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भारतीय मानक मसौदा
नेत्रहीनों के लिए छड़ी – विशिष्टि
भाग 2 मोड़ने योग्य प्रकार
[IS 11646 (Part 2):1986 का पहला पुनरीक्षण]

Draft Indian Standard
Cane For Visually Handicapped – Specification
Part 2 Folding Type
[First Revision of IS 11646 (Part 2) 1986]

ICS 11.180.10

Artificial Limbs, Rehabilitation Appliances and
Equipment for Persons with Disability
Sectional Committee, MHD 09

Last date for comments: **03 July 2024**

FOREWORD

(Formal clauses will be added later)

This standard was originally published in 1986. The first revision of this standard has been brought out to align the standard with the latest style and format of Indian Standards. This revision incorporates Amendment No.1 issued in October 1994 and Amendment No 2 issued in March 2012. Also, cross-references to Indian Standards have been updated.

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 IS 2: 2022 ‘Rules for Rounding Off Numerical Values (*second revision*)’. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

1 SCOPE

This standard specifies dimensional and other requirements for folding cane used as a probing device or the purpose of mobility by blind persons.

2 REFERENCES

The standards given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

IS No.	Title
IS 7078: 1973	Plastics used in instrument industry

3 MATERIAL

3.1 Shaft/Tube

Aluminium or aluminium alloy or any other suitable material which shall be light conductive and durable.

3.2 Grip

Grip shall be made of rubber having slight roughness, plastic, nylon or any other material which is non-absorber of heat and moisture.

3.3 Tip

Tip shall be made of nylon, plastics, steel or any other suitable material. It shall be made detachable from the shaft. Tip shall be capable of giving auditory impulse.

3.4 Coating

The cane may be PVC coated or powder coated to make it white. The colour/paint shall be such that it shall not scrap or chip. The cane finish shall be elegant and reflective. The cane may also be provided with a fluorescent coating which can give luminosity in darkness.

3.5 Inner Element

Elastic with single cored or wrapped, plastics or nylon cord.

4 SHAPE AND DIMENSIONS

The shape and dimensions shall be as shown in Fig. 1.

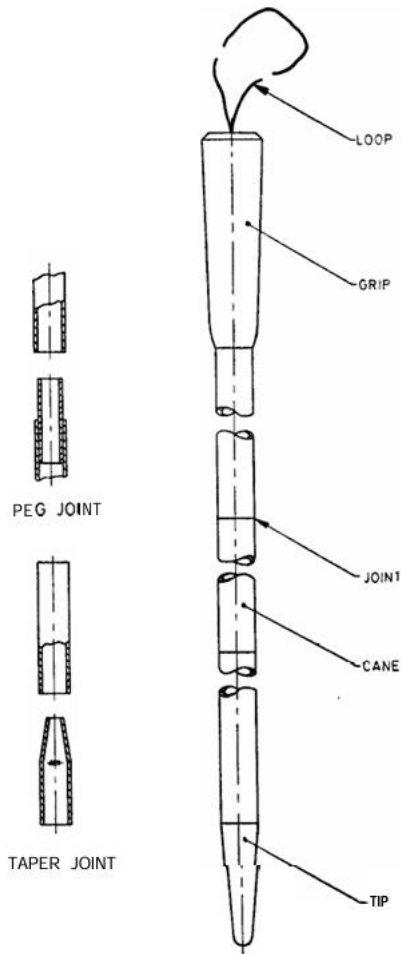


FIG. 1 CANE, FOLDING TYPE, TYPICAL

5 CONSTRUCTION

5.1 Shaft

Shaft shall be made of tube of high tensile strength and ductility. The wall thickness of the tubes shall be minimum of 1 mm and outside diameter of the tube at the centre shall be 12.5 mm minimum. The total length of the cane shall vary between 1000 and 1350 mm in steps of 50 mm. There may be 2 to 5 shafts in order to make it foldable.

5.2 Grip

The grip may preferably be made of rubber compound. It may be moulded as shown in Fig. 1. The moulded grip shall have broader end at the top and gradually tapering at the lower end. The grip shall have flat surface in one of the segments and the remaining portion may have a few (2 or 3) serrations for better grip. The weight of the grip shall be 70 to 100 g and length 175 to 250 mm. The grip shall be fixed on one end of the shaft with a strong adhesive. The hollowness may be filled in with a plastic button peg. The grip has an elastic loop for handle passing through a peg hole at a distance of 12.5 from top. The perimeter of the loop shall be 200 to 250 mm.

5.3 Tip

This tip may be made from suitable plastics as applicable to plastics for gear specified in IS 7078 or any other material having property of good auditory impulse. The length of the tip outside the cane shall be 25 to 50 mm. The tip may have a peg hole at one end which shall be fixed into the other end of the shaft by either inserting or screwing it into the tube. The diameter of the tip shall be 12.5 mm minimum, and may be half round at the bottom.

5.4 Joints

The joints shall be such that it shall be easily fitted after disassembling. The joints may be of taper type or peg type. In case of taper joint one end of the shaft is tapering and the other is done shaped. In case of peg type joint, either one end of the shaft is reduced in diameter by turning or a peg button is tightly fixed in the shaft to enable it to be fitted in the female end of the shaft. The male and female parts shall fit into each other firmly (see **Fig. 3**). The shaft shall remain attached to when a single or double elastic cord is passed through. The elastic cord shall be fixed at the grip and the other end at the peg hold at the tip.

6 WORKMANSHIP AND FINISH

The functioning of the cane shall be smooth. Sharp points, roughness and any projections shall be avoided.

7. TESTS

Endurance Test

The folding cane shall be folded and unfolded manually or by mechanical means for 1000 times. After the test the performance of the cane shall not be affected.

8 MARKING

The cane shall be marked with the manufacturer's name, initials or recognized trade mark, and with the total length of the cane below the grip.

8.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed there under, and the product(s) may be marked with the Standard Mark.

9 PACKING

The cane shall be packed in a manner as agreed to between the purchaser and the manufacturer.