

## High heat flux test with a HIP bonded mock-up of Cu/SS for the ITER first wall

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In order to verify the integrity of the first wall (FW) of the International Thermonuclear Experimental Reactor (ITER), the fabricated Cu/SS mock-up was tested with the e-beam facility (JEBIS) at Japan Atomic Energy Agency (JAEA). To fabricate the Cu/SS mock-up, CuCrZr and 316L authentic stainless steel (SS316L) were used for Cu alloy and steel, respectively. The hot isostatic pressing (HIP) was used as a manufacturing method with a 1050 °C and 100 to 150 MPa. Microstructure observation and mechanical tests were performed to confirm the joining technology. The analysis with ANSYS 10 was performed to determine the test condition of about 1000 cycles with 5 MW/m<sup>2</sup> of heat flux and compared with the experimental results.

### [참고문헌]

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