

COMMITTEE OF EXPERTS ON THE TRANSPORT OF  
DANGEROUS GOODS AND ON THE GLOBALLY  
HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the  
Transport of Dangerous Goods

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agenda item 2)

**NOTE ON THE PROGRESS MADE ON THE WORK CARRIED OUT  
BY THE TECHNICAL COMMITTEE ISO/TC 58 GAS CYLINDERS**

**Transmitted by the International Organization for Standardization (ISO)**  
(Prepared by Dr. Chris Jubb, Chairman of ISO/TC 58)

## Overview of the Work Programme

A highlight of the work of ISO/TC58 was given to the Sub-Committee at its last meeting in July so this paper is designed to complement that by giving more details on current activities. There are 37 active work items and these are listed in Annex A. The following items are relevant to the Model Regulations.

### 1 Revision of standards currently referenced in the Model Regulations

- 1.1 ISO 10156:1996 Gases and gas mixtures -- Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets (**under revision to accommodate a new testing method for oxygen potential**)
- 1.2 ISO 7225:1994 Gas cylinders -- Precautionary labels (**under revision to take account of the recent changes in the Model Regulations**)
- 1.3 ISO 10297:1999 Gas cylinders -- Refillable gas cylinder valves -- Specification and type testing. (NB: All gases except LPG) (**general update**)
- 1.4 ISO 11117:1998 Gas cylinders -- Valve protection caps and valve guards for industrial and medical gas cylinders -- Design, construction and tests (**general update**)
- 1.5 ISO 6406:1992 Periodic inspection and testing of seamless steel gas cylinders (**general update**)
- 1.6 ISO 10461:1993 Seamless aluminium-alloy gas cylinders -- Periodic inspection and testing (**general update**)
- 1.7 ISO 10462:1994 Cylinders for dissolved acetylene -- Periodic inspection and maintenance (corrected and reprinted 1995) (**general update**)

**Note:** The following standard has been reconfirmed

- 1.8 ISO 11621:1997 Gas cylinders -- Procedures for change of service

### 2 Standards which are being developed or revised and are potential candidates for future referencing in the Model Regulations

- 2.1 15996 Gas cylinders -- Residual pressure valves -- General requirements and type testing
- 2.2 22434 Gas cylinders -- Valves -- Inspection and maintenance
- 2.3 22435 Gas cylinders -- Valves with integrated pressure regulator -- Testing
- 2.4 ISO 4706:1989 Refillable welded steel gas cylinders (**under revision**)
- 2.5 20703 Gas cylinders -- Refillable welded aluminium alloy gas cylinders -- Design, construction and testing

- 2.6 21172 Gas cylinders -- Welded steel gas drums up to 3000 capacity for the transport of gases -- Design and construction
- 2.7 22991 Gas cylinders -- Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) -- Design and construction
- 2.8 10464.2 Gas cylinders -- Refillable welded steel cylinders for liquefied petroleum gas LPG -- Requalification and inspection

### **3 Standards under development or revision which support the Model Regulations but are unlikely to be referenced**

- 3.1 ISO 10286:1996 Gas cylinders -- Terminology (**under revision**)
- 3.2 11114-4 Transportable gas cylinders -- Compatibility of cylinder and valve materials with gas contents -- Part 4: Test method for hydrogen compatibility with metals
- 3.3 10691 Gas cylinders -- Refillable welded steel cylinders for liquefied petroleum gas (LPG) -- Procedures for checking before, during and after filling
- 3.4 11372 Cylinders for dissolved acetylene -- Inspection at time of filling
- 3.5 11622 Filling ratios, filling pressures and provisions for safety devices for gas cylinders
- 3.6 11755 Cylinders in bundles for permanent and liquefiable gases (excluding acetylene) -- Inspection at time of filling
- 3.7 16148 Gas cylinders -- Refillable seamless gas cylinders -- Acoustic emission testing for periodic inspection
- 3.8 22694 Gas cylinders -- Methods for acceptance criteria for defects in seamless steel and aluminium monolithic cylinders at time of periodic inspection and testing
- 3.9 24431 Cylinders for liquefied gases -- Inspection at time of filling

## ANNEX A

### List of all Work Items in progress in Technical Committee ISO/TC 58

ISO No.	Stage	Title
<b>TC 58 Gas cylinders</b>		
10286	CD	Gas cylinders – Terminology
11114-4	AWI	Transportable gas cylinders -- Compatibility of cylinder and valve materials with gas contents -- Part 4: Test method for hydrogen compatibility with metals
<b>TC 58/SC 2 Cylinder fittings</b>		
407	DIS	Small medical gas cylinders -- Pin-index yoke-type valve connections
5145	FDIS	Cylinder valve outlets for gases and gas mixtures -- Selection and dimensioning
10156-1	AWI	Gas cylinders -- Gases and gas mixtures -- Part 1: Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets
10156-2	CD	Gas cylinders -- Gases and gas mixtures -- Part 2: Determination of oxidizing ability of toxic and corrosive gases and gas mixtures
10297	DIS	Transportable gas cylinders -- Cylinder valves -- Specification and type testing
11117	AWI	Gas cylinders -- Valve protection caps and valve guards for industrial and medical gas cylinders -- Design, construction and tests
15996	DIS	Gas cylinders -- Residual pressure valves -- General requirements and type testing
22434	AWI	Gas cylinders -- Valves -- Inspection and maintenance
22435	AWI	Gas cylinders -- Valves with integrated pressure regulator -- Testing
<b>TC 58/SC 3 Cylinder design</b>		
3500	AWI	Seamless steel CO <sub>2</sub> cylinders for fixed fire-fighting installations on ships
4706	AWI	Refillable welded steel gas cylinders
12391-2	PRF TR	Gas cylinders -- Refillable seamless steel -- Performance tests -- Part 2: Fracture performance tests -- Monotonic burst tests
12391-3	PRF TR	Gas cylinders -- Refillable seamless steel -- Performance tests -- Part 3: Fracture performance tests -- Cyclical burst tests
12391-4	PRF TR	Gas cylinders -- Refillable seamless steel -- Performance tests -- Part 4: Flawed cylinder cycle test
20703	CD	Gas cylinders -- Refillable welded aluminium alloy gas cylinders -- Design, construction and testing
20704	AWI TR	Gas cylinders -- Test methods on fracture performance for high strength aluminium
21172	AWI	Gas cylinders -- Welded steel gas drums up to 3000 capacity for the transport of gases -- Design and construction
22991	DIS	Gas cylinders -- Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) -- Design and construction

AWI = Approved work Item

CD = Committee Draft

FDIS = Final Draft International Standard

WD = Working Draft

DIS = Draft International  
Standard

TR = Technical Report

ISO No.	Stage	Title
<b>TC 58/SC 4 Operational requirements for gas cylinders</b>		
32	CD	Gas cylinders for medical use -- Marking for identification of content
6406	DIS	Seamless steel gas cylinders -- Periodic inspection and testing
7225	CD	Gas cylinders -- Precautionary labels
10460	DIS	Gas cylinders -- Welded carbon steel gas cylinders -- Periodic inspection and testing
10461	DIS	Seamless aluminium-alloy gas cylinders -- Periodic inspection and testing
10462	DIS	Gas cylinders -- Transportable cylinders for dissolved acetylene -- Periodic inspection and maintenance
10464.2	DIS	Gas cylinders -- Refillable welded steel cylinders for liquefied petroleum gas LPG -- Requalification and inspection
10691	FDIS	Gas cylinders -- Refillable welded steel cylinders for liquefied petroleum gas (LPG) -- Procedures for checking before, during and after filling
11372	WD	Cylinders for dissolved acetylene -- Inspection at time of filling
11622	CD	Filling ratios, filling pressures and provisions for safety devices for gas cylinders
11755	CD	Cylinders in bundles for permanent and liquefiable gases (excluding acetylene) -- Inspection at time of filling
16148	DIS	Gas cylinders -- Refillable seamless gas cylinders -- Acoustic emission testing for periodic inspection
19078	CD	Gas cylinders -- Methods for inspection and requalification of natural gas vehicle (NGV) fuel containers
21007-1	DIS	Gas cylinders -- Identification and marking using radio frequency identification technology -- Part 1: Reference architecture and terminology
21007-2	DIS	Gas cylinders -- Identification and marking using radio frequency identification technology -- Part 2: Numbering schemes for radio frequency
22694	AWI	Gas cylinders -- Methods for acceptance criteria for defects in seamless steel and aluminium monolithic cylinders at time of periodic inspection and testing
24431	CD	Cylinders for liquefied gases -- Inspection at time of filling

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