

Abstract Submitted
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Remote Handling System for Ignitor* L. GALBIATI, A. CUCCHIARO, G. CELENTANO, C. CRESCENZI, P. FROSI, G. MAZZONE, A. PIZZUTO, G. RAMOGIDA, M. ROCCELLA, ENEA, Italy, A. BIANCHI, B. PARODI, Ansaldo Ricerche, Italy, F. LUCCA, A. MARIN, L.T. Calcoli, Italy, B. COPPI, M.I.T. — Since access in Ignitor is through the limited width of the equatorial ports, the use of remote handling (RH) technology for any in-vessel intervention is required, even before the vessel becomes activated. In particular, the first wall of Ignitor, which is made of TZM (Molybdenum) tiles mounted on Inconel tile-carriers covering the entire plasma chamber, has been designed to be installed and replaced entirely by the RH system. The presence of radiation screens inside the cryostat and around the ports ensure a sufficiently low level of activation around the machine to avoid the need of ex-vessel RH techniques. The in-vessel RH system is based on two transporters carrying an articulated boom with end-effectors, supported by a movable structure over a transport system that can be lifted and set in position adjacent to two opposite horizontal ports. The design of the in-vessel RH system, of the boom and its enclosure, and of the most significant end-effectors (welding and cutting tools, and tools for the removal and handling of tile carriers) has been completed. A series of other dedicated tools for installation and maintainances of diagnostics components, of the RF antennas, vacuum cleaners, tools for general inspection and metrology are included in the design.

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- Prefer Oral Session
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