

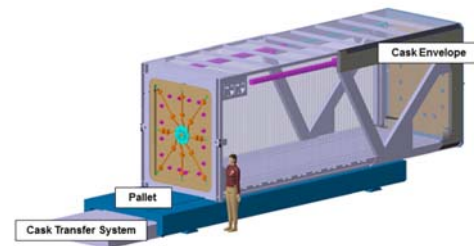
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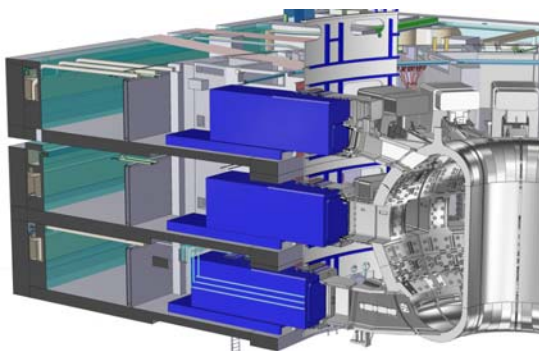
The Instituto Superior Técnico (IST), with the collaboration of the two research labs, Instituto de Plasmas e Fusão Nuclear (IPFN) and Institute for Systems and Robotics (ISR), is part of the consortium that won recently a contract of 100 million EUR, considered to be one of the biggest robotics contracts to date in the field of fusion energy. The state of the art equipment will form part of ITER, the world's largest experimental nuclear fusion facility and the first in history to produce 500 MW. The prestigious project brings together seven parties (China, Europe, Japan, India, the Republic of Korea, the Russian Federation and the USA) which represent 50% of the world's population and 80% of the global GDP.

The collaboration between Fusion for Energy (F4E), the EU organisation managing Europe's contribution to ITER, with a grouping of European companies consisting of Airbus Safran Launchers (France-Germany), and two companies of VINCI Group, Nuvia Limited (UK) and Cegelec CEM (France), will run for a period of seven years. Culham Centre for Fusion Energy (UK), Instituto Superior Técnico (Portugal), AVT Europe NV (Belgium) and Millennium (France) will also be part of this contract which will deliver remotely operated systems for the transportation and confinement of components located in the ITER vacuum vessel.

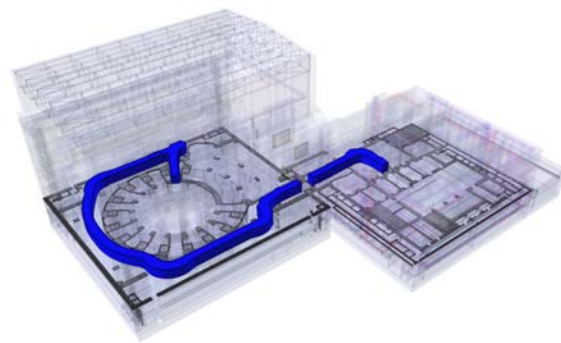
The transfer of components from the ITER vacuum vessel to the Hot Cell building will be performed by 15 casks as Automatic Guided Vehicles (AGV), with dimensions similar to a bus (8.5 m x 3.7 m x 2.6 m) approaching 100 tonnes when transporting the heaviest components. IST plays an important role in the consortium with the research and development of navigation technologies for mobile robotics to be used in nuclear facilities.



1 - Illustration of human figure standing next to an ITER cask F4E ©



3 - Cut-away image of the ITER machine showing the casks at the three levels of the Tokamak building ITER IO ©



2 - Trajectory of the equipment from the ITER machine to the maintenance hall ITER IO ©

Contact: **Alberto Vale**, avale@ipfn.tecnico.ulisboa.pt

Instituto de Plasmas e Fusão Nuclear – ipfn.tecnico.ulisboa.pt | Instituto Superior Técnico – tecnico.ulisboa.pt

Postal address: Instituto de Plasmas e Fusão Nuclear (IPFN) Instituto Superior Técnico (IST) - Av. Rovisco Pais, 1 - 1049-001 Lisbon, PORTUGAL