

Small craft — Liquefied petroleum gas (LPG) systems

ICS 47.080

National foreword

This British Standard is the UK implementation of EN ISO 10239:2008. It is identical with ISO 10239:2008. It supersedes BS EN ISO 10239:2000 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GME/33, Small craft.

A list of organizations represented on this committee can be obtained on request to its secretary.

Following the first 12 months of implementation of BS EN ISO 10239:2000 in the UK, and a review of its use by the UK national committee, a National Annex NA was introduced to highlight areas that the committee felt needed clarification. National Annex NA has now been updated to give guidance and clarification for the application of BS EN ISO 10239:2008 when working on new installations.

Additional good practice recommendations for the installation of LPG appliances in boats, yachts and other vessels are contained in PD 5482-3:2005.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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English Version

Small craft - Liquefied petroleum gas (LPG) systems (ISO
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Petits navires - Installations alimentées en gaz de pétrole
liquéfiés (GPL) (ISO 10239:2008)

Kleine Wasserfahrzeuge - Flüssiggasanlagen (ISO
10239:2008)

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Foreword

This document (EN ISO 10239:2008) has been prepared by Technical Committee ISO/TC 188 "Small craft" in collaboration with Technical Committee CEN/SS T01 "Shipbuilding and maritime structures", the secretariat of which is held by CMC.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2008, and conflicting national standards shall be withdrawn at the latest by August 2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 10239:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

For relationship with EC Directive, see informative Annex ZA, which is an integral part of this document.

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Endorsement notice

The text of ISO 10239:2008 has been approved by CEN as a EN ISO 10239:2008 without any modification.

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Small craft — Liquefied petroleum gas (LPG) systems

1 Scope

This International Standard covers permanently installed liquefied petroleum gas (LPG) systems and LPG burning appliances on small craft of hull length up to 24 m, except for systems used on LPG-fuelled propulsion engines or LPG-driven generators.

This International Standard does not cover appliances with directly attached gas cylinders, such as portable self-contained camping stoves and portable gas lamps.

NOTE 1 This International Standard is not intended to regulate technical requirements for LPG cylinders, which are subject to national regulations.

NOTE 2 New designs, materials and methods of assembly giving at least equivalent results can be considered to be complying with the requirements of this International Standard when approved by a relevant body.

2 Normative references

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

ISO 2928, *Rubber hoses and hose assemblies for liquefied petroleum gas (LPG) in the liquid or gaseous phase and natural gas up to 25 bar (2,5 MPa) — Specification*

ISO 8846, *Small craft — Electrical devices — Protection against ignition of surrounding flammable gases*

ISO 9094-1, *Small craft — Fire protection — Part 1: Craft with a hull length of up to and including 15 m*

ISO 10133, *Small craft — Electrical systems — Extra-low-voltage d.c. installations*

ISO 10240, *Small craft — Owner's manual*

ISO 13297, *Small craft — Electrical systems — Alternating current installations*

3 Terms and definitions

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

3.1

liquefied petroleum gas

LPG

mixture of light hydrocarbons, gaseous under conditions of normal temperature and pressure, and maintained in the liquid state by increase of pressure or lowering of temperature

NOTE 1 The principal components are propane, propene, butanes or butenes.

NOTE 2 LPG can be obtained as commercial butane, commercial propane or a mixture of the two.

3.2

cylinder housing

ventilated enclosure intended solely for storage of one or more LPG cylinders, pressure regulators and safety devices, and located on the exterior of the craft, where leakage would flow overboard

3.3

cylinder locker

vapour tight enclosure with an overboard drain intended solely for storage of one or more LPG cylinders in a cockpit or recessed into the craft

NOTE See 8.3.

3.4

room sealed appliance

appliance having a combustion system in which incoming combustion air and outgoing products of combustion pass through sealed ductwork connected to the enclosed combustion chamber

3.5

LPG system

system consisting of an arrangement of cylinder(s), safety device(s), pressure regulator(s), connection(s), valve(s), piping, tubing, hose, fitting(s) and devices intended to store, supply, monitor or control the flow of fuel gas up to and including the appliance

NOTE The cylinders are replacement items and may not be supplied with the LPG system in the craft.

3.6

accessible

capable of being reached for inspection, removal or maintenance without removal of a permanent part of the craft structure, with or without the use of tools

3.7

readily accessible

capable of being reached quickly and safely for maintenance or effective use under emergency conditions without the use of tools

3.8

unattended appliance

appliance intended to function without the constant attention of an operator and which may cycle on and off automatically

NOTE Examples of unattended appliances are water heaters, refrigerators and cabin heaters. Stoves, ovens and gas lamps are not considered to be unattended appliances.

3.9

high pressure side

part of the LPG supply line directly exposed to pressure at the inlet of a pressure regulator in a liquefied petroleum gas system

NOTE 1 Vapour pressure propane at 20 °C = 0,7 MPa¹⁾.

NOTE 2 Vapour pressure butane at 20 °C = 0,175 MPa.

3.10

low pressure side

part of the LPG supply line exposed to the regulated pressure of the gas regulator

1) 0,1 MPa = 1 bar.