International

ISO 9809-4

Third edition
2026-02

Gas cylinders — Design, construction and testing of refillable seamless steel gas cylinders and tubes —

Part 4: Stainless steel cylinders with an R_m value of less than 1 100 MPa

Bouteilles à gaz — Conception, construction et essais des bouteilles à gaz et des tubes rechargeables en acier sans soudure —

Partie 4: Bouteilles en acier inoxydable ayant une valeur de R_m *inférieure à 1 100 MPa*

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 3, *Cylinder design*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 9809-4:2021), which has been technically revised.

The main changes are as follows:

— modification of definition in 3.8;

— modification of Formula 1 in 7.2;

— bend test and flattening test moved under Clause 9 (prototype tests);

— clarification of shear stress calculation for parallel threads;

— clarification of 9.4;

— update of Bibliography.

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This document provides a specification for the design, construction, inspection and testing of a seamless stainless steel cylinder. The objective is to balance the design and economic efficiency against international acceptance and universal utility.

ISO 9809 (all parts) aims to eliminate the concern about climate, duplicate inspections and restrictions because of the lack of definitive International Standards.

This document has been written so that it is suitable to be referenced in the UN Model Regulations[1].