

CNIM enhances its contribution to the ITER project with three new contracts

With contracts for the supply of complex systems and on-site manufacturing, CNIM Group has confirmed its status as a vital player in the biggest international scientific collaboration in the field of energy.

CNIM Group has announced the signing of three more contracts with Fusion For Energy (F4E), the EU organization managing Europe's contribution to ITER, and ITER International Organization. The contracts, which relate to the provision of complex systems and on-site manufacturing, strengthen a partnership which began in 2009, raising the total number of contracts to six.

The aim of the ITER project, Cadarache (Bouches-du-Rhône), is to demonstrate that fusion power is a large-scale, limitless, safe and environmentally friendly source of energy. By participating in this project, CNIM is continuing its mission of helping in the transition to cleaner forms of energy.

The two contracts signed with F4E could reach together a value of €80 million. The first contract for **Poloidal Field Coils Manufacturing (PFC/MFR)** concerns the production of **poloidal field coils**, and is expected to run for at least four years. The ITER machine will use a system of superconducting magnets to confine the plasma. The poloidal field coils, which each have a maximum diameter of 25 meters and weigh between 200 and 400 tons, will help to maintain the shape and stability of the ITER plasma by creating a sort of 'magnetic cage'. CNIM has previously been awarded, in partnership with SIMIC, a first contract for manufacturing the radial plates making up this magnetic system. With this latest contract expected to generate 300,000 person hours, the new CNIM branch on the ITER construction site, Cadarache, has just been opened and will make it possible to recruit up to 50 new employees.

The **IVVS (In Vessel Viewing System) contract**, awarded to a consortium made up of CNIM and its subsidiary Bertin Technologies, encompasses everything from the design to the installation of six remotely controlled visual inspection and measurement systems capable of operating in the extremely harsh environment of the vacuum chamber and of taking 3D pictures with a resolution ranging from 1 to 3 millimeters depending on the distance (up to 10 meters). Both Bertin Technologies and CNIM will give a hand in designing this equipment, with the former's optical, mechanical and electronic experts being responsible for the optical probe component, and the latter's teams taking charge of the deployment system. The project is estimated to run for at least seven years.

Signed with the ITER Organization, the **Mechanical Handling Equipment (MHE)** contract concerns the design and production of **means for assembling** the different internal components of the **vacuum chamber** in which fusion reactions take place. These means

include in particular handling systems, specific tools, operator access platforms (which will be manufactured by the Chinese subsidiary CTE), and a test apparatus for simulating a section of the vacuum chamber. CNIM was awarded this contract thanks to its inventive approach in providing simple solutions and keeping manufacturing costs as low as possible.

"These three contracts are a reward for the expertise shown by the teams of CNIM in the field of Big Science and for the sheer quality of our industrial facilities, which are perfectly suited to large-scale projects," says Philippe Demigné, a Member of CNIM's Management Board and the President of Bertin Technologies.

About CNIM Group: www.cnim.com

CNIM designs and builds turnkey high-tech industrial facilities and provides expertise, service and operations support in the environment, energy, defense and industrial sectors. CNIM leads projects and sells equipment worldwide. CNIM relies on stable family ownership, which underwrites its development. The Group has 3,000 employees with revenues in 2015 of €727.0 million, of which exports accounted for 61.3%. CNIM is quoted on Euronext Paris.

About ITER: www.iter.org

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 à Saint-Paul-lez-Durance, in the South of France (Bouches-du-Rhônes).

About Fusion for Energy: www.fusionforenergy.europa.eu

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

One of the main tasks of F4E is to work together with European industry, SMEs and research organizations 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.

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