



भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG, NEW DELHI 110002
Phone: + 91 11 23230131, 23233375, 23239402 Extn 8406, 23608406; Website: www.bis.gov.in

व्यापक परिचालन मसौदा

हमारा संदर्भ : सीईडी 43/टी-91

05 अप्रैल 2023

तकनीकी समिति : मृदा एवं नींव इंजीनियरी विषय समिति, सीईडी 43

प्राप्तकर्ता :

- 1 सिविल इंजीनियरी विभाग परिषद, सीईडीसी के सभी सदस्य
- 2 मृदा एवं नींव इंजीनियरी विषय समिति, सीईडी 43 के सभी सदस्य
- 3 आईएस 2131 एवं आईएस 9640 के पुनरीक्षण के लिए पैनल, सीईडी 43:पी 4 के सभी सदस्य
- 4 रुचि रखने वाले अन्य निकाय।

महोदया/महोदय,

निम्नलिखित मसौदा संलग्न है:

प्रलेख संख्या	शीर्षक
सीईडी 43 (22265)WC	मृदा के मानक भेदन परीक्षण के लिए स्प्लिट स्पून सैम्पलर — विशिष्ट का भारतीय मानक मसौदा (IS 9640 का पहला पुनरीक्षण) (ICS No. 93.020; 13.080.20)

कृपया इस मसौदे का अवलोकन करें और अपनी सम्मतियाँ यह बताते हुए भेजे कि यह मसौदा प्रकाशित हो तो इस पर अमल करने में, आपको व्यवसाय अथवा कारोबार में क्या कठिनाइयाँ आ सकती हैं।

सम्मतियाँ भेजने की अंतिम तिथि: 06 मई 2023

सम्मति यदि कोई हो तो कृपया अधोहस्ताक्षरी को ई मेल द्वारा madhurima@bis.gov.in पर या उपरलिखित पते पर, संलग्न फॉर्मेट में भेजें।

यदि कोई सम्मति प्राप्त नहीं होती है अथवा सम्मति में केवल भाषा संबंधी त्रुटि हुई तो उपरोक्त प्रलेख को यथावत अंतिम रूप दे दिया जाएगा। यदि सम्मति तकनीकी प्रकृति की हुई तो विषय समिति के अध्यक्ष के परामर्श से अथवा उनकी इच्छा पर आगे की कार्यवाही के लिए विषय समिति को भेजे जाने के बाद प्रलेख को अंतिम रूप दे दिया जाएगा।

यह प्रलेख भारतीय मानक ब्यूरो की वेबसाइट www.bis.gov.in पर भी उपलब्ध है।

धन्यवाद।

भवदीय

ह/-

(अरुण कुमार एस.)

वै. 'ई'/निर्देशक और प्रमुख (सिविल इंजीनियरी)

संलग्न: उपरलिखित



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**DRAFT IN
WIDE CIRCULATION**

DOCUMENT DESPATCH ADVICE

Reference	Date
CED 43/T-91	05 April 2023

TECHNICAL COMMITTEE:

SOIL AND FOUNDATION ENGINEERING SECTIONAL COMMITTEE, CED 43

ADDRESSED TO:

1. All Members of Civil Engineering Division Council, CEDC
2. All Members of Soil and Foundation Engineering Sectional Committee, CED 43
3. All Members of Panel for Revision of IS 2131 and IS 9640, CED 43:P4
4. All other interests

Dear Madam/Sir,

Please find enclosed the following draft:

Doc. No.	Title
CED 43 (22265)WC	Draft Indian Standard Split spoon sampler for standard penetration test of soil — Specification (<i>First Revision of IS 9640</i>) (ICS No. 93.020; 13.080.20)

Kindly examine the draft and forward your views stating any difficulties which you are likely to experience in your business or profession, if this is finally adopted as National Standard.

Last Date for comments: 06 May 2023

Comments if any, may please be made in the enclosed format and emailed at madhurima@bis.gov.in or sent at the above address.

In case no comments are received or comments received are of editorial nature, you will kindly permit us to presume your approval for the above document as finalized. However, in case comments, technical in nature are received, then it may be finalized either in consultation with the Chairman, Sectional Committee or referred to the Sectional Committee for further necessary action if so desired by the Chairman, Sectional Committee.

The document is also hosted on BIS website www.bis.gov.in.

Thanking you,

Yours faithfully,

Sd/-

(Arun Kumar S.)

Sc. 'E'/Director and Head (Civil Engg.)

Encl: As above

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

(Not to be reproduced without the permission of BIS or used as a Standard)

Draft Indian Standard

**SPLIT SPOON SAMPLER FOR STANDARD PENETRATION TEST OF
SOIL —SPECIFICATION**

(First Revision of IS 9640)

Soil and Foundation Engineering
Sectional Committee, CED 43

Last date for Comments:
06 May 2023

Soil and Foundation Engineering Sectional Committee, CED 43

FOREWORD

(Formal clauses will be added later)

There is a series of standards on methods of testing of soils. It has been recognized that reliable and inter-comparable test results can be obtained only with the standard testing equipment capable of giving that desired level of accuracy. With this objective, a series of specifications covering the requirements of equipment used for testing soils have been published to encourage their development and manufacture in the country.

The equipment covered in this standard is used for conducting the *in situ* standard penetration test in soils in accordance with IS 2131:XXXX 'Standard penetration test of soil — Method of test (*second revision*)' (*under preparation*).

This standard was first published in 1980. The present revision has been taken up with a view to incorporating the modifications found necessary as a result of experience gained in the use of this standard. Also, in this revision, the standard has been brought into latest style and format of Indian Standards, and references to Indian Standards, wherever applicable have been updated. The other major modifications incorporated in this revision of the standard are given below:

- a) The title of the standard has been changed from 'Specification for split spoon sampler' to 'Split spoon sampler for standard penetration test of soil — Specification'.
- b) Length and the other dimensions of the sampler have been modified in line with the current good practice.
- c) Composite samplers, that is, split spoon sampler with liner have not been permitted for conducting standard penetration test. Accordingly, the various figures have been modified removing the liner. Also, the figure of the liner has been deleted. Marking clause has also been modified to delete marking of

type of sampler. However, considering that split spoon sampler with liner may be used in special cases for sampling for other purposes, a suitable provision has been added.

- d) BIS certification marking clause has been modified to align with the revised *Bureau of Indian Standards Act, 2016*.

This standard contributes to the Sustainable Development Goal 9 - Industry, Innovation and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

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 the same as that of the specified value in this standard.

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

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Draft Indian Standard

**SPLIT SPOON SAMPLER FOR STANDARD PENETRATION TEST OF
SOIL —SPECIFICATION**

(First Revision of IS 9640)

Soil and Foundation Engineering
Sectional Committee, CED 43

Last date for Comments:
06 May 2023

1 SCOPE

This standard covers the requirements of split spoon sampler used for conducting *in-situ* standard penetration test in soils.

2 REFERENCE

The Indian Standards given below contain provisions which through reference in this text, constitute provision 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 the standards:

<i>IS No.</i>	<i>Title</i>
IS 513 (Part 1) : 2016	Cold reduced carbon steel sheet and strip: Part 1 Cold forming and drawing purpose (<i>sixth revision</i>)
IS 1239 (Part 1) : 2004	Steel tubes, tubulars and other wrought steel fittings — Specification: Part 1 Steel tubes (<i>sixth revision</i>)
IS 2102 (Part 1) : 1993/ ISO 2768-1 : 1989	General tolerances: Part 1 Tolerances for linear and angular dimensions without individual tolerance indications (<i>third revision</i>)
IS 2131 : XXXX	Standard penetration test of soil — Method of test (<i>second revision</i>) (<i>under preparation</i>)
IS 4432 : 1988	Specification for case hardening steels (<i>first revision</i>)

3 DIMENSIONS

Dimensions with tolerances of different component parts of this apparatus are given in Fig. 1 to 6. Except where tolerances are specifically mentioned against the dimensions, all dimensions shall be taken as nominal dimensions and tolerance shall be as given for medium class in IS 2102 (Part 1).

4 MATERIALS

The materials of construction of the different component parts of the split spoon sampler shall be as given in Table 1.

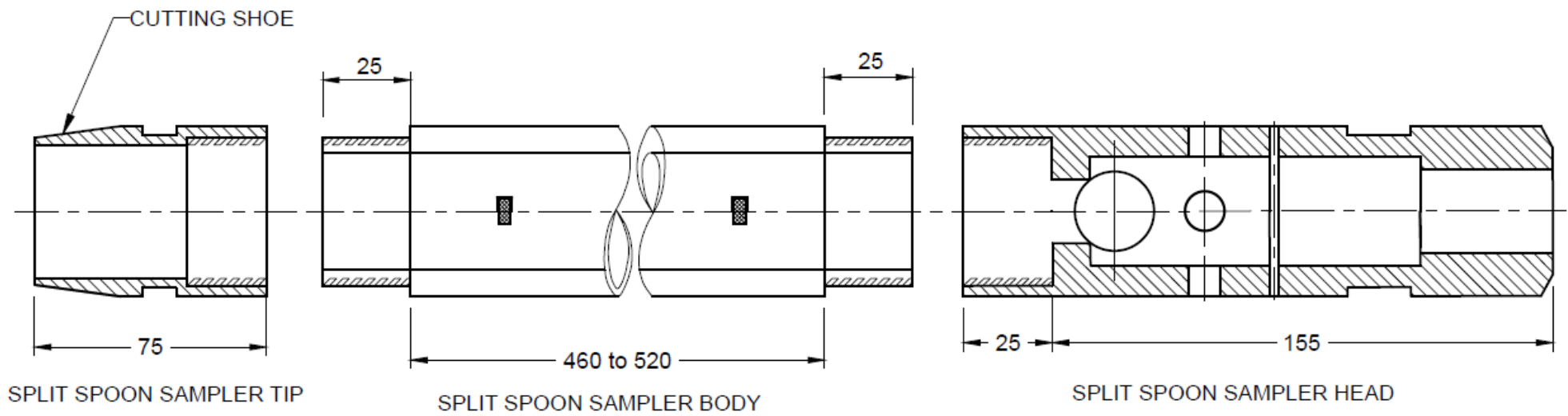
Table 1 Materials of Construction of Different Component Parts of the Split Spoon Sampler
(Clause 4)

SI No. (1)	Part (2)	Materials (3)	Special Requirements (4)	Conforming to (5)
i)	Sampler tip including cutting shoe (see Fig. 2)	Mild steel, case-hardened	Cutting edge case hardened to 45 HRC, <i>Min</i>	IS 4432
ii)	Sampler Head (see Fig. 3)	Mild steel, case-hardened	Smooth surface	IS 4432
iii)	Sampler Body (see Fig. 4)	Mild steel	Smooth surface	IS 513 (Part 1)
iv)	Coupling (see Fig. 5)	Mild steel	To suit sounding rods as specified in IS 2131	IS 1239 (Part 1)

5 CONSTRUCTION

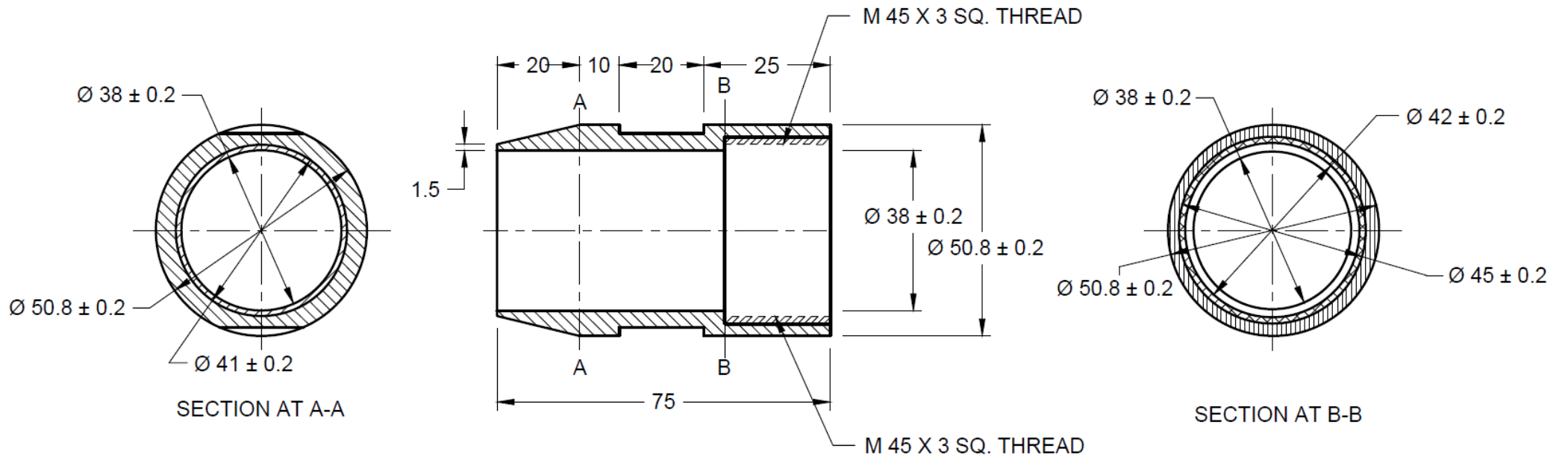
5.1 The split spoon sampler shall be constructed as per details given in Fig. 1 to 4.

5.2 The use of liner inside the split spoon sampler may be considered as a special case for sampling and in such a case, the SPT sampler shoe dimensions shall be suitably adjusted to match with the inner diameter of the liner. The inner diameter of the liner shall be 35 mm \pm 0.5 mm. The blow counts shall not be used for reporting observed SPT N value.



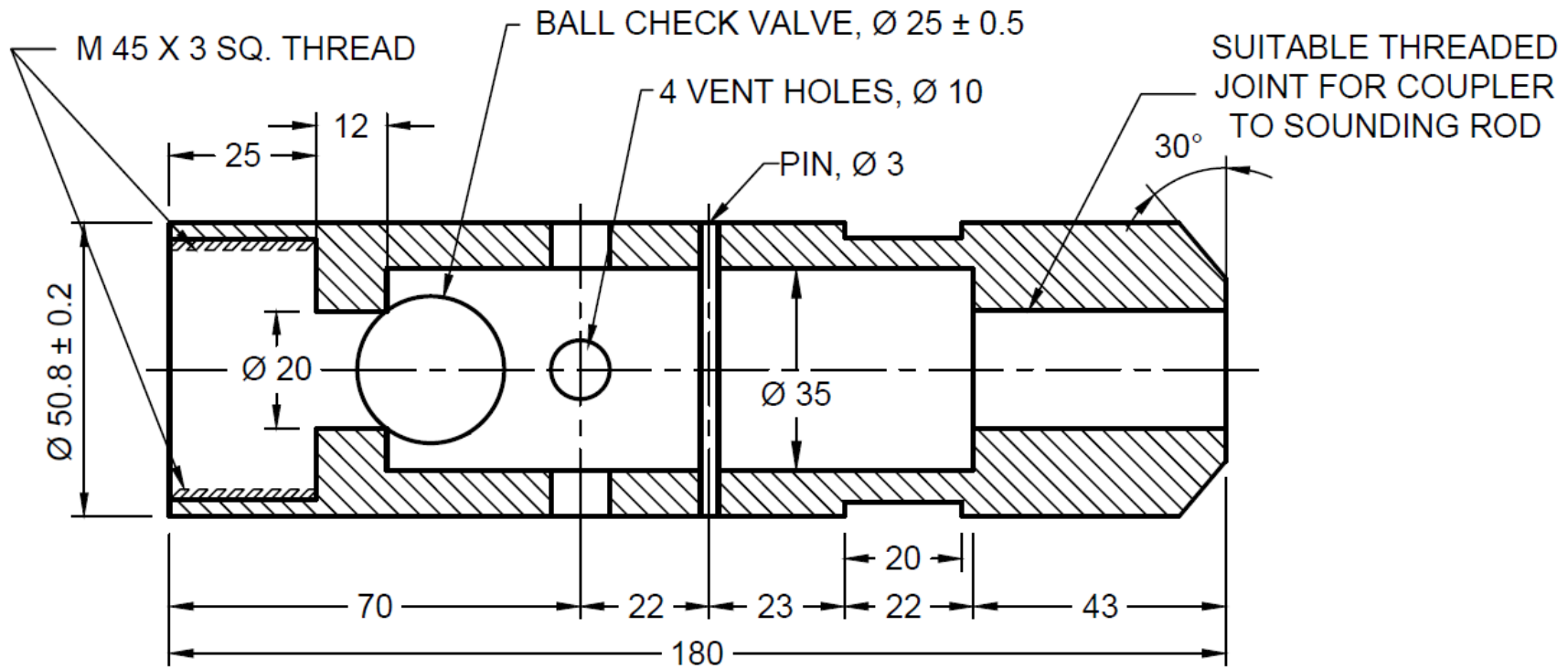
All dimensions in millimetres.

FIG. 1 ASSEMBLY OF SPLIT SPOON SAMPLER



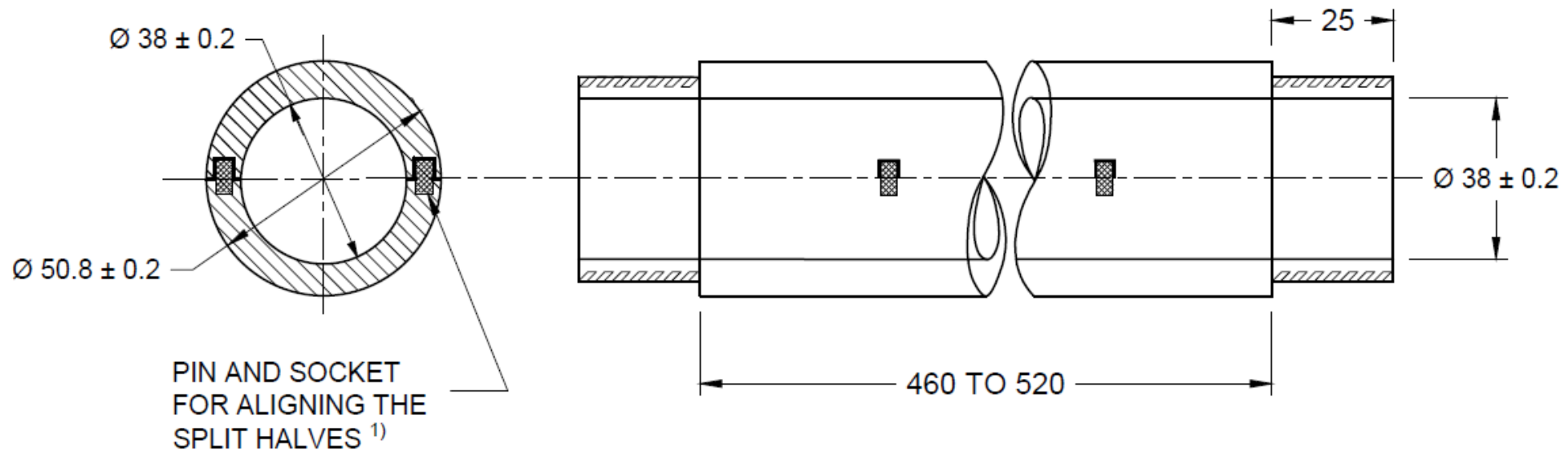
All dimensions in millimetres.

FIG. 2 SPLIT SPOON SAMPLER TIP INCLUDING CUTTING SHOE



All dimensions in millimetres.

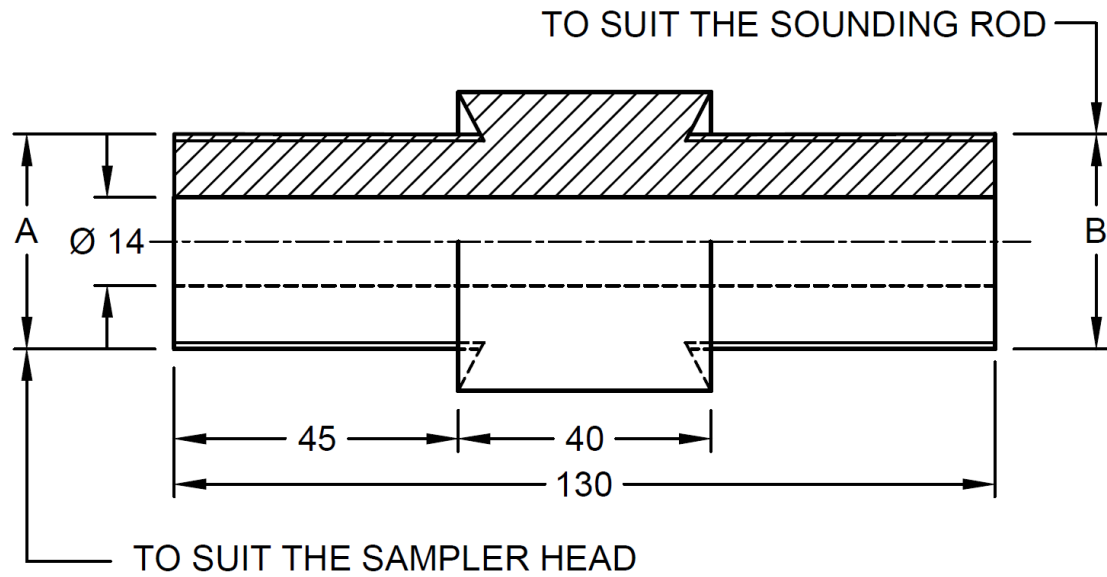
FIG. 3 SPLIT SPOON SAMPLER HEAD WITH BALL CHECK VALVE



¹⁾ A square lap joint between the split halves without pin and socket can also be used.

All dimensions in millimetres.

FIG. 4 SPLIT SPOON SAMPLER BODY



All dimensions in millimetres.

FIG. 5 COUPLER TO SOUNDING ROD

6. MARKING

6.1 The following information shall be clearly and indelibly marked on each component of the equipment:

- a) The name of the manufacturer or his registered trade-mark or both; and
- b) Date of manufacture.

6.1.1 *BIS Certification Marking*

The product 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 thereunder, and the product may be marked with the Standard Mark.