

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

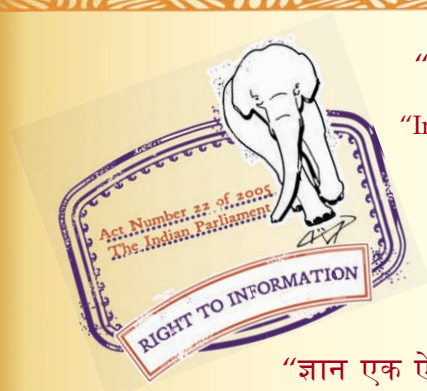
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

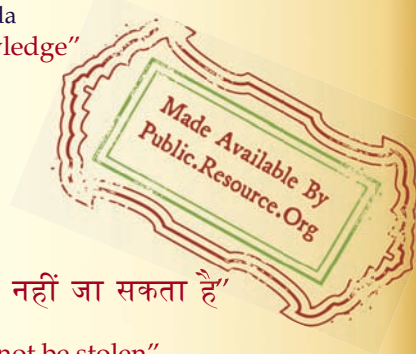
IS 10810-54 (1984): Methods of test for cables, Part 54:
Static flexibility test [ETD 9: Power Cables]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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*Indian Standard***METHODS OF TEST FOR CABLES****PART 54 STATIC FLEXIBILITY TEST**

1. Scope — Covers a method to determine the static flexibility of cables.

2. Significance — Some types of flexible cables such as lift and welding cables are subjected to frequent bending resulting in change of configuration of cable, in service. This test is done to ascertain the suitability of cables required for such operations.

3. Terminology — See IS : 1885 (Part 32) - 1971 'Electrotechnical vocabulary : Part 32 Cables, conductors and accessories for electricity supply'.

4. Apparatus

4.1 Two Clamps — A and B located at a height of at least 1.5 m above ground level as shown in Fig. 1. Clamp A shall be fixed and clamp B shall be capable of moving horizontally at the level of clamp A.

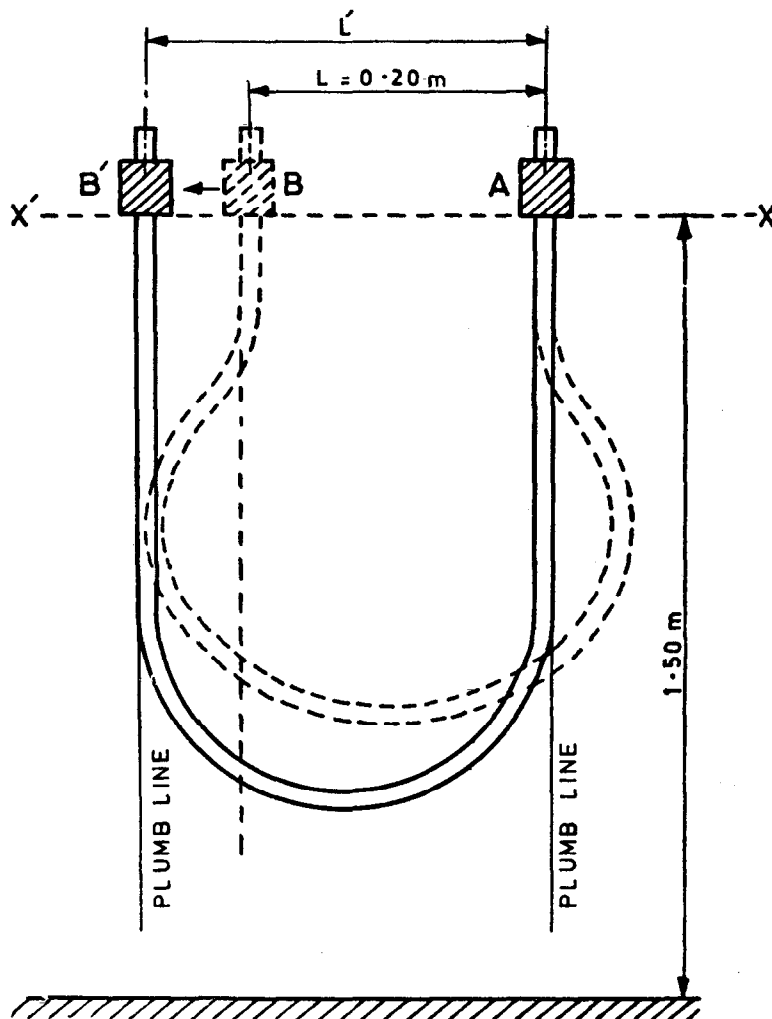


FIG. 1 STATIC FLEXIBILITY TEST

4.2 Mandrels or Reels — Diameters approximately 20 times the diameters of cables.

4.3 Measuring Tape

5. Material — No material other than the test specimen is required.

6. Test Specimen

6.1 A sample of cable having a length of 3 ± 0.05 m shall be taken.

6.2 Number of Specimens — One.

7. Conditioning — No conditioning is normally required. If however the results are unfavourable the sample shall be pre-conditioned by winding it four times on and off the mandrel or reels with diameters approximately 20 times the diameters of cables, each time turning the sample through 90°.

8. Procedure

8.1 The ends of the sample shall be clamped vertically (and remain vertical during the test), one end in clamp *A*, the other in the movable clamp *B* which shall be at a distance of 0.20 m from clamp *A*. The cable takes roughly the shape indicated in Fig. 1 by the dotted lines.

8.2 The movable clamp *B* shall then be moved away from the fixed clamp *A* until the loop formed by the cable takes the shape indicated in the Fig. 1 by the heavy outline of the U enclosed wholly between two plumb lines through the clamps and set up tangentially to the external generatrix of the cable. This test shall be done twice, the cable being turned in the clamp, after the first test, through 180°.

8.3 The values of L' (L_1' and L_2') shall be measured between the two plumb lines.

8.4 If the results of the test are unfavourable, the sample shall be preconditioned in accordance with 7 and the test conducted as in 8.1 to 8.3.

9. Tabulations of Observations

Sample Reference No.	Distance Between Two Plumb Lines L_1'	Distance Between Plumb Lines after Turning the Cable, Through 180° L_2'

10. Calculation — Mean distance between two plumb lines

$$L' = \frac{L_1' + L_2'}{2}$$

11. Report

11.1 Static Flexibility Test

Cable type _____

Reference specification _____

11.2 Results

Sample No.	Number of Cores	Distance Between Two Plumb Lines	
		Calculated	Specified

11.3 Conclusion — The specimen meets/does not meet the requirements of the specification.