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First Wall System and Plasma Chamber of Ignitor¹ A. PIZZUTO, A. CUCCHIARO, B. COPPI, E.N.E.A., Italy — The designs of the Plasma Chamber of Ignitor and of the First Wall system have been integrated and carried out considering the most updated scenarios for disruption as well as the estimates for the maximum thermal wall loadings at ignition. The first wall system consists of a set of Molybdenum tiles that cover the entire plasma chamber and are attached to a smaller set of tile carriers that can be replaced by an appropriate remote handling system. The design of the system is based on the experience gained on the JET and the FTU machines. The peak wall loading on the tiles at ignition is valued at $\simeq 1.8 \text{ MW/m}^2$ when extended limiter equilibrium configurations (with no X-points within the plasma chamber) are considered. The same tile system is compatible with the thermal wall loading estimated for double-X point equilibrium configurations and operation in the H-regime up to ignition. A detailed structural analysis of the most loaded set of tiles has been carried out and has confirmed the validity of adopted design and fabrication criteria.

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- Prefer Oral Session
 Prefer Poster Session

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Special instructions: Include in the Ignitor poster session

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