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Determination of the resistance to hydrocarbon pool fires of fire protection materials and systems for pressure vessels — Test method

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Contents

		Page
	Foreword	**iii**
0	Introduction	1
1	Scope	1
2	Normative references	1
3	Terms, definitions, symbols and abbreviated terms	1
4	Principle	5
5	Apparatus	5
5.1	Burner system	5
5.2	Fuel supply for a burner system	6
5.3	Test fluids	6
5.4	Test enclosure	6
6	Calibration tests	6
6.1	General	6
6.2	Calibration test vessel construction	7
	Figure 1 — Calibration test vessel	8
	Figure 2 — Internal TC positions for the net absorbed heat flux test	9
6.3	Calibration test procedure	9
6.4	Analysis of calibration tests	10
6.5	Requirements for valid calibration tests	10
6.6	Environmental conditions	10
6.7	Permitted deviations	11
	Table 1 — Permitted deviations from calibration test conditions	11
6.8	Calibration report	11
7	Construction of fire test specimens	12
8	Instrumentation for fire testing	13
	Figure 3 — Fire test specimen TC positions	14
9	Fire protection materials and systems	15
9.1	General	15
9.2	Applied fire protection materials	15
	Figure 4 — Material thickness measurement positions	16
9.3	Assemblies and mounted fire protection systems	16
10	Test procedure	17
10.1	General	17
10.2	Test duration	17
10.3	Maximum critical wall temperature and pressure	17
10.4	Specimen	17
10.5	Photographs before the test	17
10.6	Fire protection	17
10.7	Thermo-setting materials	17
10.8	Filling the vessel	17
10.9	Environmental conditions	17
10.10	Rate of fuel	17
10.11	Specimen behaviour and appearance	18
10.12	Photographs after the test	18
10.13	Visual observations	18
11	Termination of the test	18
12	Test report	18
13	Practical application of test results	20

13.1 PRV 20
13.2 Propane (or alternative test fluid) fill level 20
14 Performance criteria 20
14.1 General 20
14.2 Substrate temperature 20
15 Factors affecting the validity of the test 21
15.1 Interruption of the test 21
15.2 Failure of TCs and DFTs 21
15.3 Failure of pressure transducers 21
15.4 Test-related tube and pipe 21
15.5 Variation in environmental conditions 22
15.6 DFT results 22

Annex A (informative) **Directional flame thermometers** **23**
Figure A.1 — Example DFT 23

Annex B (informative) **Example P&I diagram for test facility** **24**
Figure B.1 — P&I diagram 24

Annex C (informative) **R-C balance** **25**

Annex D (normative) **Method of affixing TCs** **29**
Figure D.1 — Method of affixing TCs 29
Figure D.2 — Optional TC cover plates 29

Annex E (informative) **Additional performance criteria** **30**

Annex F (informative) **Recommended classification procedures** **31**

Annex G (informative) **Additional classification procedures: classification based on duration before failure** **32**
Figure G.1 — Measured pressure versus time 33
Figure G.2 — Measured peak wall temperature versus pressure 33
Figure G.3 — Calculated burst pressure versus temperature 34
Figure G.4 — Calculated burst pressure and measured vessel pressure versus measured peak wall temperature 35
Figure G.5 — Pressure and burst pressure versus time, showing data for burst conditions with a time scale 36

Bibliography **37**

Summary of pages
This document comprises a front cover, and inside front cover, pages i to iv, pages 1 to 38, an inside back cover and a back cover.

Foreword

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2020. It was prepared by Technical Committee FSH/22, *Fire resistance tests*. A list of organizations represented on this committee can be obtained on request to its committee manager.

Relationship with other publications

BS 8619 was developed to meet an industry demand, using ISO 21843:2018 as a basis. BS 8619 is intended to be compatible with ISO 21843:2018, and will be revised or withdrawn in the future, as appropriate, if ISO 21843:2018 is revised.

Information about this document

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Where websites and webpages have been cited, they are provided for ease of reference and are correct at the time of publication. The location of a webpage or website, or its contents, cannot be guaranteed.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its methods are expressed as a set of instructions, a description, or in sentences in which the principal auxiliary verb is “shall”.

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

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

Requirements in this standard are drafted in accordance with *Rules for the structure and drafting of UK standards*, subclause **G.1.1**, which states, “Requirements should be expressed using wording such as: ‘When tested as described in Annex A, the product shall ...’”. This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

The word “should” is used to express recommendations of this standard. The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

Tables and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

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 British Standard cannot confer immunity from legal obligations.

0 Introduction

This British Standard describes a test procedure to assess the protection afforded by fire protection materials and systems to pressure vessels. It gives an indication of how fire protection materials perform when exposed to a set of specified fire conditions. Actual vessels can vary in construction from that tested and can utilize additional protection systems. The test conditions have been shown to be representative of the severity of unconfined pool fires fuelled by light and medium oil distillates such as liquid petroleum gas (LPG) and petroleum products.

1 Scope

This British Standard specifies a test method for the determination of the resistance to hydrocarbon pool fires of pressure vessels with a fire protection system when subjected to standard fire exposure conditions. It does not apply to vessels cooled by water deluge or water monitor. The pressure vessel can be classified based on its performance during the test. The design of the pressure vessel is not covered in this British Standard.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document. For dated references, only the edition cited applies.[1)] For undated references, the latest edition of the referenced document (including any amendments) applies.

BS EN 12542, *LPG equipment and accessories — Static welded steel cylindrical tanks, serially produced for the storage of Liquefied Petroleum Gas (LPG) having a volume not greater than 13 m^3 — Design and manufacture*

PD 5500, *Specification for unfired fusion welded pressure vessels*

[N1] IEC Electropedia (https://www.electropedia.org)

[N2] ISO Online Browsing Platform (https://www.iso.org/obp/ui)

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes of this British Standard, the terms and definitions given in the IEC Electropedia [N1], the ISO Online Browsing Platform [N2] and the following apply.

3.1.1 blowdown valve

valve or device that opens to depressurize a pressure vessel

NOTE For example, a fusible plug.

3.1.2 burner system

configuration of the equipment designed to engulf the test specimen in fire, with specific reference to the size, orientation, frequency and spacing of burner heads and the design of fuel supply piping

[1)] Documents that are referred to solely in an informative manner are listed in the Bibliography.

