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**Components for containment enclosures —
Part 4:
Ventilation and gas-cleaning systems such
as filters, traps, safety and regulation
valves, control and protection devices**

Composants pour enceintes de confinement —

*Partie 4: Systèmes de ventilation et d'épuration tels que filtres, pièges,
vannes de régulation et de sécurité, organes de contrôle et de protection*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 11933 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11933-4 was prepared by Technical Committee ISO/TC 85, *Nuclear energy*, Subcommittee SC 2, *Radiation protection*.

ISO 11933 consists of the following parts, under the general title *Components for containment enclosures*:

- *Part 1: Glove/bag ports, bungs for glove/bag ports, enclosure rings and interchangeable units*
- *Part 2: Gloves, welded bags, gaiters for remote-handling tongs and for manipulators*
- *Part 3: Transfer systems such as plain doors, airlock chambers, double door transfer systems, leaktight connections for waste drums*
- *Part 4: Ventilation and gas-cleaning systems such as filters, traps, safety and regulation valves, control and protection devices*
- *Part 5: Penetrations for electrical and fluid circuits*

Annex A forms a normative part of this part of ISO 11933. Annex B is for information only.

Introduction

A great number of components or systems used for ventilation and gas-cleaning in containment enclosures are presently offered on the market. These components or systems can:

- have different geometrical dimensions;
- differ by their design criteria;
- require holes of different diameters for installation on the containment enclosure wall;
- be attached to the wall by different methods;
- use different mounting techniques for their corresponding leak tightness.

These components or systems are generally not mutually compatible, but nevertheless often have the same performance level; therefore it was not possible to select only one component or system as the standard.

As a consequence, the aim of this part of ISO 11933 is to present general principles of design and operation, and to fully describe the most common components or systems in use, in order to:

- avoid new, parallel components or systems based on identical principles and differing only in details or geometrical dimensions;
- make possible interchangeability between existing devices;
- demonstrate consistency among the various parts of the same system such as a ventilation basic element or gas-cleaning associated element.