Abstract Submitted
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ITER First Wall Component Design and Development[1] MICHAEL ULRICKSON, JOSEPH KOTULSKI, STEVE GOODS, REBECCA COATS, MICHAEL PASIK, TINA TANAKA-MARTIN, DENNIS YOUCHISON, Sandia National Labs — The ITER First Wall (FW) consists of 468 panels with Be tiles and copper heat sink on a stainless steel structure. The design has evolved from poloidal fingers to toroidal fingers because of excess stress caused by revised estimates of the halo current loads on the FW. This change was made to permit changing the FW without having to remove the entire FW/SM set. We have completed simulation of plasma current disruption forces for six disruption cases for all 18 different styles of FW/SM in ITER. The toroidal, radial and poloidal force and torque have been used to calculate the loads on the mounting points. Using the flux surfaces from ITER plasma equilibria, we have calculated the heat loads on the FW surface for a variety of surface shapes. We have completed fabrication and testing of a FW Qualification Mockup. We have completed cyclic thermal testing of both an EU and a US FWQM.

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