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### **Fusion for Energy signs 140 million EUR with French companies for the ITER project**

ITER, the biggest international collaboration aiming to demonstrate the potential of fusion power as an unlimited, safe and sustainable energy source is also a motor for business growth with direct economic benefits.

Fusion for Energy (F4E), the EU organisation managing Europe's contribution to ITER, has signed three contracts with two French companies amounting to 140 million EUR. The project in Latin means "the way" towards a new energy mix, which is also triggering new commercial opportunities and paves the way to new markets for those involved. The contracts recently signed cover high-tech engineering, frontier R&D and civil construction works, all requiring collaboration between different suppliers and coordination across different levels.

Constructions Industrielles de la Méditerranée (CNIM) has been awarded two contracts, reaching a cumulative value of 80 million EUR. The first contract is in the field of magnets and is expected to run for at least four years. The ITER machine will use powerful superconducting coils to confine the superhot gas which is expected to reach 150 million °C. Measuring up to 25 metres in diameter and weighing between 200 and 400 tonnes, the Poloidal Field coils will maintain the shape and stability of the ITER plasma creating a cage of concentric magnetic rings from top to bottom. CNIM has been entrusted with the manufacturing of four out of the six PF coils to be manufactured on the ITER site, Cadarache. The operation of equipment, acceptance controls and cold tests at approximately -193 °C/ 80 K will be carried out by the contractor.

Through the second contract signed with CNIM, a cutting-edge inspection system will be produced. A combination of high-tech vision system and robotics will be deployed to carry out the delicate checks inside the ITER machine. It will take up to seven years for the company to deliver the viewing system, which will perform the 3D mapping of the components inside the vessel and provide technical information about their state. The system will collect measurements and images with a resolution better than 1 mm at distances of 0.5m - 4 m and better than 3 mm from up to 10 m away. "These contracts highlight the expertise of CNIM in the field of Large Scientific Instruments and the quality of our industrial facilities, which are perfectly suited to large-scale projects," explained Philippe Demigné, member of CNIM's Management Board and President of Bertin Technologies.

ITER offers an impressive array of business opportunities when it comes to sophisticated civil engineering. With a platform measuring more than 42 hectares, and Europe being the party responsible for the delivery of the 39 buildings and facilities, F4E has the responsibility to award contracts in this domain. A consortium consisting of three subsidiaries of the Spie batignolles Group (Spie batignolles TPCI / Spie batignolles sud-est and Valérian) and ADF has signed a contract in the range of 60 million EUR to deliver the networks for the electricity and hydraulic services so that facilities are operational. The roadworks connecting all buildings will also be delivered through this contract. The works will unfold to almost half of the entire ITER platform covering a surface of more than 200 000 m<sup>2</sup>. "After having designed and built the PF Coils building, the first infrastructure on the ITER site, we are happy to be back on the project. This contract demonstrates our expertise and our ability to design and build infrastructure for the biggest fusion facility. Spie batignolles Group together with Spie batignolles TPCI Valérian and ADF would like to thank F4E for its trust and look forward to collaborating", explained Guillaume Galant, Sales Director of Spie batignolles TPCI.

### **Background information**

**MEMO: Information on the two contracts signed between Fusion for Energy and CNIM**

**MEMO: Information on the contract signed between Fusion for Energy, Spie batignolles Group and ADF**

**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 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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