SRI LANKA STANDARD 598:1982
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SPECIFICATION FOR
SPLIT PINS

BUREAU OF CEYLON STANDARDS

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SLS 598 : 1982

Gr. 7

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SRI LANKA STANDARD
SPECIFICATION FOR SPLIT PINS

FOREWORD

This Sri Lanka Standard was authorised for adoption and publication by the Council of the Bureau of Ceylon Standards on 1982-11-24, after the draft, finalized by the Drafting Committee on Staples and Split Pins had been approved by the Mechanical Engineering Divisional Committee.

This standard covers split pins made of low carbon steel. Brass and stainless steel are specified as optional materials for split pins.

The dimensions of split pins specified in this standard are consistent with the requirements given in ISO 1234: Split pins - metric series.

All the values in this standard are given in SI units.

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 analysis, shall be rounded off in accordance with CS 102. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

The assistance derived from the publications of the International Organization for Standardization (ISO), the British Standards Institution and the Indian Standards Institution in the preparation of this standard is gratefully acknowledged.

1 SCOPE

This standard lays down requirements and method of test for split pins.

2 REFERENCES

ISO 1234 Split pins - metric series

CS 102 Presentation of numerical values

SLS 428 Random sampling methods

3 DEFINITIONS

For the purpose of this standard the following definitions shall apply:

3.1 **length of the eye (b):** The distance from the underside to the extreme outer surface of the eye (see Fig. 1).

3.2 **nominal length (l):** The distance from the underside of the eye to the extreme end of the short leg (see Fig. 1 and Appendix A).

3.3 **nominal size:** The diameter of the hole for receiving the split pins.

4 DESIGNATION

A split pin shall be designated by the nominal size, nominal length and material (for material other than steel). All dimensions shall be in millimetres.

Example 1

A split pin of nominal size 5 mm, nominal length 50 mm and made of steel, shall be designated as:

Split pin 5 x 50

Example 2

A split pin of nominal size 10 mm, nominal length 80 mm and made of brass, shall be designated as:

Split pin 10 x 80 - Brass

5 REQUIREMENTS

5.1 Material

5.1.1 Unless otherwise ordered, split pins shall be manufactured from low carbon steel wire (0.15 per cent C max.) in a ductile condition suitable for forming and fixing. (Ultimate tensile strength should not exceed 540 MPa). The material shall be rolled or drawn to a half-round section and the corners may be radiused as shown in Fig. 1.

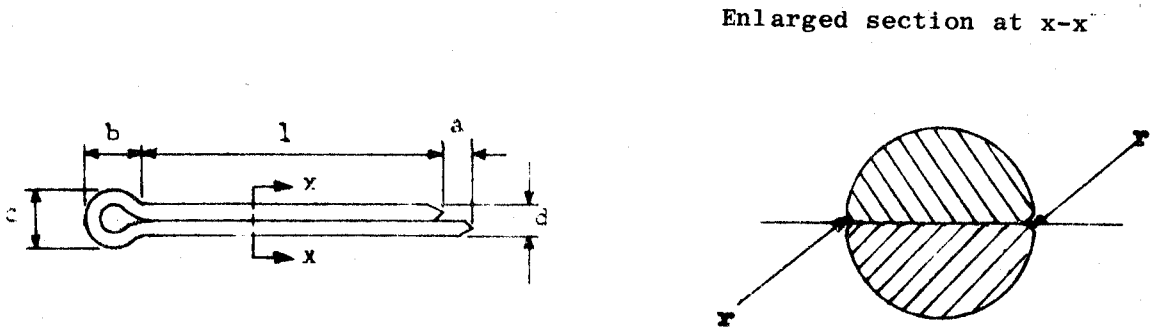


FIGURE 1 - Split pin

5.1.2 If split pins are required to be made of any other material such as brass or stainless steel, this shall be specified by the purchaser in his enquiry or order.

5.2 Workmanship and finish

5.2.1 Steel split pins shall be supplied with bright self colour finish unless otherwise specified by the purchaser. The surface of the split pins shall be smooth and free from harmful defects such as cracks, burrs, rust and staggering of the contact faces. The ends of split pins shall have either the shape shown in Fig. 2a or that shown in Fig. 2b. The shank of split pin shall be straight with both legs parallel throughout the nominal length.

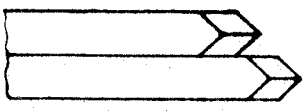


Fig. 2a

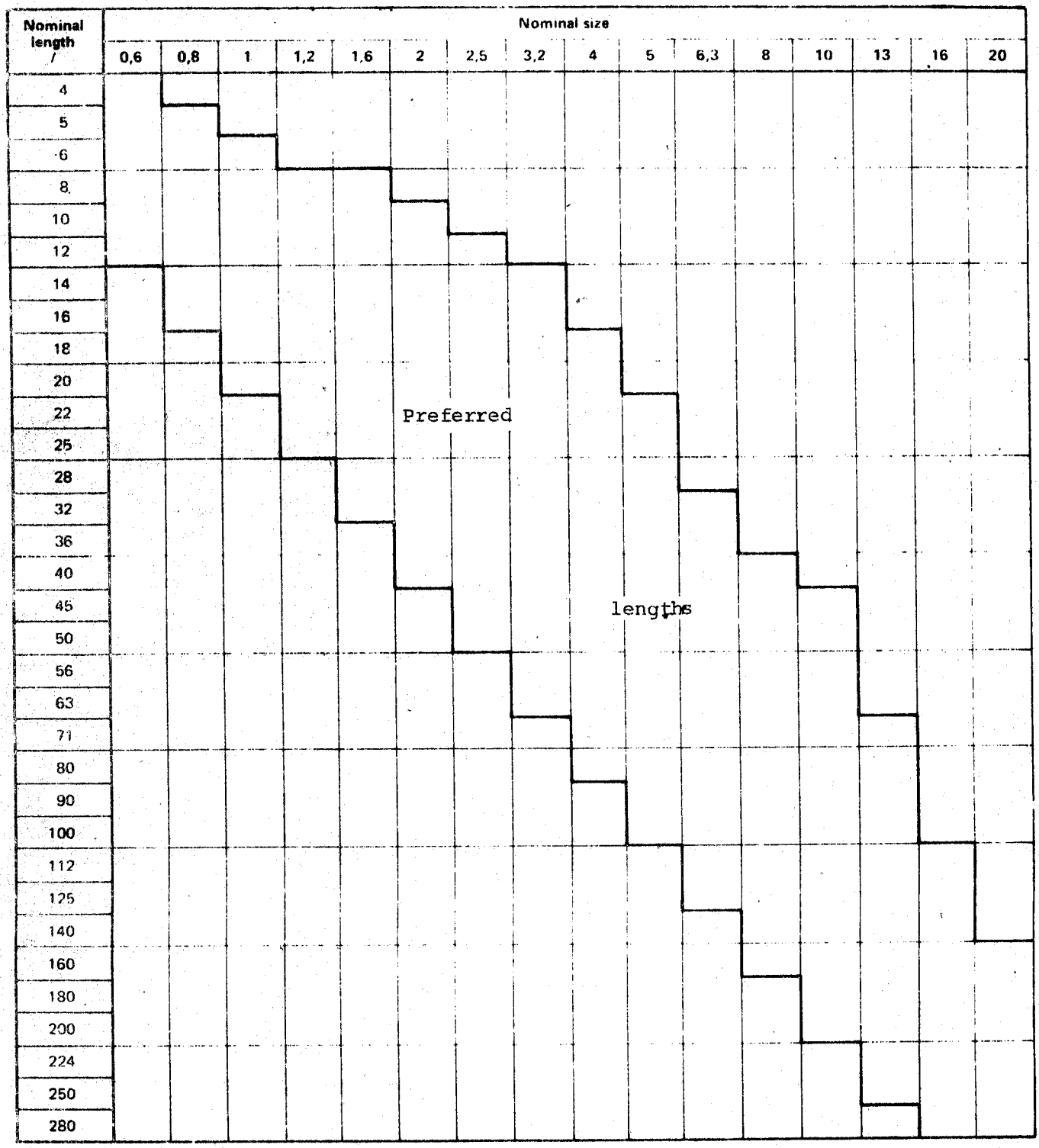
Fig. 2b

FIGURE 2 - Alternative shapes of end permissible

TABLE 1 - Preferred length - size combination

(See 5.3)

(All dimensions in millimetres)



5.2.2 Electroplated protective coatings may be applied, in which case the plating thickness will occupy part of the fit allowance. For normal coating thickness the recommended hole sizes for unplated pins shall also accomodate plated split pins, but in the case of heavier plating it may be necessary to specify a larger hole size.

NOTE - It should be noted that plating cannot be applied between the legs nor with certainly to the inside of the eye. In application where this is not acceptable corrosion resistant materials such as stainless steel are recommended.

5.3 Dimensions

The preferred length-size combinations for split pins are given in Table 1, and the tolerances are given in Table 2. The other important dimensions shall be as given in Table 3.

NOTE - The lengths of split pins may be determined by the method described in Appendix **A.**

TABLE 2 - Tolerance on length

(All dimensions in millimetres)

Nominal size	Tolerance on length
Up to and including 3.2	± 1.5
4, 5 and 6.3	± 2.0
8 and 10	± 2.5
13, 16 and 20	± 3.0

5.4 Performance

When tested in accordance with the bend test described in **8.1** the split pin shall not show any sign of fracture.

6 PACKING

Unless otherwise agreed to between the purchaser and the manufacturer split pins shall be packed in cartons and the number of split pins in each carton shall be as given in Table 4.

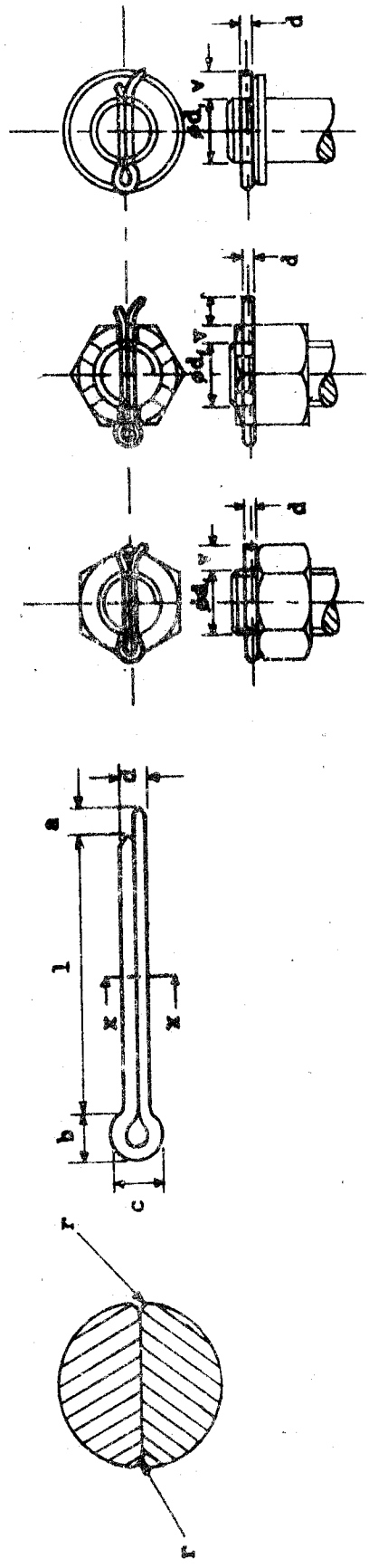


FIGURE 3 – Dimensions of split pins
(See Table 3)

TABLE 3 - Dimensions of spilt pins
(See 5.3 and Fig. 3)

(All dimensions in millimetres)

Nominal size / Dimensions (1)		0.6 (2)	0.8 (3)	1.0 (4)	1.2 (5)	1.6 (6)	2.0 (7)	2.5 (8)	3.2 (9)	4.0 (10)	5.0 (11)	6.3 (12)	8.0 (13)	10 (14)	13 (15)	16 (16)	20 (17)
Nominal diameter (d)	Max	0.5	0.7	0.9	1.0	1.4	1.8	2.3	2.9	3.7	4.6	5.9	7.5	9.5	12.4	15.4	19.3
	Min	0.4	0.6	0.8	0.9	1.3	1.7	2.1	2.7	3.5	4.4	5.7	7.3	9.3	12.1	15.1	19.0
Length of extended prong (a)	Max	1.6	1.6	1.6	2.5	2.5	2.5	2.5	3.2	4.0	4.0	4.0	4.0	6.3	6.3	6.3	6.3
	Min	0.8	0.8	0.8	1.2	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0	3.1	3.1	3.1	3.1
Length of eye (b)	≈	2.0	2.4	3.0	3.0	3.2	4.0	5.0	6.4	8.0	10.0	12.6	16.0	20.0	26.0	32.0	40.0
Outside diameter of eye (c)	Max	1.0	1.4	1.8	2.0	2.8	3.6	4.6	5.8	7.4	9.2	11.8	15.0	19.0	24.8	30.8	38.6
	Min	0.9	1.2	1.6	1.7	2.4	3.2	4.0	5.1	6.5	8.0	10.3	13.1	16.6	21.7	27.0	33.8
Radius of corner of wire (r)	Max	0.05	0.05	0.10	0.10	0.15	0.15	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.95	1.20	1.50
Bolts corresponding diameter	over	-	2.5	3.5	4.5	5.5	7.0	9.0	11.0	14.0	20.0	27.0	39.0	56.0	80.0	120	170
	upto	2.5	3.5	4.5	5.5	7.0	9.0	11.0	14.0	20.0	27.0	39.0	56.0	80.0	120	170	-
Clevis pins*	over	-	2.0	3.0	4.0	5.0	6.0	8.0	9.0	12.0	17.0	23.0	29.0	44.0	69.0	110	160
	upto	2.0	3.0	4.0	5.0	6.0	8.0	9.0	12.0	17.0	23.0	29.0	44.0	69.0	110	160	-
V		3.0	3.0	4.0	5.0	5.0	6.0	6.0	8.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0	32.0

* *For railway applications and in cases where split pins in clevis pins are subjected to alternating transverse forces it is recommended to use the next split pin size to that specified in the above table.*

TABLE 4 - Packing of split pins

Nominal size in mm	Quantity in each carton
Up to and including 2	1000
2.5, 3.2 and 4	500
5 and 6.3	250
8 and 10	100
13, 16 and 20	20

7 MARKING

Each carton shall be clearly and indelibly marked with the following:

a) The manufacturer's name and address;

b) Trade name or trade mark, if any;

c) The designation of split pins;

d) The quantity; and

e) Any other additional marking required by the purchaser.

8 METHOD OF TEST

8.1 Bend test

The samples selected for test, when cold shall permit half the length of both the legs being bent back through 180° and closed upon themselves without showing any sign of fracture.

9 SAMPLING

9.1 Lot

In any consignment the cartons containing split pins of same size and designation shall be grouped to form a lot.

9.2 Scale of sampling

9.2.1 Samples from each lot shall be tested for ascertaining conformity of the lot to the requirements of this standard.

9.2.2 The cartons and split pins shall be selected at random. In order to ensure randomness of selection, random number table given in SLS 428 shall be used.

9.2.3 Number of cartons to be selected for the test from the lot shall be in accordance with Table 5.

TABLE 5 - Scale of sampling for cartons

Number of cartons in the lot	Number of cartons to be selected
Up to 20	5
21 to 50	8
51 to 100	12
101 to 150	16
151 and above	20

9.2.4 The number of split pins to be selected from each carton thus selected shall be in accordance with Table 6.

Table 6 - Scale of sampling for split pins

Number of split pins per carton	Number of split pins to be drawn
20 or less	3
21 to 100	5
101 to 400	6
401 to 900	8
901 and above	10

9.3 Testing of samples

Each split pin selected as in 9.2.3 and 9.2.4 shall be inspected for the requirements specified in 5.3 and 5.4 of this standard.

10 CONFORMITY TO STANDARD

The lot shall be declared as conforming to the requirements specified in 5.3 and 5.4 of this standard, if the number of split pins not conforming to one or more requirements when inspected as in 9.3 is less than or equal to the corresponding acceptance number given in Table 7.

TABLE 7 - Acceptance number of split pins

Number of split pins inspected	Acceptance number
Up to 15	1
16 - 40	2
41 - 64	3
65 - 80	4
81 - 100	5
101 - 128	6
129 - 160	7
161 - 200	9

APPENDIX A

(See 3.2 and 5.3)

SPLIT PIN LENGTH GAUGE

A.1 Length gauge

The lengths of the split pins may be determined by means of a split pin gauge as illustrated below in Fig. 4.

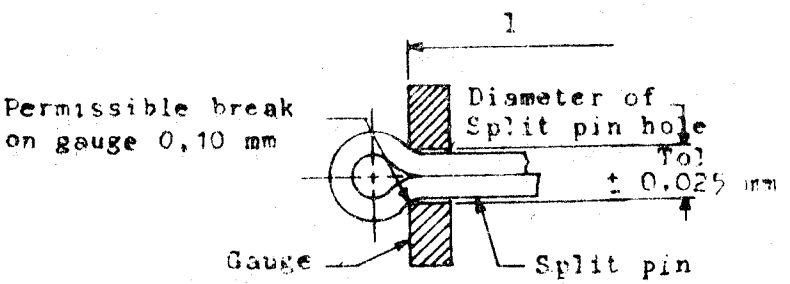


FIGURE 4 - Split pin gauge

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