भारतीय मानक ब्यूरो
(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)
BUREAU OF INDIAN STANDARDS
(Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India

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व्यापक परिचालन मसौदा

हमारा संदर्भ : सीईडी 30/टी-7 **11 जून 2025**

तकनीकी समिति: निर्माण अनुभागीय समिति के लिए मिट्टी और स्थिर मिट्टी उत्पाद, सीईडी 30

प्राप्तकर्ता :

क) सिविल इंजीनियरी विभाग परिषद्, सीईडीसी के सभी सदस्य
ख) सीईडी 30 के सभी सदस्य
ग) रूचि रखने वाले अन्य निकाय

प्रिय महोदय/महोदया,

निम्नलिखित भारतीय मानक का मसौदा संलग्न हैं:

प्रलेख संख्या	शीर्षक
सीईडी 30 (28174)WC	**भारतीय मानक मसौदा** **निर्माण के लिए पक्की मिट्टी की छिद्रित ईंटें - विशिष्टता** (IS 2222 **का *चौथी* *पुनरीक्षण***) ICS No. 91.100.25

कृपया इस मानक के मसौदे का अवलोकन करें और अपनी सम्मतियॉ यह बताते हुए भेजे कि यदि यह मानक के रूप में प्रकाशित हो तो इस पर अमल करने में आपके व्यवसाय अथवा कारोबार में क्या कठिनाइयाँ आ सकती हैं।

सम्मतियाँ भेजने की अंतिम तिथि: 10/07/2025

टिप्पणियाँ, यदि कोई हों, बीआईएस ई-गवर्नेंस पोर्टल https://www.services.bis.gov.in/php/BIS_2.0/dgdashboard/draft/darftdetail/63/3/CED के माध्यम से ऑनलाइन भेजी जा सकती हैं।

वैकल्पिक रूप से, टिप्पणियाँ संलग्न प्रारूप में भी दर्ज की जा सकती हैं और ced30@bis.gov.in या divya.s@bis.gov.in पर ईमेल की जा सकती हैं।

आपको अपनी टिप्पणियाँ प्रस्तुत करने के लिए लॉगिन करना पड़ सकता है, कृपया लॉगिन बनाएं।

यदि कोई सम्मति प्राप्त नही होती है अथवा सम्मति में केवल भाषा सम्बन्धी त्रुटि हुई तो उपरोक्त प्रलेख को यथावत अंतिम रूप दिया जाएगा। यदि सम्मित तकनीकी प्रकृति की हुई 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 वैबसाइट www.bis.gov.in पर भी उपलब्ध हैं।

धन्यवाद।

भवदीय
ह/-
(**दिव्या एस.**)
सदस्य सचिव सीईडी 30
वैज्ञानिक 'डी'(सिविल इंजीनियरिंग)
ई-मेल: **divya.s@bis.gov.in**

संलग्न: उपरलिखित

भारतीय मानक ब्यूरो
(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)
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WIDE CIRCULATION DRAFT

Our Reference: CED 30/T- 7 **11 June 2025**

Technical Committee: Clay and Stabilized Soil Products for Construction Sectional Committee, CED 30

Addressed To:

a) All Members of Civil Engineering Division Council, CEDC
b) All Members of CED 30
c) All others interested

Dear Sir/Madam,

Please find enclosed the following document:

Doc No.	*Title*
CED 30 (28174) WC	**Draft Indian Standard** **Burnt Clay Perforated Building Bricks — Specification** [*Fourth* Revision of IS 2222] ICS No. 91.100.25

Kindly examine the draft standard 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: **10 July 2025**

Comments if any, may be sent online through the BIS e-governance portal at https://www.services.bis.gov.in/php/BIS_2.0/dgdashboard/draft/darftdetail/63/3/CED .

Alternatively, comments may also be recorded in the enclosed format and emailed at ced30@bis.gov.in or at divya.s@bis.gov.in.

You may be required to login to submit your comments, kindly create a login.

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 of comments of 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,

Sd/-
(**Divya S.**)
Member Secretary CED 30
Scientist 'D' (Civil Engineering)
E-mail: **divya.s@bis.gov.in**

Encl: As above

FORMAT FOR SENDING COMMENTS ON THE DOCUMENT

[Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub-clause/ table/figure, etc, be stated on a fresh row. Information/comments should include reasons for comments, technical references and suggestions for modified wordings of the clause. **Comments through** https://www.services.bis.gov.in/php/BIS_2.0/WCDraft/comment_pdraft.php **shall be appreciated**.]

Doc. No.: CED 30 (28174) WC **BIS Letter Ref**: CED 30/T-7

Title: *Draft Indian Standard Specification for Burnt Clay Perforated Building Bricks* (*Fourth Revision* of IS 2222)
ICS No. 91.100.25

Last date of comments: **10 July 2025**

Name of the Commentator/ Organization: _____

Sl No.	Clause/ Para/ Table/ Figure No. commented	Comments/ Modified Wordings	Justification of Proposed Change
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NOTE- Kindly insert more rows as necessary for each clause/table, etc

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

BURNT CLAY PERFORATED BUILDING BRICKS — SPECIFICATION

(*Fifth Revision* of IS 2222)

ICS No. 91.100.25

Clay and Stabilized Soil Products for Buildings Sectional Committee, CED 30	Last date of comments **10 July 2025**

FOREWORD

(Formal clauses will be added later.)

Perforated bricks are light in weight and provide better thermal insulation as compared to common bricks. Further, with the setting up of a number of mechanized and semi-mechanized plants for the manufacture of clay building products in different parts of the country, and since all the plants are using extrusion process, these bricks and other special varieties of clay building materials will be produced in larger quantities and will find greater application in general building construction. This standard has been formulated, therefore, to provide a guide for the manufacture and use of perforated bricks.

This standard was first published in 1962 and subsequently revised in 1969, 1979, 1989 and 1991. In this revision, non-modular size of brick in addition to modular size has been included.

The Sectional Committee responsible for the preparation of this standard has taken into consideration the views of producers, consumers and technologists and has related the standard to the manufacturing and trade practices followed in the country in this field. Due weightage has also been given to the need for international co-ordination among standards prevailing in different countries of the world.

Significant modifications in this revision are:

a) More sizes of non-modular sizes of bricks have been added,
b) The typical figure for perforated brick has been added, and
c) The requirement for edge warpage has been updated

This standard contributes to the following United Nations Sustainable Development Goal 11 ‘Sustainable cities and communities’ towards strengthen efforts to protect and safeguard the world’s cultural and natural heritage and Goal 12 ‘Ensure sustainable

consumption and production patterns' towards substantially reduce waste generation through prevention, reduction, recycling and reuse.

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.

Working Draft Indian Standard

BURNT CLAY PERFORATED BUILDING BRICKS — SPECIFICATION

(*Fourth Revision* of IS 2222)

1 SCOPE

This standard covers the dimensions, quality and physical requirements of perforated burnt clay bricks for use in walls and partitions.

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 edition of these standards:

IS No	*Title*
IS 1077: 2025	Common burnt clay building bricks — Specification (*sixth revision*) (*under revision*) DOC: 26161
IS 2248: 2025	Glossary of terms relating to clay products for buildings (*third revision*) (*under revision*) DOC: 26161
IS 3495	Burnt clay building bricks — Methods of tests:
Parts 1: 2019	Part 1 Determination of compressive strength (*fourth revision*)
Parts 2: 2019	Part 2 Determination of water absorption (*fourth revision*)
Parts 3: 2019	Part 3 Determination of efflorescence (*fourth revision*)
Parts 4: 2019	Part 4 Determination of warpage (*fourth revision*)
IS 5454:2024	Methods of sampling of clay building bricks (*second revision*)

3 TERMINOLOGY

For the purpose of this standard, the definitions of terms given in IS 2248 shall apply.

4 GENERAL QUALITY

The bricks shall be made of suitable clay and shall be thoroughly burnt at the maturing temperature of clay. They shall be free from cracks, flaws and nodules of free lime. They shall have rectangular face with sharp straight edge at right angle. They shall be of uniform colour and texture.

5 DIMENSIONS AND TOLERANCES

5.1 The standard size of burnt clay perforated bricks shall be as follows:

	Length (*L*) mm	*Width* (*W*) mm	*Height* (*H*) mm
Modular	190	90	90
Non - modular	230	110	70
	230	110	75

5.2 The permissible tolerances on the dimensions specified in **5.1** shall be as follows:

Dimension	*Tolerances*
mm	mm
70, 75, 90	± 4
110, 190	± 7
230	± 10

NOTE – The tolerances specified above shall apply to measurements on individual bricks.

6 PERFORATIONS

6.1 The area of perforation shall be between 20 percent and 36 percent of the total area of the corresponding face of the bricks. A typical example of perforation is given in Fig 1.

6.2 The perforation shall be uniformly distributed over the surface. In the case of rectangular perforations, the larger dimension shall be parallel to the longer side of the brick. The shorter side of the perforation shall be less than 20 mm in case of rectangular perforations and less than 25 mm diameter in case of circular perforations.

6.3 The area of each perforation shall not exceed 500 mm^2.

6.4 The thickness of any shell shall not be less than 15 mm and that of any web not less than 10 mm.

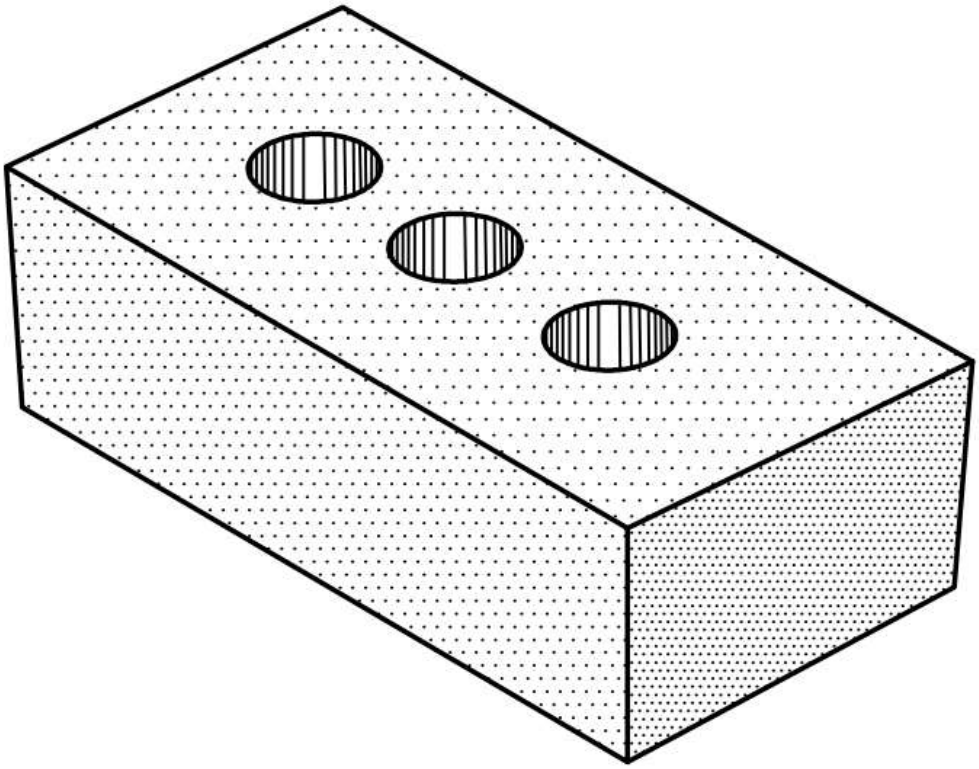

FIG 1 TYPICAL DIAGRAM OF PERFORATED BRICK

7 PHYSICAL REQUIREMENT

7.1 Compressive Strength

The bricks when tested in accordance with the procedure laid down in IS 3495 (Part 1) shall have a minimum average compressive strength of 7.5 N/mm^2 on gross area.

7.1.1 The compressive strength of any individual brick tested shall not fall below the minimum compressive strength specified for the corresponding class of brick by more than 15 percent as per IS 1077. The lot shall then be checked for next lower class of brick.

7.2 Water Absorption

The bricks when tested in accordance with the procedure laid down as per 4.1 of IS 3495 (Parts 2) after immersion in water for 24 hours water absorption shall be as per the corresponding class of brick as per IS 1077.

7.3 Efflorescence

The bricks when tested in accordance with the procedure laid down in IS 3495 (Part 3) shall have a rating of efflorescence not more than ‘slight’.

7.4 Edge Warpage

The bricks when tested in accordance with the procedure laid down in IS 3495 (Part 4) the warpage shall not exceed 1.5 percent of the height of the brick.

8 SAMPLING AND CRITERION OF CONFORMITY

8.1 Sampling and criteria of conformity shall be done in accordance with the procedure laid down in IS 5454.

9 MARKING

9.1 Each brick shall be marked in a suitable manner with the manufacturer's identification mark or initials.

9.1.1 BIS certification marking

The product(s) may be marked with Standard Mark as per the conformity assessment schemes governed by the provisions of the Bureau of Indian Standards Act, 2016 and the Rules and Regulations made there under. The details of conditions for the licence may be obtained from the Bureau of Indian Standards.