

Creation of ISO standards on the confinement systems in Tritium facilities

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International Standard Organization is devoted to create standards for all type of management, organisational as well as technical matters. The ISO technical committee related to nuclear energy (TC 85) has a sub-committee on radiation protection (SC2) comprising in particular one working group dealing with confinement, ventilation and shielding issues (WG23). This working group has created an ISO standard on confinement systems (ISO 17873). This standard defines the criteria for the design and the operation of the ventilation systems in order to reduce the risks for the workers and the members of the public for all types of nuclear facilities other than reactors (including fusion machines). This standard is used as a basis for the ventilation and detritiation systems at ITER and for the ventilation zoning (negative pressure, filtration, air change rates...).

Nevertheless, the ISO 17873 standard is very oriented towards facilities with aerosol contamination, which represents the main risk of nuclear facilities other than reactors. In particular, this standard may give in particular cases rules that may not be applied for pure Tritium handling facilities (e.g. the possibility to have passive filters between two rooms with different airborne contamination level).

In association with ISO/TC85/SC2/WG23, this presentation gives the main elements that need to be adapted for Tritium handling facilities in order to create a new standard more dedicated to ITER purposes.