## DEVELOPMENT ON SYSTEMS CONFIGURATION IN ITER TOKAMAK COMPLEX AND AUXILIARY BUILDINGS

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The ITER Site consists of almost 30 buildings to service the Tokamak machine which is located in the centre of the Tokamak Complex facility with the Tokamak-, Diagnostic- & Tritium building.

The design of a large part of the ITER plant systems will be executed by the ITER Domestic Agencies or their industrial suppliers under functional specifications provided by the ITER Organization. At the same time, the detailed design of the building is carried out by the European Domestic Agency 'Fusion for Energy' (F4E).

The management and integration of this parallel design development is extremely challenging because of the large number of interfaces between each plant system, the building structures and among the plant systems themselves.

In order to allow an efficient identification of the ITER configuration as well as to manage the concurrent engineering activities and to simplify the identification and assessment of changes, the design of each ITER plant systems is described in the so-called Configuration Management Models (CMM). These are relatively light CATIA 3D models that define the required space envelope and the physical interfaces in-between the systems and the buildings. In the past months, the focus of activities has been on the completion of the plant system

representations in all buildings in order to confirm the required space for the systems. This has been an integrated effort involving all ITER engineering Departments coordinated by

the Central Integration and Engineering office (CIE).

A process for the management of the buildings has been introduced to ensure that the layout of the systems is performed according to the CAD manual and nuclear guidelines and that all interfaces are identified and reviewed (including interfaces with the buildings, such as openings, penetrations, supports) and loading conditions needed for the verification of the structural integrity of the buildings are established.

Although all ITER buildings have been considered, the priority has been given to the nuclear buildings, i.e. the Tokamak Complex facility and the Hot Cell- & Radwaste building, where later modifications of the building structures have to be avoided. This work allows the start of the detailed designed of the Architect Engineer hired by F4E to have a well identified configuration with established and agreed interfaces.

The paper describes the procedure adopted for the control of the baseline configuration of the Tokamak Complex facility and Auxiliary Buildings with their associated plant systems and illustrates the current status as well as recent developments in the different systems.