

First edition
1998-11-01

Components for containment enclosures —

Part 3:

Transfer systems such as plain doors, airlock chambers, double door transfer systems, leaktight connections for waste drums

Composants pour enceintes de confinement —

Partie 3: Systèmes de transfert tels que portes, sas, doubles portes de transfert étanche, connexions étanches pour fûts de déchets



Reference number
ISO 11933-3:1998(E)

Contents

	Page
1 Scope.....	1
2 Normative references	1
3 Definitions	2
4 Designation.....	2
4.1 Explanation of the reference number	2
4.1.1 Series allocation	3
4.1.2 Alphabetical codes corresponding to the mounting procedures.....	3
4.1.3 Alphabetical codes corresponding to the construction materials	3
4.2 Designation — Examples and explanation.....	4
4.2.1 Plain doors.....	4
4.2.2 Airlock chambers	4
4.2.3 Double door transfer systems.....	5
4.2.4 Leaktight connections for waste drums	5
5 Plain doors.....	6
5.1 General.....	6
5.1.1 Application	6
5.1.2 Precautions for opening the doors.....	6
5.1.3 Choice of the leaktight system (way of locking).....	7
5.2 Description.....	8
5.2.1 Shape	8
5.2.2 Assembly	8
5.2.3 Materials	9
5.2.4 Seals.....	10
5.2.5 Dimensions	10
5.2.6 Examples	12

© ISO 1998

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

This is a preview of "ISO 11933-3:1998". [Click here to purchase the full version from the ANSI store.](#)

6	Airlock chambers (see figure 6)	12
6.1	General	12
6.2	Various types of airlock chambers.....	13
6.2.1	Classification according to the ventilation mode	13
6.2.2	Classification according to the geometrical shape.....	14
6.3	Precautions to be taken during use of an airlock chamber.....	16
6.4	Ventilation of airlock chambers.....	16
6.5	Description.....	16
6.5.1	Shape.....	16
6.5.2	Assembly (see figure 9)	16
6.5.3	Material	17
6.5.4	Doors for airlock chambers.....	17
6.5.5	Dimensions	18
6.5.6	Examples	20
7	Double door transfer systems	20
7.1	General.....	21
7.2	Type 1 double door transfer systems	22
7.2.1	General	22
7.2.2	Principle of use	23
7.2.3	Assembly	24
7.2.4	Material	24
7.2.5	Dimensions (see figure 16).....	25
7.3	Type 2 double door transfer systems	26
7.3.1	General	26
7.3.2	Operation	27
7.3.3	Assembly	28
7.3.4	Material	28
7.3.5	Dimensions (see figure 20).....	28
8	Leaktight connections for waste drums	29
8.1	General.....	30
8.2	Principle of use	31
8.3	Type 1 leaktight connections for waste drums	32
8.3.1	General	32
8.3.2	Operation	32
8.3.3	Material	32
8.3.4	Dimensions (see figure 24).....	33
8.4	Type 2 leaktight connections for waste drums	34
8.4.1	General	34
8.4.2	Operation	34
8.4.3	Material	34
8.4.4	Dimensions (see figure 26).....	35
	Annex A (informative) Examples of plain doors and airlock chambers.	36
	Annex B (informative) Bibliography.....	43

This is a preview of "ISO 11933-3:1998". [Click here to purchase the full version from the ANSI store.](#)

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 11933-3 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 doors for leaktight transfer, leaktight connections for waste drums*
- *Part 4: Ventilation and air cleaning systems, such as filters, traps, pressure regulators, safety and control devices*
- *Part 5: Penetration for electrical and fluid circuits*

Annexes A and B of this part of ISO 11933 are for information only.

This is a preview of "ISO 11933-3:1998". [Click here to purchase the full version from the ANSI store.](#)

Introduction

A great number of components or systems used for achieving leaktight transfer functions in containment enclosures are presently offered on the market. These equipment or systems

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

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 system or component as the International 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 systems or components in use in order to:

- avoid new parallel systems or components based on identical principles and differing only in details or geometric dimensions;
- make possible interchangeability between existing devices;
- demonstrate consistency among the various parts of the same system such as the basic elements (described in ISO 11933-1), the associated leaktight components (described in ISO 11993-2) or the transfer systems (described in this part of ISO 11933).