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Containment enclosures —

Part 1: Design principles

Enceintes de confinement —

Partie 1: Principes de conception



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Contents

Page

| | | |
|----------------|--|-----------|
| 1 | Scope..... | 1 |
| 2 | Normative references..... | 2 |
| 3 | Definitions..... | 2 |
| 4 | Characteristics of materials used | 3 |
| 5 | Plastic containment enclosures..... | 4 |
| 6 | Metal-framed containment enclosures..... | 6 |
| 7 | Hot-worked metal containment enclosures | 11 |
| 8 | Special case of containment enclosures with shielding..... | 20 |
| Annexes | | |
| A | Seals for containment enclosures | 23 |
| B | Fully equipped containment enclosure..... | 27 |
| C | Bibliography | 28 |

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10648-1 was prepared by Technical Committee ISO/TC 85, *Nuclear energy*, Subcommittee SC 2, *Radiation protection*.

ISO 10648 consists of the following parts, under the general title *Containment enclosures*:

- *Part 1: Design principles*
- *Part 2: Classification according to leak tightness and associated checking methods*

Annexes A, B and C of this part of ISO 10648 are for information only.

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Introduction

This part of ISO 10648 provides guidance and recommendations for the design, mounting and assembly of containment enclosures. It gives general requirements on the materials to be used, the construction of the different types of containment enclosure: plastic enclosures, metal profile enclosures or hot-worked metal enclosures which can be used either alone or placed behind a shielding wall and, finally, standard dimensions for these different categories of containment enclosure.

Other requirements and important design and safety features, such as operating conditions, internal atmosphere, ventilation, illumination, electrical grounding and shock prevention, ergonomic considerations, etc., will be addressed in other International Standards. The risk of fire, explosion, or violent chemical reaction should also be considered when applying the design principles of this part of ISO 10648.

It is not intended to describe here a systematic procedure for risk assessment in order to select adequate and consistent construction measures. The risk assessment should consider the following different stages, including design, manufacture, construction, assembly, operation, maintenance, decommissioning of containment enclosures and waste management or disposal, as appropriate. This task should be undertaken by every designer, with respect to the exact intended use of the containment enclosure and in order to comply, if required, with relevant safety standards or regulations.