



BSI Standards Publication

Liquid fuel firing

Part 3: Installations for liquid fuelled standby generators, furnaces, kilns, ovens and other industrial purposes — Code of practice

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Contents

	Page
Foreword	V
1 Scope	1
2 Normative references	1
3 Terms and definitions	3
4 Classification of fuels	5
5 Storage and handling temperatures for liquid fuels	5
<i>Table 1 — Minimum tank, outflow and handling temperatures for liquid fuels</i>	6
6 Liquid fuel storage tanks and equipment	6
6.1 Liquid fuel tank construction	6
<i>Table 2 — Types of liquid fuel storage tank and locations for which they are suitable</i>	6
6.2 Capacity	7
6.3 Selection of tanks	7
6.4 Equipment for measurement of contents of liquid fuel storage tanks	7
6.5 Filling and monitoring procedures of liquid fuel storage tanks	9
6.6 Fill pipes and connections	9
6.7 Vent pipes	10
6.8 Drainage and de-sludging facility	10
6.9 Multiple storage tanks with return line connections	10
6.10 Installation of liquid fuel storage tanks	11
6.11 Protection of steel tanks on site	12
6.12 Heating for liquid fuel storage tanks containing classes E, F, G and H oils and biofuels	12
6.13 Service tanks	14
6.14 Rooftop tanks	15
6.15 Environmental elements	15
7 Liquid fuel handling systems from storage tank to fuel-using equipment	16
7.1 General	16
7.2 Fuel supply systems for distillate fuels	17
<i>Figure 1 — Remote fuel transfer system</i>	18
7.3 Materials and construction and selection of liquid fuel pipelines	21
7.4 Testing of the pipework installation	22
7.5 Painting and identification	23
7.6 Fire valve systems and their installation	23
8 Accommodation for storage and service tanks	24
8.1 General	24
8.2 Tanks above ground away from or outside buildings (other than over or upon the roof)	25
8.3 Steel tanks buried in the ground	25
8.4 Tanks situated on or over a building	26
<i>Table 3 — Construction and fire resistance (in h) of tank chamber and generator enclosures and the doors and openings therein in large buildings and places of public entertainment or assembly</i>	27
<i>Table 4 — Construction and fire resistance of tank chamber and generator enclosures and the doors and openings therein in all buildings other than large buildings and places of public entertainment or assembly</i>	28
8.5 Bunds (secondary containment)	29
8.6 Siting of tank chambers within buildings with reference to means of escape and accessibility	30
8.7 Ventilation of tank chambers	30
8.8 Automatic fire-extinguishing installations and foam inlets in tank chambers	30
8.9 Lighting and electrical equipment in tank chambers	30
9 Fuel selection considerations	31

10	Standby generator sets	31
10.1	General	31
10.2	Accommodation for bulk storage tanks	32
	<i>Figure 2 — Gravity feed fuel transfer supply system</i>	32
10.3	Fire protection	32
10.4	Noise levels	33
10.5	Exhaust emissions	33
10.6	Air cooling system	34
10.7	Electrical capacity	34
10.8	Control system	34
	<i>Figure 3 — Typical standby generator set control and accessory wiring</i>	35
10.9	Maintenance	35
10.10	Fuel filtration	36
11	Control of standby generators	36
11.1	General	36
11.2	Temperature and pressure control	36
12	Selection of burners for furnaces	37
12.1	General	37
12.2	Choosing liquid fuel burning equipment	37
13	Selection and application of burner types for furnaces	38
13.1	General	38
13.2	Maximum and minimum heat input requirements	38
13.3	Heat release rates per unit volume	38
13.4	Type and shape of flame	38
13.5	Configuration of the combustion zone	38
13.6	Combustion air source	39
13.7	Pressure in the combustion zone	40
13.8	Positioning of burners	40
13.9	Noise level	41
14	Accommodation for and installation of furnaces	41
14.1	General	41
14.2	Fire resistance for furnace accommodation	41
14.3	Automatic fire extinguishing installations and foam inlets	42
14.4	Access to and means of escape from buildings in which furnaces are located	42
14.5	Smoke outlets	42
14.6	Lighting	43
14.7	Plant access	43
14.8	Ventilation and supply of combustion air	43
15	Waste gas handling equipment – Chimneys	43
16	Means of heat recovery from waste gases	45
16.1	Regenerators	45
16.2	Recuperators	45
16.3	Waste heat combustion equipment and economizers	45
17	Air supply facilities	45
18	Arrangements of additional ventilation where flammable solvents are evaporated in furnaces (ovens)	45
19	Explosion relief	46
20	Exhausts	46
21	Commissioning, performance tests and handover	47
21.1	Commissioning arrangements	47

21.2	Pre-commissioning procedure	47
21.3	Commissioning procedure	48
21.4	Performance tests	51
21.5	Handover	51
22	Maintenance	52
22.1	General	52
22.2	Supplier's and/or installer's responsibility	52
22.3	User's responsibility	52
23	Furnace, kiln and oven operating and maintenance instructions	53
24	Combustion and safety controls for burners	53
24.1	General	53
24.2	Flame monitoring	53
24.3	Failure of ignition	54
24.4	Failure of electricity supply and voltage variations	54
24.5	Plant breakdown	54
24.6	Excess temperature	54
24.7	Change from selected liquid fuel pressure conditions	55
24.8	High or low liquid fuel temperature change	55
24.9	Fan failure	55
24.10	Fire at appliance	55
24.11	Remote alarms	55
25	Waste gas removal	55
25.1	Height of chimneys	55
25.2	Number of chimneys or flues	56
25.3	Chimney cross-sectional area	56
25.4	Chimney exit	56
25.5	Internal surfaces of flues	56
25.6	Types of construction	56
25.7	Lightning conductors	57
25.8	Inspection access	57
25.9	Connecting flues	57
25.10	Dampers, draught control and combustion explosion relief doors	58
25.11	Induced-draught fans	59
25.12	Balanced flues	59
26	Fans (induced draught or recirculation)	59
27	Ejectors	59
28	Waste gases cleaning equipment	59
29	Electrical equipment	60
29.1	General	60
29.2	Wiring	60
29.3	Electrical isolation of standby generators	60
29.4	Electrical enclosures, components and cabling	60
30	Automatic shut-off valves and manually operated isolating valves	61
31	Process regulated control devices	61
32	Valve actuators	62
33	Ignition equipment	62
33.1	Maximum gas heat input	62
33.2	Types of ignition equipment	62
34	Starting-up, shutting-down and flame monitoring control devices	63
35	Pressure indicators	63

36	Temperature indicators	63
37	Flow meters and flow indicators	63
38	Instrumentation	64
38.1	Essential instrumentation	64
38.2	Other instrumentation	64
39	Proving devices	64
40	Safety control devices	65
40.1	General	65
40.2	Liquid fuel handling system	65
40.3	Housekeeping	65
40.4	Protection against combustion explosions	65
40.5	Fire precautions	66
41	Visual supervision facilities	66
42	Hazards from use of air filters in combustion systems	67
43	Hazards arising from accumulation of unburnt liquid fuel in furnaces	67
Annex A	(informative) Types of burners	68
Annex B	(normative) Maintenance schedule for standby generators	70
	<i>Table B.1 — Maintenance schedule for standby generators</i>	71
	Bibliography	75

Summary of pages

This document comprises a front cover, an inside front cover, pages I to VIII, pages 1 to 77, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 28 February 2023. It was prepared by Technical Committee RHE/13, *Liquid fuel firing*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 5410-3:2016, which is withdrawn.

Information about this document

This is a full revision of the standard and introduces the following principal changes:

- the use of biofuel is now included;
- the use of coal tar fuels has been deleted; and
- the installation of standby generators is covered.

It is desirable that there are minimum recommendations for the liquid fuel firing installation aspects of furnaces, kilns, ovens, liquid fuelled standby generators and other industrial plants so that equipment manufacturers, suppliers, installers and users have a common basis on which to work.

This part of [BS 5410](#) gives recommendations on the design as well as installation, commissioning and maintenance aspects of liquid fuel-using equipment within its scope.

In following the recommendations given in this British Standard, other authorities might need to be consulted.

Hazard warnings

WARNING. Decommissioning and disposal of liquid fuel storage tanks

The decommissioning and disposal of liquid fuel storage tanks, which can become necessary as part of the maintenance cycle of a liquid fuel-fired system is a very hazardous procedure, and it is imperative that it is only undertaken by specialist operatives who have the right equipment and expertise.

NOTE 1 Attention is drawn to the Construction (Design and Management) Regulations 2015 [1], which class such work as a “demolition project”.

NOTE 2 Guidance on decommissioning and disposal of liquid fuel storage tanks is given in OFTEC Technical Book 3 [N1].

NOTE 3 Attention is drawn to The Dangerous Substances and Explosive Atmospheres Regulations 2002 (Amendment 2015) [2].

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

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.

Relationship with other publications

[BS 5410](#) is published in three parts, as follows:

- Part 1 – *Installations for space heating and hot water supply purposes for domestic buildings;*
- Part 2 – *Installations providing space heating, hot water and steam supply services to non-domestic buildings; and*
- Part 3 – *Installations for liquid fuelled standby generators, furnaces, kilns, ovens and other industrial purposes.*

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.

In particular, attention is drawn to the following specific regulations:

- Construction (Design and Management) Regulations 2015 [1];
- Dangerous Substances and Explosive Atmospheres Regulations 2002 (Amendment 2015) [2];
- Building Regulations 2010 [3];
- Building (Amendment) (Wales) Regulations 2011 [4];
- Building (Scotland) Regulations 2004 [5];
- Building Regulations (Northern Ireland) 2012 [6];
- Environmental Protection Act 1990 [7];
- Control of Pollution (Special Waste) (Amendment) Regulations 1988 [8];
- Control of Pollution (Oil Storage) (England) Regulations 2001 [9];
- Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016 [10];
- Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011 [11];
- Construction (Design and Management) Regulations (Northern Ireland) 2016 [12];
- Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) [13];
- Waste (England and Wales) Regulations 2011 (as amended) [14];
- Hazardous Waste (Amendment) Regulations (Northern Ireland) 2015 [15];
- Special Waste (Amendment) (England and Wales) Regulations 2001 [16];
- Special Waste Amendment (Scotland) Amendment Regulations 2004 [17];
- Building (Approved Inspectors etc.) Regulations 2010 [18];
- Building (Forms) (Scotland) Regulations 2005 (as amended) [19];
- Waste Incineration Directive (UK) [20];
- Medium Combustion Plant Directive (UK) – MCPD (EU 2015/2193) [21];
- Non-Road Mobile Machinery Regulation – NRMM (EU 2016/1628) [22];
- Industrial, Emissions Directive (UK) – IED (EU 2010/75) [23];

- Environmental Permitting (England and Wales) (Amendment) Regulations 2018 [\[24\]](#);
- Pollution Prevention and Control (Scotland) Amendment Regulations 2017 [\[25\]](#);
- Pollution Prevention and Control (Industrial Emissions) (Amendment) Regulations (Northern Ireland) 2018 [\[26\]](#).

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1 Scope

This part of [BS 5410](#) gives recommendations and guidance on the design, installation, commissioning and maintenance of liquid fuel consuming equipment used in conjunction with industrial installations, such as standby generators, furnaces, kilns and ovens. Recommendations and guidance are given for the selection, application and installation of burners, storage tanks, piping systems, accommodation, chimneys, electrical and control equipment.

This part of [BS 5410](#) is applicable to installations consuming liquid fuel conforming to BS 2869, [BS EN 16900](#), BS EN 590, including biofuels conforming to BS EN 14214, and blends thereof, and BS EN 15940.

NOTE For the avoidance of doubt, the scope of this British Standard does not include equipment in relation to liquid gases.

This British Standard covers the provision of new installations and also gives guidance on the modernizing of existing installations. Recommendations and guidance are given on the selection and installation of liquid fuel storage tanks associated with these installations.

This British Standard is primarily intended for use by designers, specifiers, installers and building owners of systems having an environmental impact and seeking to use the best available technologies that have the potential for improvement through design where practical.

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 document¹⁾. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

[BS 799-3](#), *Oil burning equipment – Part 3: Automatic and semi-automatic atomizing burners up to 36 litres per hour*

[BS 799-4:1991](#), *Oil burning equipment – Part 4: Specification for atomizing burners (other than monobloc type) together with associated equipment for single burner and multi burner installations*

[BS 799-5:2010](#), *Oil burning equipment – Part 5: Carbon steel oil storage tanks – Specification*

[BS 1710](#), *Specification for identification of pipelines and services*

BS 2869, *Fuel oils for agricultural, domestic and industrial engines and boilers – Specification*

BS 5306 (all parts), *Fire extinguishing installations and equipment on premises*

[BS 5410-1](#), *Code of practice for liquid fuel firing – Part 1: Installations for space heating and hot water supply purposes for domestic buildings*

[BS 5410-2](#), *Code of practice for liquid fuel firing – Part 2: Installations providing space heating, hot water and steam supply services to non-domestic buildings*

[BS 5970](#), *Thermal insulation of pipework, ductwork, associated equipment and other industrial installations in the temperature range of –100 °C to +870 °C – Code of practice*

[BS 7430](#), *Code of practice for protective earthing of electrical installations*

BS 7445 (all parts), *Description and measurement of environmental noise*

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