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Classification of TBM components for construction code application

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Test Blanket Module (TBM) system in ITER facilities shall be designed, fabricated, and installed according to the construction code appropriate to the component class of TBM system. It is essential to properly define the component class of the system considering safety, quality, seismic and etc. Current construction codes have been well established and applied to nuclear power plants. However, due to the difference on the criterion about the classes, it is unclear to apply existing construction codes based on nuclear power plant condition in case of not only ITER conditions but fusion power generation conditions. In this paper, the criterion of each class for nuclear power plants and that for TBM system among ITER facilities are compared and the differences in each criterion are summarized. The component class of each component in TBM-set, which is located at the front of TBM system and has major function in TBM system, is established per each criterion and the applicable construction codes for each component are determined considering component class and operating conditions. Construction codes including ASME and RCC-MR (RCC-MRx) are used in this paper.

Eligible for student paper award?

No

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