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Gas cylinders — Cylinder valve outlets for gases and gas mixtures — Selection and dimensioning

Bouteilles à gaz — Raccords de sortie de robinets de bouteilles à gaz et mélanges de gaz — Choix et dimensionnement

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Foreword

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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).

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This document was prepared by Technical Committee ISO/TC 58 *Gas cylinders*, Subcommittee SC 2 *Cylinder fittings*.

This fourth edition cancels and replaces the third edition (ISO 5145:2014), which has been technically revised.

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This edition includes the following significant changes with respect to the previous edition:

— reference to ISO 14456 has been added;

— former Annex A on gas groups and FTSC codes has been removed.

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Introduction

At the beginning of the 1960s, the members of ISO/TC 58/SC 2 were charged with the task of drafting an International Standard on gas cylinder valve outlets.

It soon became obvious that millions of different types of valve outlets are in use and the various countries concerned were not ready to give up their own systems. It was, therefore, only possible to draw up a list of the existing provisions, either standardized or in use, which was published as ISO/TR 7470. The number and variety of such provisions give an idea of the complexity and scope of the task.

Towards the end of the 1970s, ISO/TC 58/SC 2 realized that the task at hand could only be achieved by adopting a long-term solution; this was to create an ideal system of valve outlets which would not be interchangeable with the existing systems. This system would be based on the four fundamental criteria of safety, simplicity, compactness, and tightness.

Two key actions were then undertaken in parallel:

— a classification and grouping of gases and gas mixtures;

— a practical definition of an original and non-interchangeable connection system.

This document represents a synthesis of these two actions. It is a practical guide for the selection of cylinder valve outlets for gases and gas mixtures. In view of the fact that no country seemed ready to give up their national standards and to adopt an International Standard specifying the dimensions of gas cylinder valve outlets, it was agreed that this document need not be complied with where a national standard predates it.

This document presents a logical system for determining valve outlets for gas cylinders for all gases or gas mixtures. It is of special interest for those countries that have no national standards or regulations. Its provisions can be called for in the future in cases where a new gas or gas mixture is developed industrially.

The main purpose in standardizing valve outlets is to prevent the interconnection of non-compatible gases. The user is cautioned to ensure that a particular outlet connection when used is compatible with any other connections or gases that might be connected to that outlet. Because of the multiplicity of connections in use and the existence of many national standards, this concern cannot be overstated.

This document thus represents a basis for international agreement in the more or less remote future.

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