

## Europe completed its second sector of the ITER Vacuum Vessel

**Ortona, 5 March 2025** - Fusion for Energy (F4E), in collaboration with the AMW consortium consisting of Ansaldo Nucleare, Westinghouse and Walter Tosto, has completed the manufacturing of the second European sector of the Vacuum Vessel for ITER, the world's largest international fusion experiment. A ceremony was held in Ortona Mare, Abruzzo, at Walter Tosto S.p.A, where senior representatives from industry, politicians/policy makers, and members of the technical teams gathered to celebrate this remarkable milestone for the ITER project.

This is yet another incredible achievement, showcasing international collaboration, cutting-edge technology, and innovation, along with the craftsmanship in creating one of the most advanced mechanical components ever built.

In his speech at the ceremony, **Marc Lachaise**, Director of Fusion for Energy, stated: "The completion of the second European sector of ITER's vacuum vessel, demonstrates yet again, the exceptional manufacturing skills of our industry and its ability to apply quickly lessons learned from the first sector. It also illustrates how the EU, through its participation in the biggest international fusion project, can successfully involve medium sizes companies, help them grow, and target overseas markets. We are proud of this achievement because it shows that Europe delivers and is competitive. F4E together with the consortium of Ansaldo Nucleare, Westinghouse, Walter Tosto, and in partnership with ITER Organization, have taken another step in harnessing the potential of fusion energy."

**Roberto Adinolfi**, President of Ansaldo Nucleare, stated: "The completion of the second EU sector of the Vacuum Vessel by the AMW Consortium confirms the ability of the European supply chain to combine strengths and capabilities existing in our individual companies to deliver high quality complex components, at them forefront of nuclear technologies".

"We are proud to have this opportunity to celebrate again with our partners at Ansaldo and Walter Tosto the delivery of a completed sector for the ITER Vacuum Vessel. Each of this sector is a testament to years of cutting-edge cooperation and technology delivery, and it is humbling to reflect on all the work and innovation that allowed this achievement." said **Luca Oriani**, Westinghouse President of Long-Term Operations. "We congratulate our partners are friends at Walter Tosto on this achievement and look forward to continue our joint effort with the remaining Sectors and in future opportunities as well to continue to support the world needs for clean, safe and reliable nuclear energy, in all its applications."

The CEO of Walter Tosto S.p.A., **Luca Tosto**, emphasized: "Today, we achieve an extraordinary milestone, the result of a shared commitment among several industrial entities that have turned this dream into an exceptional outcome". He continued: "The certainty of success was by no means guaranteed, and it represented a real challenge for all the companies involved in the enhancement and realization of this project. As always, behind these achievements, the most crucial factor is the people. It is only thanks to the dedication and professionalism of every individual worker that we have come this far. This journey, undertaken with confidence, has strengthened us and made us more competitive, demonstrating that we are ready for a leading

role within the nuclear sector's value chain".

### **Description of the project:**

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 weighs approximately 5200 tonnes. It complies with strict standards set by France's Nuclear Safety Authority to operate safely.

Each sector counts roughly 150 km of welding beads. In all manufacturing facilities, 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 second sector. The sector will depart from Italy in March and 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 three sectors are in production and will be delivered in the next two years.

### **About F4E:**

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.

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

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