

BRITISH STANDARD

Code of practice for non-automatic fire-fighting systems in buildings

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BSi
British Standards

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Foreword

Publishing information

This British Standard was published by BSI and came into effect on 31 May 2006. It was prepared by Technical Committee FSH/14, *Fire precautions in buildings*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard partially supersedes BS 5306-1:1976, which will be withdrawn upon publication of a revision of BS 5306-1 in 2006.

Information about this document

BS 9990 brings up to date the guidance on private fire mains (both internal and external), taking into account research carried out by the Office of the Deputy Prime Minister [1, 2]. The principal changes from BS 5306-1 are that the new standard no longer gives guidance on when and where such systems are needed (which is now given in, for example, guidance in support of national building regulations), but deals solely with the design of the systems, including recommendations for provision, siting, installation and maintenance. The guidance on hose reels and foam inlets remains in the revised BS 5306-1; requirements for hose reels are given in BS EN 671-1.

It is important for the fire protection of a building to be considered as a whole. The provision of fire mains is an essential element of the fire protection systems in large and complex buildings due to the difficulties in providing water supplies at the point of use for fire-fighting and search and rescue. It is essential that these systems be carefully maintained to ensure instant readiness when required.

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.

Presentational conventions

The provisions in this standard 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 British Standard cannot confer immunity from legal obligations.

Attention is drawn to legal requirements in respect of planning and approval, and to the need to consult with the appropriate bodies, which might include the building control body, the local water undertaking and the fire authority.

1 Scope

This British Standard gives recommendations for non-automatic fire-fighting systems in buildings. It covers good practice in matters affecting the design, installation, testing and maintenance of such systems including wet and dry fire-fighting mains.

This British Standard does not cover hose reels, foam inlets, automatic foam systems and portable fire-fighting equipment. These systems are covered in BS EN 671-1, BS 5306-1, BS 5306-3, BS 5306-8 and BS EN 3-7.

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.

BS 750, *Specification for underground fire hydrants and surface box frames and covers*

BS 1710, *Specification for identification of pipelines and services*

BS 5041 (all parts), *Fire hydrant systems equipment*

BS 5499-1, *Graphical symbols and signs – Safety signs, including fire safety signs – Part 1: Specification for geometric shapes, colours and layout*

BS 5499-5, *Graphical symbols and signs – Safety signs, including fire safety signs – Part 5: Signs with specific safety meanings*

BS 5588-5, *Fire precautions in the design, construction and use of buildings – Part 5: Access and facilities for fire-fighting*

BS 5588-12, *Fire precautions in the design, construction and use of buildings – Part 12: Managing fire safety*

BS 6387:1994, *Specification for performance requirements for cables required to maintain circuit integrity under fire conditions*

BS 7629-1, *Specification for 300/500 V fire resistant electric cables having low emission of smoke and corrosive gases when affected by fire – Part 1: Multicore cables*

BS 7346-6, *Components for smoke and heat control systems – Part 6: Specifications for cable systems*

BS 7430, *Code of practice for earthing*

BS 7671, *Requirements for electrical installations – IEE Wiring Regulations – Sixteenth edition*

BS 7846, *Electric cables. 600/1 000 V armoured fire-resistant cables having thermosetting insulation and low emission of smoke and corrosive gases when affected by fire*

BS 8434-2, *Methods of test for assessment of the fire integrity of electric cables – Test for unprotected small cables for use in emergency circuits – Part 2: BS EN 50200 with 930 °C flame and with water spray*

BS EN 1092 (all parts), *Flanges and their joints – Circular flanges for pipes, valves, fittings and accessories, PN designated*

BS EN 1515 (all parts), *Flanges and their joints – Bolting*

BS EN 14384, *Pillar fire hydrants*

BS EN 14339, *Underground fire hydrants*

BS EN 60702-1, *Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V – Part 1: Cables*

3 Terms and definitions

For the purposes of this British Standard the following definitions apply.

3.1 bridgehead

part of a building, usually the floor below the fire (floor above in the case of basements), from which fire-fighting teams can be safely committed to attack a fire

3.2 competent person

person, suitably trained and qualified by knowledge and practical experience, and provided with the necessary instructions, to enable the required task(s) to be carried out correctly

3.3 coupling

device for connecting lengths of hose so as to secure continuity from the source of a water supply to the delivery point

3.4 depth

distance of the lowest point of the floor of the lowest storey of a building to the fire service access level measured at the centre of that face of the building where the distance is greatest

3.5 fire-fighting lobby

protected lobby provided within a fire-fighting shaft giving access from a fire-fighting stair to an accommodation area, and normally to any associated fire-fighting lift and fire main

NOTE Common corridors serving residential accommodation can be regarded as fire-fighting lobbies.

3.6 fire-fighting shaft

protected enclosure containing a fire-fighting stair, fire-fighting lobbies, a fire main and, if provided, a fire-fighting lift together with any machinery space

3.7 fire-fighting stair

protected stairway communicating with an accommodation area only through a fire-fighting lobby

3.8 fire hydrants

3.8.1 fire hydrant

assembly comprising a valve and outlet connection from a water supply

3.8.2 pillar fire hydrant

fire hydrant whose outlet connection is fitted to a vertical component projecting above ground level