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P4.111 High heat flux qualification tests of HELCZA facility

Thursday, 20 September 2018 11:00 (2 hours)

The high heat flux test facility HELCZA move forward in commissioning phase to the high heat flux qualification tests. The purpose of the qualification tests is the demonstration of facility's readiness for the testing of plasma facing components primarily first wall panels at high heat loads. For the qualification tests the flat cooper FW mock-up with representative size for electron beam irradiated windows of all types of FW panels was used. The heat loads coming up to 3.25 MW/m² (absorbed in cooling water) and cycling with at least 600 cycles (30 s beam on, 30 s dwell) was tested on this mock-up. The heat load testing was performed at inlet pressure 4 MPa, inlet temperature 70 ℃ and velocity of cooling water in cooling channels 11.0 m/s which are the parameters for real First Wall component. The qualification tests on this mock-up prove the facility full functionality to carry out the First Wall prototype tests and further for First Wall series.

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