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SRI LANKA STANDARD 376 : 1976

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SPECIFICATION FOR CAST BRASS WINDOW STAYS

(SI UNITS)

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BUREAU OF CEYLON STANDARDS

SPECIFICATION FOR CAST BRASS WINDOW STAYS (SI UNITS)

S.L.S. 376 : 1976

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Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This Standard does not purport to include all the necessary provisions of a contract.

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SRI LANKA STANDARD SPECIFICATION FOR CAST BRASS WINDOW STAYS (S I UNITS)

FOREWORD

This Sri Lanka Standard Specification has been prepared by the Drafting Committee on Brass Window Stays. It was approved by the Mechanical Engineering Divisional Committee of the Bureau of Ceylon Standards and was authorised for adoption and publication by the Council of the Bureau on 18th March, 1976.

All standard values are given in SI Units and equivalent Imperial values are given within brackets.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or observation, shall be rounded off in accordance with C S 102 : Ceylon Standard on Presentation of Numerical Values. The number of figures to be retained in the rounded off values shall be the same as that of the specified value in this standard.

It is intended to incorporate in this specification a Bend Test in due course, once a suitable test is devised.

The assistance gained from the British and Indian Standards Specifications in the preparation of this standard is acknowledged.

1. SCOPE

1.1 This standard covers the requirements for cast brass window stays.

2. TYPES

2.1 Brass window stays shall be of the following types :

(a) Straight type (see Fig. 1).
(b) Curved type (see Fig. 2).

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3. TERMINOLOGY

3.1 Size (a) Size of straight type window stay is denoted by the length of the arm indicated by ' a ' in Figure 1.

(b) Size of the curved type window stay is denoted by the distance between the centres ' M ' and ' N ' on the arm indicated by ' a ' in Figure 2.

4. MATERIAL

4.1 Brass used for the manufacture of window stays shall have the following chemical composition and physical properties.

(a) Chemical Composition

Constituent			Percentages
Copper	...	...	...	60 — 65
Tin	...	...	...	0·5 — 1·50
Lead	...	...	...	0·75 — 1·50
Zinc	...	...	...	Remainder
Impurities		...	...	1·25 (max)

(b) Physical Properties — The minimum tensile strength of brass shall be 245 MPa* (16·0 tonf/in^2).

4.2 Mild steel or phosphorbronze wire used for the hinge pin shall comply with the following physical properties :

4.2.1 (a) **Mild steel wire** — Ultimate tensile strength shall be not less than 310 MPa (20·0 tonf/in^2).

(b) **Phosphorbronze wire** — Ultimate tensile strength shall be not less than 460 MPa (30·0 tonf/in^2).

4.2.2 The diameters of the mild steel and phosphorbronze wire shall be in the range 2·50 mm to 6·50 mm.

5. SHAPE AND DIMENSIONS

5.1 Shapes and dimensions of the window stays shall be as given in the Figures and Tables 1, 1·1, 1·2, 1·3, and 2. Dimension ' l ' in Tables 1 and 2 refers to the handle which could be of any shape.

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* 1 MPa = 10^6 Pa.

6. MANUFACTURE AND FINISH

6.1 Window stays shall be manufactured using the materials specified in Clause 4. There shall be no blow holes in any part of the window stay and the movement of the window stay shall be free and easy. The screw holes shall be counter-sunk to suit counter-sunk 19·1mm x No. 6 (3/4 in x No. 6) wood screws conforming to CS 6 : 1967 Ceylon Standard Specification for Wood Screws. The window stays shall be bright finished and may also be oxidised or plated.

7. SAMPLING

7.1 **Lot** — In any consignment all the window stays of the same type and size manufactured under similar conditions of manufacture on one date shall be grouped together to constitute the lot.

7.2 Samples shall be selected at random from each lot as given in Table 3, and shall be examined for shape, dimensions, manufacture and finish. Any window stay failing to meet the requirements of this standard shall be considered defective.

Table 3 — Sample Size and Permissible Number of Defectives

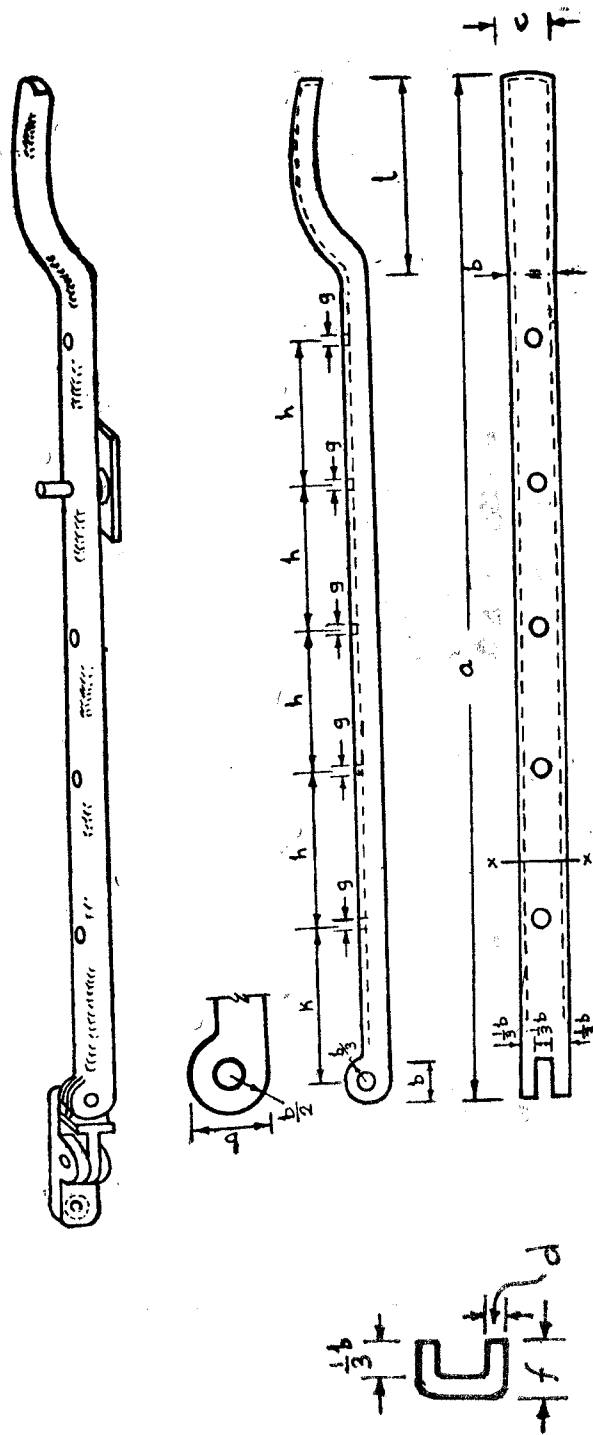| Lot Size	Sample Size	Permissible Number of defectives
(1)	(2)	(3)
Up to 200	15	0
201 to 300	20	1
301 to 500	30	2
501 to 800	40	3
801 and above	55	3

Fig. 1. STRAIGHT TYPE WINDOW STAYS

Table 1 — Dimensions of Straight Type Window Stays (Fig 1.)

Size	No. of Peg holes	a	b min	e	d min
250 mm (9.8 in)	5	250 ± 5 mm (9.8 ± 0.20 in)	15.0 mm (0.59 in)	17.0 ± 0.5 mm (0.67 ± 0.02 in)	2.5 mm (0.10 in)
320 mm (12.6 in)	7	320 ± 5 mm (12.6 ± 0.20 in)			
355 mm (14.0 in)	8	355 ± 5 mm (14.0 ± 0.20 in)			

Contd.

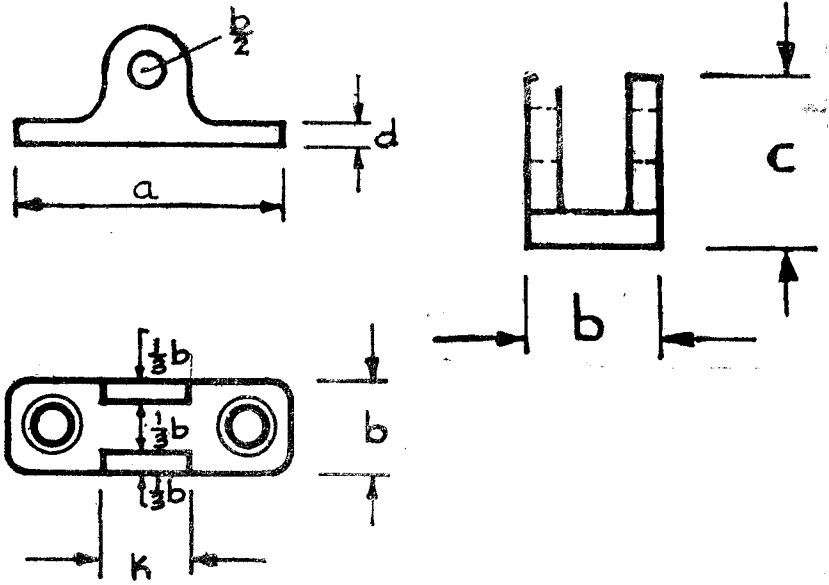| f min	h	k	l	g
8.0 mm (0.31 in)	35.0 ± 1 mm (1.38 ± 0.04 in)	50 ± 1 mm (2.0 ± 0.04 in)	50 mm (2.0 in)	7.0 ± 0.1 mm (0.28 ± 0.044 in)

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COMPONENTS OF WINDOW STAYS

Fig. 1·1 ANCHOR BLOCK

Table 1.1 — Dimensions of Component Shown in Fig. 1.1

Size	b	c	d
250 mm (9·8 in)			
320 mm (12·6 in)	15·0 ± 0·3 mm (0·59 ± 0·01 in)	20·0 ± 0·5 mm (0·79 ± 0·02 in)	3·5 ± 0·1 mm (0·14 ± 0·004 in)
355 mm (14·0 in)			
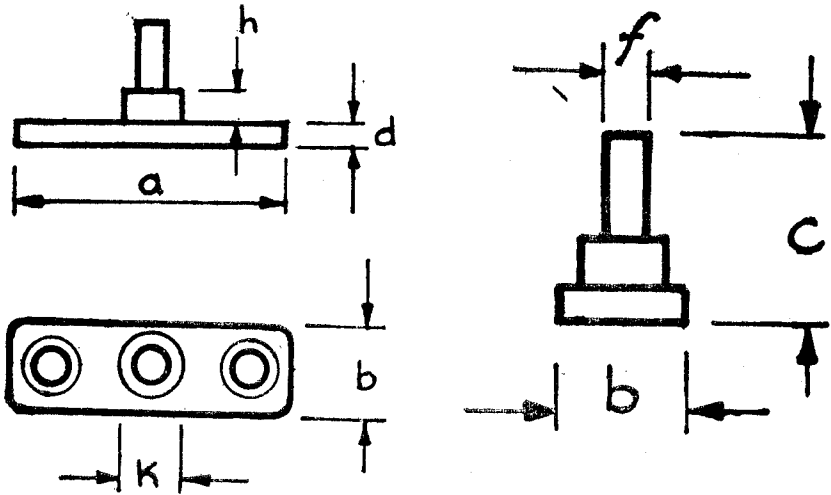
Fig. 1·2   STAY   PIN

Table 1.2 — Dimensions of Component Shown in Fig. 1.2

Size	a	b	c
250 mm (9·8 in) 320 mm (12·in) 355 mm (14·0 in)	45·0 ± 1 mm (1·77 ± 0·004 in)	15·0 ± 0·3 mm (0·59 ± 0·001 in)	20·0 ± 1 mm (0·79 ± 0·04 in)

Contd.

d	f	h	k
3·5 ± 0·1 mm (0·14 ± 0·004 in)	6·0 ± 0·1 mm (0·24 ± 0·004 in)	5·0 ± 0·1 mm (0·20 ± 0·004 in)	8·0 ± 0·1 mm (0·31 ± 0·004 in)
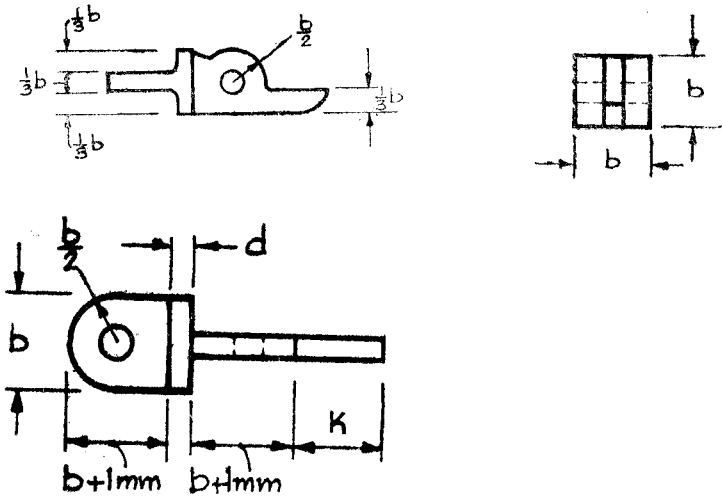
Fig. 1·3 DOUBLE HINGE

Table 1.3 — Dimensions of Component Shown in Fig. 1.3

Size	b	d	k
250 mm (9·8 in)			
320 mm (12·6 in)	15·0 ± 0·3 mm (0·59 ± 0·001 in)	3·5 ± 0·5 mm (0·14 ± 0·02 in)	15·0 ± 1 mm (0·59 ± 0·04 in)
355 mm (14·0 in)			

SP and TQ are arcs of two circles with centre O.

Fig. 2 - CURVED TYPE WINDOW STAYS

Table 2 — Dimensions of Curved Type Windo Stays

Size	No. of peg holes	a	b min	c	d min	f min
250 mm (9·8 in)	5	250 ± 5 mm (9·8 ± 0·20 in)	15·0 mm (0·59 in)	17·0 ± 0·5 mm (0·67 ± 0·20 in)	2·5 mm (0·10 in)	8·0 mm (0·31 in)
320 mm (12·6 in)	7	320 ± 5 mm (12·6 ± 0·20 in)	15·0 mm (0·59 in)	17·0 + 0·5 mm (0·67 ± 0·20 in)	2·5 mm (0·10 in)	8·0 mm (0·31 in)

Contd.

h	k	l	g	r	m*
35·0 ± 1 mm (1·38 ± 0·04 in)	50 ± 1 mm (2·0 ± 0·04 in)	50 mm (2·0 in)	7·0 ± 0·1 mm (0·28 ± 0·004 in)	150 mm (5·9 in)	225 mm (8·8 in)
35·0 ± 1 mm (1·38 ± 0·04 in)	50 ± 1 mm (2·0 ± 0·04 in)	50 mm (2·0 in)	7·0 ± 0·1 mm (0·28 ± 0·004 in)	225 mm (8·8 in)	300 mm (11·8 in)

*m is given as a check measurement.

The dimensions of other components for both sizes shall be those specified for straight type window stays in Tables 1.1, 1.2 and 1.3.

8. CRITERION FOR CONFORMITY

8.1   The lot shall be considered as conforming to the requirements of this standard if the number of defective window stays in the sample tested is less than or equal to the corresponding number given in Column 3 of Table 3.

9. PACKING & MARKING

9.1   Window stays shall be packed in boxes so that one box contains 10 window stays of one type and one size.

9.2   The window stays shall be legibly stamped with the manufacturer's trade mark.

9.3   Each box shall be marked with the following information :

(a)   Manufacturer's name or trade mark ;

(b)   Type of window stay and finish ;

(c)   Size and quantity ;

(d)   Country of origin.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI which includes surveillance inspection of the factory, testing of both factory and market samples.

Further particulars of the terms and conditions of the permit may be obtained from the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.

SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

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All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.