**24 September 2024, Barcelona**

**Europe's first ITER Vacuum Vessel sector manufactured**

Fusion for Energy (F4E) in collaboration with Ansaldo Nucleare, Westinghouse, Walter Tosto have completed manufacturing Europe's first vacuum vessel sector for ITER- the largest international fusion experiment. In a ceremony held in Monfalcone, at the industrial facility of Westinghouse, senior representatives from industry and policymakers gathered to celebrate the impressive technical milestone for the ITER project. The sector's fabrication builds on ten years of work directly involving more than 150 professionals, and at least 15 companies across Europe with their respective workforces. F4E, managing Europe's contribution to ITER, which amounts to nearly half of the project, has successfully created with its industrial partners a first-of-a-kind supply chain which is underpinned by expertise, and the capacity to manufacture complex components for future fusion reactors.

In his speech at the ceremony, Marc Lachaise, Director of Fusion for Energy praised the collaborative spirit of all parties. "Europe's first sector results from the partnership between F4E, the consortium of Ansaldo Nucleare, Westinghouse, Walter Tosto and ITER Organization. Our commitment to deliver, the teamwork and innovative thinking have been the driving forces of this impressive achievement. It is a testament to European knowhow in engineering that we can be proud of and proof of our determination to harness the potential of fusion energy. ITER has also been instrumental in boosting Europe's competitiveness and raising the benchmark in manufacturing."

"The manufacturing of Europe's first vacuum vessel sector for ITER, carried out by AMW Consortium, showcases the outstanding collaboration between the Consortium, the client F4E, and ITER Organization" affirmed Daniela Gentile, CEO of Ansaldo Nucleare. "We are proud of the Ansaldo Nucleare team's dedication and hard work over the years, as the completion of this sector marks a significant milestone not only for the ITER project but also for the future of fusion energy, demonstrating the capabilities of the Italian nuclear supply chain".

"Westinghouse and the many professionals at our manufacturing facility in Monfalcone have worked for years on this milestone fabrication for the ITER project," said Dan Sumner, Westinghouse Operating Plant Services President. "We are proud that our collaboration with our valued partners Ansaldo and Walter Tosto under the leadership of F4E has allowed us all to achieve this key component shipment for the continued development of clean, reliable energy for what is truly an unprecedented global cooperation."

"Today is an extraordinary day. This milestone is the result of the fundamental contributions of many individuals who, with dedication and passion, have made what we celebrate today possible", affirmed Luca Tosto, CEO of Walter Tosto. "It has been a journey filled with technological challenges, all of which we have faced and successfully overcome, emerging stronger and more valued. We are now ready and looking ahead to future challenges with confidence."

The vacuum vessel can be described as a massive double-walled container that will house the fusion reaction. It will provide a clean environment blocking any dust, air, liquids and impurities from entering its chamber. Thanks to a set of powerful superconducting magnets that will embrace the vessel, the plasma will float without touching its walls. The ITER Vacuum Vessel is made of nine sectors. Europe will deliver five of them and the Republic of Korea the remaining four. The component is 19.4 m in diameter, 11.4 m high and weigh approximately 5200 tonnes. It complies with strict standards set by France's Nuclear Safety Authority to operate safely.

It's worth mentioning that its shape and size present their own set of challenges. Each sector counts roughly 150 km of welding beads. In all manufacturing sites, large teams of technicians, metrology experts, engineers and quality assurance officers continuously inspected the production to mitigate risks. More than 20 000 hours of machining and at least 100 000 hours of welding were required to produce the Europe's first sector. Two of its segments (1 and 4) were manufactured In Westinghouse, Monfalcone, while the other two (2 and 3) were produced in Walter Tosto, Chieti. The segments were assembled and then welded. The sector is expected to depart from Italy in September and will travel by sea to Fos-sur- Mer, the industrial port of Marseille. Then, it will be loaded onto a massive trailer to be driven to ITER site. Europe's remaining four sectors are in production and will be delivered in the next two years.

Background

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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