

Fire extinguishing installations and equipment on premises —

Part 3: Maintenance of portable fire extinguishers — Code of practice

ICS 13.220.10

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The preparation of this British Standard was entrusted by Technical Committee FSH/2, Fire extinguishers, to Subcommittee FSH/2/12, Portable fire extinguishers, upon which the following bodies were represented:

- British Fire Consortium
- British Telecommunications plc
- Buying Agency
- Chief and Assistant Chief Fire Officers Association
- Dorset Healthcare NHS Trust
- Fire Extinguishing Trades Association
- Home Office
- Independent Fire Equipment Distributors Association
- Institute of Fire Safety
- London Fire and Civil Defence Authority
- Loss Prevention Certification Board
- Loss Prevention Council
- Nationwide Fire Services
- Society of Motor Manufacturers and Traders

This British Standard, having been prepared under the direction of the Health and Environment Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 October 2000

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First published February 1980
Second edition August 1985
Third edition October 2000

The following BSI references relate to the work on this standard:
Committee reference FSH/2/12
Draft for comment 99/541200 DC

ISBN 0 580 33202 0

Amendments issued since publication

Amd. No.	Date	Comments

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Foreword

This revision of BS 5306-3 has been prepared under the direction of the Fire Standards Committee. The main change in this edition was to change the status of Part 3 to that of a British Standard code of practice. Part 3 was divided into two parts, Part 8 covering selection and installation and this Part 3 covering maintenance. Part 3 and Part 8 together supersede BS 5306-3:1985 which is withdrawn. The other parts of BS 5306 published are as follows:

- *Part 0: Guide for selection of installed systems and other fire extinguishing equipment;*
- *Part 1: Hydrant systems, hose reels and foam inlets;*
- *Part 2: Sprinkler systems;*
- *Part 4: Specification for carbon dioxide systems;*
- *Part 5: Halon systems — Section 5.1: Halon 1301 total flooding systems;*
- *Part 5: Halon systems — Section 5.2: Halon 1211 total flooding systems;*
- *Part 6: Foam systems;*
- *Part 7: Extinguishing powder systems;*
- *Part 8: Selection and installation of portable fire extinguishers.*

The recommendations for inspection, maintenance and testing in this part of this standard may be applied to portable extinguishers wherever they are located.

Recommendations are included in this revision covering identification and reporting procedures for maintenance since it is important not only that extinguishers are, but also that they are known to have been, serviced.

The advice given on the maintenance of halon extinguishers takes account of probable changes in European legislation following the ratification of the Montreal Protocol.

Users of this code of practice should be aware that the maintenance of fire extinguishers form part of the general fire precautions for a location. As such there may be Government Regulations or official recommendations which set maintenance schedules. For example the Fire Precautions (Workplace) Regulations [1] relate to this subject. Other types of location may be subject to other official guidance.

The bodies of certain types of portable fire extinguisher form pressure vessels and therefore these units may fall within the scope of the European Pressure Equipment Directive [2]. The scheduling of some types of maintenance such as pressure testing on these units may be set by this and similar Directives.

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.

Annexes A, B, C and D are normative. Annexes E and F are informative.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from relevant statutory and legal requirements.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 17 and a back cover.

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Introduction

Portable fire extinguishers are important firefighting appliances. They are especially valuable in the early stages of fire when their portability and immediate availability for use by one person enable a prompt attack to be made. They cannot be expected to deal with a large fire since they are essentially first aid firefighting appliances of a limited capacity.

This British Standard code of practice should be read together with two other documents. The first is BS 5306-8, which gives guidance on the selection and installation of portable fire extinguishers. The second is the Pressure Equipment Directive [2] which lays down the basis of national safety regulations for any devices which must resist internal pressures higher than that of the atmosphere.

Users of this British Standard are advised to consider the desirability of independent certification of competence (see 3.4) and/or conformity (see 3.5) based on surveillance of the procedures specified in this standard.

Recommendations are contained in this revision covering identification and reporting procedures for the annual inspection and maintenance, since it is important not only that extinguishers are, but also that they are known to have been, serviced. For this reason it is important that a record of maintenance should be kept.

It should be realized that the usefulness of portable fire extinguishers depends to a considerable extent on proper maintenance and on the presence of persons who know how to operate them, and staff should be trained in their use. Particular attention is drawn to the necessity for compliance with statutory requirements (e.g. Pressure Systems Safety Regulations) and to the necessity for observance of contractual obligations to insurers.

1 Scope

This British Standard code of practice gives guidance on schedules for the maintenance of portable fire extinguishers, installed in all applications, to be followed by the user and the maintenance supplier. Additionally it recommends the detailed actions for three levels of maintenance: basic service, extended service and overhaul procedures.

Maintenance is intended to assure fitness for purpose. Some types of portable fire extinguishers are excluded from consideration in this British Standard (see clause 9); otherwise it may be applied to portable fire extinguishers in conformity with BS EN 3, national standards superseded by BS EN 3 and, if possible and appropriate, other standards.

2 Normative references

This British Standard incorporates, by dated and undated references, provisions from other publications. These normative references are cited at the appropriate places in the text. For dated references, subsequent amendments to or revisions of any of these publications apply to this British Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

BS 6643-1, *Recharging fire extinguishers (manufactured to BS 5423, Specification for portable fire extinguishers) — Part 1: Specification for procedure and materials.*

BS EN 3 (series), *Portable fire extinguishers.*

BS EN 25923, *Fire extinguishing media — Carbon dioxide.*

BS EN 27201-1, *Fire protection — Fire extinguishing media — Halogenated hydrocarbons — Part 1: Specifications for halon 1211 and halon 1301.*

BS EN 27201-2, *Fire protection — Fire extinguishing media — Halogenated hydrocarbons — Part 2: Code of practice for safe handling and transfer procedures.*

3 Terms and definitions

For the purposes of this part of BS 5306 the following terms and definitions apply.

3.1

body

shell of the extinguisher or gas cartridge (see 3.16) not fitted with its accessories but fitted with all its welded parts

3.2

body fittings

those parts of the extinguisher (see 3.14) that, under normal working conditions, are permanently attached to the body shell (see 3.3) and are subject to the working pressure

3.3

body shell

unfinished outer case of the extinguisher (see 3.14) usually comprising a cylindrical part with dished ends, and containing an aperture or apertures for charging the extinguisher or for subsequent fitting of components such as nozzles, pressure gauges and closures

3.4

certificate of competence

document issued under the rules of a certification system indicating that adequate confidence is provided that the named person is competent in performing specific services

3.5

certificate of conformity

document issued by a third party, demonstrating that adequate confidence is provided that a duly identified product, process or service is in conformity with a specific standard or other normative document

3.6

charge of a fire extinguisher

mass or volume of the extinguishing medium contained in the extinguisher

NOTE The charge of appliances based on water is expressed in volume (litres) and that of other appliances in mass (kilograms).

3.7

chemical foam fire extinguisher

extinguisher from which foam is expelled when chemical solutions stored separately within the body of the portable fire extinguisher are allowed to mix and react on the actuation of the operating mechanism

3.8

clean agent

electrically non-conducting, volatile, or gaseous fire extinguishing medium that does not leave a residue upon evaporation

3.9

competent person

person with the necessary training and experience, with access to the relevant tools, equipment and information, manuals and knowledge of any special procedures recommended by the manufacturer of the portable fire extinguisher, to be capable of carrying out the relevant maintenance procedures of this standard (see annex E)

3.10

disposable body

body (see 3.1) of a gas cartridge (see 3.16) or of an extinguisher (usually the stored pressure type) that is not designed for recharging and should be discarded after use

3.11

extinguishing medium

substance contained in the extinguisher which causes extinction

3.12

factory sealed rechargeable body

body (see 3.1) of a gas cartridge (see 3.16) or of an extinguisher (usually the stored pressure type) that is intended to be recharged after use but only by the manufacturer or his approved agent

3.13

field rechargeable fire extinguisher

extinguisher of the gas cartridge type or a stored pressure type that may be recharged in the field

NOTE All gas cartridge type extinguishers are field rechargeable and the use of the term is not normally necessary for these extinguishers. Only some stored pressure type extinguishers, however, are field rechargeable.

3.14**fire extinguisher**

appliance containing an extinguishing medium which can be expelled by the action of internal pressure and be directed on to a fire

NOTE This pressure may be stored in the body or produced by the release of an auxiliary gas.

3.15**fitness for purpose**

ability of a product, process or service to serve a defined purpose under specific conditions

3.16**gas cartridge**

pressure container that fits into, or is attached to, the portable fire extinguisher and that contains an expelling gas that, on operation, is used to expel the extinguishing medium

3.17**gas cartridge fire extinguisher**

extinguisher from which the extinguishing medium is expelled, on the actuation of the operating mechanism, by pressure released from a gas cartridge

3.18**halon**

halogenated hydrocarbon used as an extinguishing medium

NOTE 1 Halons used as extinguishing media are designated by a number in which:

- a) the first digit is the number of carbon atoms in the molecule;
- b) the second digit is the number of fluorine atoms in the molecule;
- c) the third digit is the number of chlorine atoms in the molecule;
- d) the fourth digit is the number of bromine atoms in the molecule.

Thus bromochlorodifluoromethane is halon 1211. The halon number does not distinguish between isomers.

NOTE 2 Halons fall within the definition of clean agents.

3.19**maintenance**

combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform a required function

3.20**portable fire extinguisher**

extinguisher which is designed to be carried and operated by hand and which in working order has a mass of not more than 20 kg

3.21**primary sealed stored pressure fire extinguisher**

stored pressure extinguisher in which the operating head and valve to control the flow of medium during discharge can be detached from the body of the extinguisher without releasing propellant or medium, which are retained in the body by a closure that is ruptured on operation

3.22**recharging**

maintenance procedure carried out after complete or partial discharge of an extinguisher, or as part of a scheduled maintenance procedure

3.23**soda acid fire extinguisher**

extinguisher from which water is expelled by pressure resulting from an acid and/or alkali reaction in the contents of the portable fire extinguisher on the actuation of the operating mechanism

3.24**stored pressure fire extinguisher**

extinguisher from which the extinguishing medium is expelled, on the actuation of the operating mechanism, by pressure stored within the body