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BSI Standards Publication

## PUBLISHED DOCUMENT

# Guidance for the design, commissioning and maintenance of LPG systems in small craft

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### Summary of pages

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## Foreword

### Publishing information

This Published Document is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 March 2016. It was prepared by Technical Committee GME/33, *Small craft*. A list of organizations represented on this committee can be obtained on request to its secretary.

### Supersession

This Published Document supersedes PD 5482-3:2005, which is withdrawn.

### Relationship with other publications

This document is a supplement to BS EN ISO 10239:2014, unlike its predecessor, PD 5482-3:2005, which was a stand-alone document. As such, reference might need to be made to BS EN ISO 10239:2014 for more information in certain circumstances, including the fitting of additional appliances or major system modification. However, for design, commissioning and maintenance, this document gives sufficient guidance. If any conflict arises between the two documents, then BS EN ISO 10239:2014 takes precedence.

### Information about this document

This is a full revision of the Published Document, and introduces the following principal changes:

- the identifier has been changed to PD 54823, as the Published Document has been revised in such a way that it no longer belongs in the 5482 series;
- the text has been revised to supplement BS EN ISO 10239:2014, concerning the design, commissioning and maintenance of small craft LPG installations;
- gas tightness testing of LPG supply line and appliances has been improved; and
- an annex covering cooking appliances with integral LPG cartridges has been added.

### Hazard warnings

**WARNING:** This Published Document calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

### Use of this document

As a guide, this Published Document takes the form of guidance and recommendations. It should not be quoted as if it were a specification or a code of practice and claims of compliance cannot be made to it.

### Presentational conventions

The provisions of this Published Document are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

### **Contractual and legal considerations**

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

### **Compliance with a Published Document cannot confer immunity from legal obligations.**

Particular attention is drawn to the Gas Safety (Installation and Use) Regulations [1], [2], [3], [4].

*NOTE* Guidance on the individual competency for gas work and other guidance regarding legislation is given in the Health and Safety Executive's Approved Code of Practice L56 (ACOP) [5].

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## 1 Scope

This Published Document gives guidance for the design, commissioning and maintenance of LPG (liquefied petroleum gas) systems, including replacement appliances, replacement hose and replacement piping. It covers permanently installed gas burning installations in small craft<sup>1)</sup> of up to 24 m in length, using LPG operating at a nominal pressure of up to 50 mbar<sup>2)</sup>. The LPG is from either cylinders stowed on board or the on-board aspects of the gas system in the situation of a fixed shore bulk supply.

This Published Document also covers cooking appliances with integral LPG cartridges, for which guidance is given in Annex A.

This Published Document does not cover:

- new system installation requirements as covered in BS EN ISO 10239:2014;
- major system modification for which BS EN ISO 10239:2014 is to be used for installation requirements;
- additional appliances (including additional piping and additional hose) added to an existing system for which BS EN ISO 10239:2014 is to be used for installation requirements;
- on-shore installation of bulk supplies of LPG;
- catering equipment;
- portable LPG-burning appliances not covered in Annex A;
- the installation of LPG generators; or
- the use of LPG for propulsion of vessels for which guidance is given in UKLPG Code of Practice 18 [6], or BS EN 15609.

*NOTE* Further information on gas supply systems to permanently moored craft can be found in IGEM/IG/6 [7].

## 2 Normative references

The following 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.

BS 609 (all parts), *Flexible hoses, end fittings and sockets for gas burning appliances*

BS 152, *Specification for open bottomed taper plug valves for 1st, 2nd and 3rd family gases up to 200 mbar*

BS 6172, *Specification for installation, servicing and maintenance of domestic gas cooking appliances (2nd and 3rd family gases)*

BS 6362 (ISO 7598), *Specification for stainless steel tubes suitable for screwing in accordance with BS 21 "Pipe threads for tubes and fittings where pressure-tight joints are made on the threads"*

BS 6956 (all parts), *Jointing materials and compounds*

BS 7838, *Specification for corrugated stainless steel semi-rigid pipe and associated fittings for low-pressure gas pipework of up to DN 50*

<sup>1)</sup> Attention is drawn to the various Merchant Shipping Acts that apply to British registered ships.

<sup>2)</sup> 1 mbar = 102 N/m<sup>2</sup> = 0.1 kPa = 100 Pa.