transfer their energy to the plasma, raise its temperature and drive additional current to sustain longer discharges. The precision of the electron cyclotron will help scientists to target specific plasma areas that require an extra blast of heat and maintain plasma confinement and stability.

During the next six years, Ampegon AG will work to deliver 8 out of the ITER's 12 main high voltage power supplies (55kV/100A) and 16 body power supplies (35kV/100mA). The main task of power supplies will be to transform the electricity from the grid to regulated direct current and voltage that ITER will need to generate the electromagnetic waves. The power supplies system will be designed to shut down in less than 10 micro-seconds.

### **Background information**

MEMO: Europe signs contract with Ampegon AG to heat up ITER's plasma

View the progress of the ITER construction site: <http://www.youtube.com/user/fusionforenergy>

## **Fusion for Energy**

Fusion for Energy (F4E) is the European Union's organisation for Europe's contribution to ITER.

One of the main tasks of F4E is to work together with European industry, SMEs and research organisations to develop and provide a wide range of high technology components together with engineering, maintenance and support services for the ITER project.

F4E supports fusion R&D initiatives through the Broader Approach Agreement signed with Japan and prepares for the construction of demonstration fusion reactors (DEMO).

F4E was created by a decision of the Council of the European Union as an independent legal entity and was established in April 2007 for a period of 35 years.

Its offices are in Barcelona, Spain.

<http://www.fusionforenergy.europa.eu>

<http://www.youtube.com/user/fusionforenergy>

<http://twitter.com/fusionforenergy>

<http://www.flickr.com/photos/fusionforenergy>

## **ITER**

ITER is a first-of-a-kind global collaboration. It will be the world's largest experimental fusion facility and is designed to demonstrate the scientific and technological feasibility of fusion power. It is expected to produce a significant amount of fusion power (500 MW) for about seven minutes.

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 safe, limitless and environmentally responsible energy source.

Europe will contribute almost 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.

The site of the ITER project is in Cadarache, in the South of France.

<http://www.iter.org/>

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