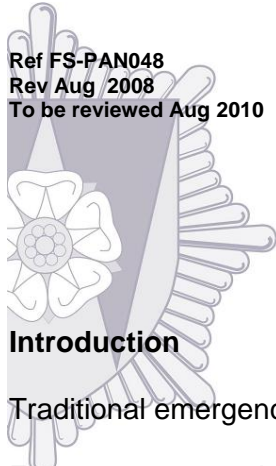


Advice Leaflet 48

Way Guidance Systems To Aid Evacuation In Case Of Fire

Ref FS-PAN048
Rev Aug 2008
To be reviewed Aug 2010



West Yorkshire Fire & Rescue Service
Fire Safety Group
Oakroyd Hall
Birkenshaw
West Yorkshire
BD11 2DY

Tel: 01274 682311
Fax: 01274 655888

Introduction

Traditional emergency lighting is based on high mounted luminaries.

Emergency way guidance lighting systems consist of low mounted tracks of light and the marking of exit doors on escape routes, in combination with emergency exit signs and intermediate directional signs.

The purpose of the system is to direct people safely onto and along the escape routes and to guide them to a safe area. The system comes into operation when power to the normal lighting fails or, in some cases, as soon as the fire alarm system is actuated.

Walk through assessments carried out by Building Research Establishment (BRE) on routes marked by electrical systems in the presence of smoke showed that the low mounted systems offered more visual information about the path between signs than high mounted luminaries, and that exit signs alone did not offer sufficient visual cues along the path.

Applications

Low mounted way guidance systems are intended to complement emergency escape lighting systems and should only be used as stand alone systems when they are in accordance with all the relevant recommendations of BS 5266: Part 1.

Low-level way guidance systems can be of great benefit and assistance to persons escaping from a building where there is a tendency for special disorientation to occur, i.e.:

- a) Town centre developments
- b) Large residential accommodation such as Hospitals and Hotels
- c) Buildings where there is extensive corridor approach to the accommodation
- d) Large premises used for public assembly
- e) High risk premises/areas with complex geometry.

Advice Leaflet 48
Way Guidance Systems To Aid Evacuation In Case Of Fire

Other Authorities You May Need To Consult

If escape lighting and emergency way guidance systems are being installed in the following situations the appropriate authority should be consulted:

Pubs, clubs, theatres, cinemas etc; the relevant licensing authority e.g. the Licensing Justices,

The Local Authority.

Where building work is undertaken; the local authority Building Control department.

Design Guidance

Emergency way guidance systems should follow the under mentioned design principles:

- a) Identify each exit door along the escape route
- b) Direct people towards these exits, using a continuous, low mounted luminous wayfinding track together with high and low mounted signs
- c) Emphasise changes of level, for example at stairs, single steps and ramps
- d) Emphasise hazards such as protruding corners
- e) Indicate locations of fire alarm call points and fire fighting equipment.

Types Of Way Finding Systems

a) Electroluminescent Lamps

These continuous strips of light are constructed of a coloured phosphor layer sandwiched between aluminium foil and a transparent electrode. These are then sealed in a high density polymer. The phosphor glows brightly on the application of a 115 volt AC supply.

b) Miniature Incandescent Lamps

These are a series of tiny light bulbs sealed in a tube and powered by an electric supply.

c) LED Tracks

These are continuous lines of electrically powered light emitting diodes.

d) Photoluminescent Way Finding Systems

These systems are not electrically powered. Light is emitted for a number of hours following exposure to natural or artificial light. White fluorescent lamps are the most effective energising source.

Further Advice

Further advice on emergency way finding lighting systems may be sought from the Fire Safety Department of the West Yorkshire Fire & Rescue Service, Oakroyd Hall, Birkenshaw, BD11 2DY or from the documents in the Bibliography.

Advice Leaflet 48
Way Guidance Systems To Aid Evacuation In Case Of Fire

Bibliography

Title	Available From
BRE IP 17/89 Photoluminescent Markings for Escape Routes	BRE
BRE IP 1/93 Emergency Wayfinding Lighting Systems	BRE
BRE IP 17/94 Emergency Wayfinding Lighting Systems in Smoke	BRE
BS 5266 Part 1 1999 Code of Practice for the Emergency Lighting of Premises	BSI
BS 5266 Part 2 1998 Code of Practice for electrical low mounted way guidance systems for emergency use	BSI
BS 5266 Part 6 1999 Code of Practice for non-electrical low mounted way guidance systems for emergency use - Photoluminescent systems	BSI

Publications can be obtained from the following addresses:

BRE	Building Research Establishment Garston Watford , WD25 9XX	Tel: 01923 664444 e-mail: enquiries@bre.co.uk web: http://www.bre.co.uk/
BSI	British Standards Institution (Sales) 389 Chiswick High Road LONDON, W4 4AL	Tel: 0208 996 7003 e-mail: cservices@bsi-global.com web: bsonline.techindex.co.uk