Assystem and F4E: a new step for the ITER Nuclear Fusion project

Assystem and its partners to deliver high tech remote handling system for ITER divertor

Paris, 4 June, 2014 – Assystem, a leading innovation and engineering consultancy, has signed a multimillion contract with Fusion for Energy (F4E) - the EU organisation responsible for Europe’s contribution to ITER. This contract, expected to run up to seven years, focuses on the ITER Divertor Remote Handling system. It confirms Assystem’s position as a key engineering partner within the ITER project, the biggest international energy project which is under construction in Cadarache, in the South of France.

The Divertor is a key component of the ITER machine. Located at the bottom of the vacuum vessel, its function is to extract impurities from the plasma, in effect acting like a giant exhaust system. The Divertor Remote Handling systems include the equipment required to safely and reliably position as well as extract each of the 54 removable cassettes within the Divertor. Remote handling is widely used in space exploration missions, underwater or ground operations. The system brings together high tech robotics, advanced technological tools, powerful computers and virtual reality platforms. A high level of intuition and intelligence are inbuilt within the system which is handled by a human operator with extreme dexterity because of the degree of millimetric precision that is required.

Since 2009, Assystem has been heavily involved in the concept design phase of the various types of remote handling equipment that will be required to install, maintain, and recover the diverse components of the ITER Tokamak during its operational life.

A wealth of expertise in fusion energy
For Assystem, this contract confirms the Group’s dedication and commitment to the international fusion energy project. It also demonstrates the company’s leading edge competencies in nuclear engineering, and its capacity to bring together the best-in class skills and partners for a specific project. Assystem and its partners - Culham Centre Fusion for Energy (CCFE), Soil Machine Dynamics Ltd (SMD), Technical Research Centre of Finland (VTT) and Tampere University of Technology (TUT) - have successfully collaborated to offer a wealth of expert fusion energy knowledge that will drive innovation and meet the uniquely challenging requirements of the ITER project.

The Assystem led team brings a distinctive combination of skills and experience which provides F4E access to the extensive nuclear remote handling capability available from within Assystem. CCFE’s substantial fusion energy experience and expertise includes operating the largest Toroidal Fusion reactor in the world. VTT/TUT have extensive research & development experience of the ITER Divertor Remote Handling systems and equipment. The experienced engineering team is perfectly complemented with SMD’s bespoke large scale remote handling manufacturing capability.

The assembled team provides a winning combination of comprehensive technical understanding with world-class innovative manufacturing capability. As leader, Assystem is fully committed to the successful delivery of the challenging requirements of the ITER machine Divertor Remote Handling programme.

Commenting on the award, Peter Higton, Assystem’s Energy & Infrastructure Managing Director for the UK, who has led the team effort, said: “We are very pleased to have been selected for this prestigious project. We have an established offering in fusion energy and this award is recognition
that our capabilities and reputation for delivering high standards of innovative engineering, quality and safety are valued by our customers. We look forward to working with F4E and our partners to deliver these remote handling high tech components."

F4E Director, Professor Henrik Bindslev, explained that “this contract is a turning point for ITER’s remote handling system because it will lead us to production mode. We have managed to bring together industry, fusion laboratories, SMEs and research centres under one contract that will unleash their potential and help them advance further in their domain”.

Assystem has been working with F4E for the ITER project since a first contract for nuclear safety engineering in 2005. In April 2010, the Assystem-led consortium, Engage, was awarded the Architect Engineer contract following an international tender. The Group also supports ITER for the design of the machine and the preparation of the assembly phase.

Assystem is an international Engineering and Innovation Consultancy. As a key participant in the industry for more than 45 years, Assystem supports its customers in developing their products and managing their capital expenditure throughout the product life cycle. Assystem employs more than 11,000 people worldwide and reported €871 million in revenue in 2013. A leading European independent nuclear engineering specialist for 45 years, Assystem generates 20% of the Group’s total revenue in nuclear and employs 1,500 experts. The Company is listed on NYSE Euronext Paris.

For more information: www.assystem.com
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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.

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