INTERNATIONAL STANDARD

ISO 21029-2

Second edition
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Cryogenic vessels — Transportable vacuum insulated vessels of not more than 1 000 litres volume —

Part 2: Operational requirements

Récipients cryogéniques — Récipients transportables, isolés, sous vide, d'un volume n'excédant pas 1 000 litres —

Partie 2: Exigences de fonctionnement

Reference number
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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 220, *Cryogenic vessels*.

This second edition cancels and replaces the first edition (ISO 21029-2:2004), which has been technically revised.

ISO 21029 consists of the following parts, under the general title *Cryogenic vessels — Transportable vacuum insulated vessels of not more than 1 000 l volume:*

— *Part 1: Design, fabrication, inspection and tests*

— *Part 2: Operational requirements*

Introduction

Elements of this part of ISO 21029 support the requirements of the UN Recommendations on the Transport of Dangerous Goods and other international, national, or local requirements.

Some requirements of this International Standard may be covered by local regulations, e.g. safety distances, occupational safety and health.

Where there is a conflict between the requirements of this International Standard and any applicable local regulation, the local regulation always takes precedence.

Cryogenic vessels — Transportable vacuum insulated vessels of not more than 1 000 litres volume —

Part 2: Operational requirements

1 Scope

This part of ISO 21029 specifies operational requirements for transportable vacuum insulated cryogenic vessels of not more than 1 000 l volume designed to operate above atmospheric pressure. Appropriate parts may be used as a guidance for a vessel design to operate open to the atmosphere.

For cryogenic vessels designed for personal medical use, other requirements can apply.

The scope includes putting into service, filling, withdrawal, transport within the location, storage, maintenance, periodic inspection, and emergency procedures.

For the transportation of these vessels by public road, rail, sea, and air, other additional requirements can apply; these are defined in specific regulations.

Transportable cryogenic vessels of not more than 1 000 l volume are often partly equipped by the manufacturer, but can be installed or re-installed by another party, such as the operator or owner. For this reason, some of the scope of this part of ISO 21029, which includes putting into service, inspection, filling, maintenance, and emergency procedure, overlaps with ISO 21029-1.

2 Normative references

The following referenced documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 21010, *Cryogenic vessels — Gas/materials compatibility*

ISO 23208, *Cryogenic vessels — Cleanliness for cryogenic service*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
putting into service
operation by which a vessel is prepared to be used, applying to either a new vessel being used for the first time or an existing vessel being returned to service

3.2
filling
operation by which a transportable vessel undergoes a prefill check, filling with a cryogenic fluid and an after-fill check

3.3
withdrawal
operation by which the product is taken from a vessel connected to the supply system