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Configuration and engineering integration in the IFMIF-DONES project

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The IFMIF-DONES facility (International Fusion Materials Irradiation Facility –DEMO Oriented Neutron Source) is currently under design and being prepared for the construction phase within the framework of a EUROfusion Consortium work package. Its location will be in Escúzar, Granada and it will be the largest science and technology infrastructure project developed in Spain. Its objective is the study and certification of irradiated fusion materials by the generation of a neutron flux with a broad energy distribution covering the typical neutron spectrum of a (D-T) fusion reactor. For this purpose, a facility which accommodates a 40 MeV at 125mA deuteron Linac, a liquid lithium target and test module are being undertaken. Building and conventional plant systems are also designed to house, serve and allow main systems correct operation. Due to the complexity and high number of collaborators involved, it is of utmost importance to properly manage design and configuration integration activities.

This paper describes current CAD management approaches and methodology followed in the project to coherently arrange Structures, Systems and Components (SSCs) throughout the facility's lifecycle, easing identification of potential design inconsistencies and interferences as early as possible to actively resolve them and speed-up development of the project towards a ready-to-construct status, minimizing future construction, commissioning and operation issues and associated cost-overruns.

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Footnotes

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