

CAPABILITIES AND STATUS OF THE IFMIF-DONES PROJECT

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Abstract

The International Fusion Materials Irradiation Facility - Demo Oriented NEutron Source (IFMIF-DONES) is a proposed research infrastructure for irradiation the materials to be used in a fusion reactor. The facility would provide a unique neutron source of energy spectrum and flux level representative of those expected for the first wall containing future fusion reactors. Materials irradiation data under such conditions are of fundamental interest for the fusion community to consolidate the fusion reactors engineering design and licensing and to validate modelling tools for materials radiation damage. IFMIF-DONES has been identified as one of the key facilities required for the development of the EU Fusion Roadmap and in the critical path to DEMO. The design is presently being developed in the framework of a specific work package of the EUROfusion Consortium and it is strongly linked to the engineering work and validation results being obtained in the IFMIF/EVEDA (Engineering and Validation Engineering Design Activities) project under the framework of the EU-JP Bilateral Agreement to the Broader Approach to Fusion. Its construction is close to be started in the proposed site in the Escúzar Metropolitan Park (located in the Granada 18 km southwest from Granada city).

This paper will review the irradiation capabilities of the present design as well as some of the presently proposed fusion-related experiments that could be developed in the facility. It will be also presented an overview of the implementation status as well as of the engineering design of the facility.

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