

SPECIFICATION FOR ELECTRIC LAMPS FOR RAILWAY SIGNALLING

B.S. 469 : 1960

THIS BRITISH STANDARD, having been approved by the Illumination Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council on 23rd December, 1960.

First published October, 1932.

First revision January, 1939.

Second revision September, 1952.

Third revision December, 1960.

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

A complete list of British Standards, numbering over 6000, fully indexed and with a note of the contents of each, will be found in the **British Standards Yearbook**, which may be purchased from **BSI Sales Department**. It may also be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

- B.S. 52. Dimensions of bayonet lamp-caps, lampholders and lampholder-plugs (B.C. adaptors) for voltages not exceeding 250 volts.
- B.S. 941. Automobile filament lamps.
- B.S. 1050. Visual indicator lamps for use in telephone and telegraph switchboards and for allied purposes.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following B.S.I. references relate to the work on this standard:
Committee reference LGE/6, LGE/6/9.
Draft for comment A(LGE) 5980.

Amendment No. 1
published and effective from 31 October 1985
to BS 469 : 1960

Specification for electric lamps for railway signalling

Revised text

Page 2. Delete BS 52 from the list of reference standards.

Delete the title against BS 1050 and substitute 'Specification for indicator lamps for use in telecommunication apparatus and for allied purposes'.

Insert the following after the entry for BS 1050:

'B.S. 5101. Lamp caps and holders together with gauges for
the control of interchangeability and safety
Part 1. Lamp caps.'

Clause 6. Caps. In line 2, delete 'B.S. 52*' together with the associated footnote and substitute 'B.S. 5101 : Part 1*'.

In paragraph 2, line 4, delete 'B.22(3-pin)' and substitute 'B 22d-3', and delete 'B.15' and substitute 'B.A.15'.

At the foot of the page insert '*B.S. 5101, 'Lamp caps and holders together with gauges for the control of interchangeability and safety', Part 1. 'Lamp caps.''

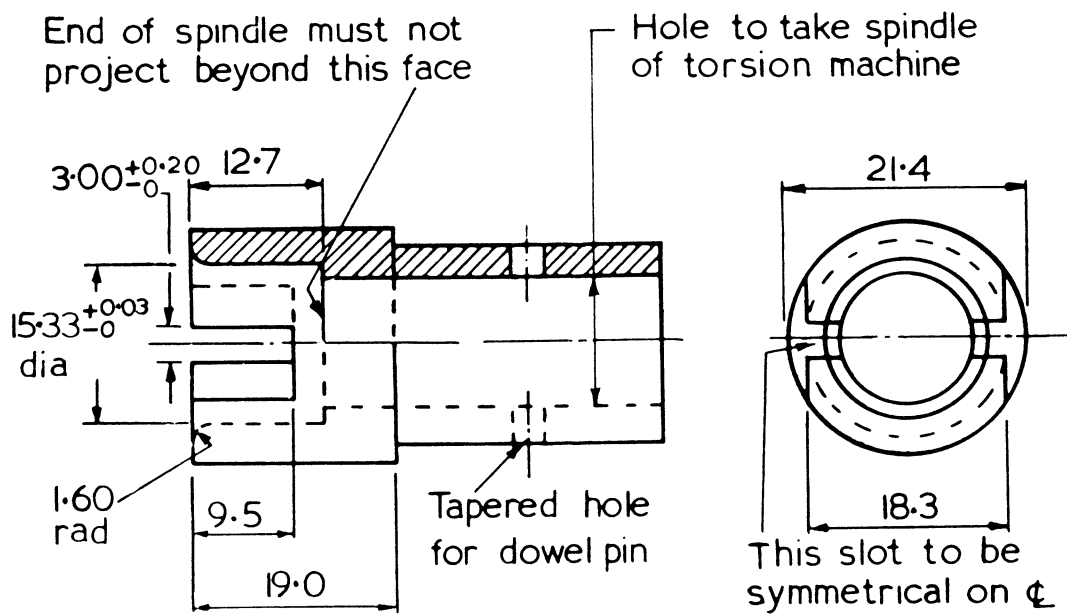
Clause 7. Insulation. Delete line 3 and substitute 'in the case of B 22d-3 caps'.

Table 2. Dimensions. In column 3, against S.L.8, delete '6' and substitute '5'.

Table 3. Initial readings and life. In column 3, against S.L.8, delete '6' and substitute '5'.

Figure 6. Holder for torsion test for B.22(3-pin) caps. In the title delete 'B.22(3-pin)' and substitute 'B 22d-3'.

Figure 7. Holder for torsion test for B.15 caps. Delete the existing drawing and and title and substitute the attached new drawing.



To be case hardened
 Dimensions to be within ± 0.3 mm unless otherwise stated
Fig. 7. Holder for torsion test for B.A.15 caps
 Dimensions in millimetres

CO-OPERATING ORGANIZATIONS

The Illumination Industry Standards Committee under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- *Admiralty
- Air Ministry
- *Association of Public Lighting Engineers
- *British Electrical and Allied Manufacturers' Association
- British Electrical Development Association
- *British Railways, The British Transport Commission
- *D.S.I.R.—Building Research Station
- *Electric Lamp Industry Council
- *Electric Light Fittings Association
- *Electricity Council, the Generating Board and the Area Boards
in England and Wales
- Gas Council
- Glass Manufacturers' Federation
- *Illuminating Engineering Society
- *Independent Lamp Manufacturers' Export Group
- *Institution of Electrical Engineers
- Institution of Gas Engineers
- Institution of Municipal Engineers
- *London Transport Executive, The British Transport Commission
- Medical Research Council
- *Ministry of Aviation
- Ministry of Housing and Local Government
- Ministry of Labour (Factory Inspectorate)
- *Ministry of Transport
- *Ministry of Works
- *National Physical Laboratory (D.S.I.R.)
- *Post Office
- Royal Institute of British Architects
- Society of British Gas Industries
- Society of Glass Technology
- War Office

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Crown Agents for Overseas Governments and Administrations
Electrical Contractors Association
High Commission of India
London County Council
Municipal Passenger Transport Association
Public Transport Association (Incorporated)
Society of Motor Manufacturers and Traders

BRITISH STANDARD SPECIFICATION FOR ELECTRIC LAMPS FOR RAILWAY SIGNALLING

FOREWORD

In this revision of the 1952 edition of B.S. 469, the text has been re-arranged to bring it into line, as far as practicable, with other current British and international specifications for lamps. Statistical methods have been used to permit of judgment whether or not the lamps being sampled conform to the requirements of this specification (see Appendix A).

The list of lamps covered by the specification has also been amended to meet present and future requirements. Heavy type indicates those lamps whose use is preferred.

SPECIFICATION

SECTION ONE : GENERAL

SCOPE

1. This British Standard states the technical requirements for the railway signalling lamps given in Table 1 and the methods of test to be used for determining their quality and interchangeability.

TABLE 1. RANGE OF LAMPS COVERED

Reference number	Use	Reference number	Use
S.L. 5 } S.L. 8 }	Repeaters and indicators	S.L.25	Searchlight signals
S.L.13	Searchlight signals	S.L.29	Repeaters and indicators
S.L.16	Searchlight signals	S.L.30 } S.L.31A }	Illuminated diagrams and control panels
S.L.17 } S.L.18 } S.L.21 }	Multi-aspect colour-light signals	S.L.32	Searchlight signals
S.L.22	Position light junction indicators	S.L.33	Position light junction indicators
		S.L.34 } S.L.35 }	Multi-aspect colour-light signals

DEFINITIONS

2. For the purposes of this British Standard the following definitions apply:
- a. Rated voltage.* The voltage for which the lamp is designed.
 - b. Rated wattage.* The wattage which the lamp is designed to consume at the rated voltage.
 - c. Double-pole.* Denotes in a double-filament lamp that both filaments are connected permanently in parallel.
 - d. Triple-pole.* Denotes in a double-filament lamp that one end of each filament is connected to the cap shell and the other ends of the filaments are connected one to each contact plate.
 - e. Light centre.* The geometrical centre of the filament (the main filament of double filament lamps) or, in the case of bow filaments, the centre of the enclosing rectangle.
 - f. Light centre length.* The perpendicular distance of the light centre from the plane which is normal to the cap axis and lies along the surface of the pins at the point nearest to the filament.
 - g. Axial error.* (For lamps other than those with offset filaments.) The perpendicular distance of the light centre from the axis of the cap.
 - h. Initial readings.* The measurements of watts and lumens made at the end of the ageing period.
 - j. Life.* The number of hours a lamp filament operates to burn-out under the conditions laid down in this specification.
 - k. Batch.* All the lamps of the same reference number put forward at one time for test.
 - l. Test quantities.*
 - (i) *Inspection test quantity (I.T.Q.).* The number of lamps to be tested to determine whether a batch satisfies the mechanical and physical requirements.
 - (ii) *Rating test quantity (R.T.Q.).* The number of lamps to be tested to determine whether a batch satisfies the requirements for initial readings.
 - (iii) *Life test quantity (L.T.Q.).* The number of lamps to be tested to determine whether a batch satisfies the requirements for life.

SECTION TWO : MECHANICAL AND PHYSICAL REQUIREMENTS

LAMP MARKING

3. All lamps except S.L.30 and S.L.31A shall be distinctly marked with the following information:
- a.* Reference number (see Table 1).
 - b.* Rated voltage.
 - c.* Rated wattage.
 - d.* Manufacturer's name or mark.