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## **ITR/P5-16: Progress in the EU Test Blanket Systems Safety Studies**

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The European Joint Undertaking for ITER and the Development of Fusion Energy ('Fusion for Energy' - F4E) provides the European contributions to the ITER international fusion energy research project. Among others it includes also the development, design, technological demonstration and implementation of the European Test Blanket Systems (TBS) in ITER. An overview of the ITER TBS program has been presented recently at ISFNT-10.

Currently two EU TBS designs are in the phase of conceptual design - Helium-Cooled Lithium-Lead (HCLL) and Helium-Cooled Pebble-Bed (HCPB). Safety demonstration is an important part of the work devoted to the achievement of the next key project milestone the Conceptual Design Review.

The paper will reveal the details of the work on EU TBS safety performed in the last couple of years in the fields of update of the TBS safety demonstration file; TBS Safety approach, design principles, requirements, features and safety functions; detailed TBS components classifications; Radiation Shielding and Protection; Potential Hazards and adopted safety measures; Selection of reference accidents scenarios and Accidents analyses; and TBS Safety requirements and fulfillments matrix.

Finally the authors will share the planning of the future EU TBS safety activities.

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