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DRAFT INDIAN STANDARD IN WIDE CIRCULATION

Reference : MTD15/T-174& T-115 **Date : 06 October 2023**

TECHNICAL COMMITTEE : Refractories Sectional Committee, MTD 15

To,

All concerned

Dear Madam/Sir,

The following document has been prepared by the Refractories Sectional Committee Sectional Committee, MTD 15. Please click here to view the document.

Document Number : MTD 15 (23720) WC
Title of the document : Refractory mortars Part 7: Determination of permanent change in dimensions on heating
Document Type : New Indian Standard

This document has following salient features which may require specific attention for your valuable comments:

1) This document describes the method for determining the permanent change in dimensions on heating (drying and/or firing) of refractory mortars.This draft Indian Standard (Part 7) has been prepared and recommended for adoption after thoroughly reviewing the already existing indigenous Indian standards on drying shrinkage measurement namely IS 13185 : 1991 'Method of Test for Determination of Drying Shrinkage of Refractory' Mortars and on testing of air-setting mortars namely IS 11452 : 1985 'Methods of testing air-setting refractory mortars' vis-a-vis the corresponding ISO standard namely ISO 13765-7:2021 'Refractory mortars — Part 7: Determination of permanent change in dimensions on heating' and other six parts of the aforementioned ISO standard which were already adopted as Indian Standards under dual numbering system mentioned below
2) During the review, it was observed that the indigenous Indian standard, namely IS 13185 : 1991 'Method of Test for Determination of Drying Shrinkage of Refractory Mortars', covered only the drying shrinkage of refractory

mortars as compared to ISO 13765-7:2021 'Refractory mortars — Part 7: Determination of permanent change in dimensions on heating' which covers determination of permanent change in dimensions on heating (drying and/or firing) of refractory mortars. Hence, this draft Indian Standard (Part 7), over and above prescribing the test method for determination of firing shrinkage also covers the determination of drying shrinkage as given in IS 13185 : 1991 'Method of Test for Determination of Drying Shrinkage of Refractory Mortars' and hence supersedes IS 13185 : 1991 'Method of Test for Determination of Drying Shrinkage of Refractory Mortars'.

3) Further, the methods of testing air-setting refractory mortars were earlier also covered in IS 11452 : 1985 'Methods of testing air-setting refractory mortars'. This Indian Standard IS 11452 : 1985 'Methods of testing air-setting refractory mortars' specified the test methods of all types of air-setting mortars available in premixed state (dry/wet) or as two components (powder and liquid binder supplied separately).The test methods described in IS 11452 : 1985 'Methods of testing air-setting refractory mortars' were sieve analysis, chemical analysis, bond strength, refractoriness and, drying and firing shrinkage. However, the standard lacked consistency measurement methods which is the measure of the viscosity of the material in its ready-to-use state and is considered a vital requirements for any type of mortar and is already covered in IS 16052 (Part 1) : 2013/ISO 13765-1 : 2004 Refractory Mortars : Part 1 Determination of consistency using the penetrating cone method.

4) The Sectional Committee while reviewing felt necessary to withdraw the Indian standard IS 11452 as the test methods for determination of bond strength/flexural bond strength , sieve analysis, drying and firing shrinkage were already covered in IS 16052 (Part 4) : 2013/ISO 13765-3 : 2004 'Refractory Mortars : Part 4 Determination of flexural bonding strength', IS 16052 (Part 5) : 2013/ISO 13765-5 : 2004 'Refractory Mortars : Part 5 Determination of grain size distribution (sieve analysis)'and this part of Indian standard (Part 7) respectively. The method for determination of refractoriness or Pyrometric Cone Equivalent (PCE) or softening point are covered in IS 1528 (Part1) : 2010 'Methods of sampling and physical tests : Part 1 Determination of Pyrometric Cone Equivalent (PCE) or softening point for refractory materials (third revision)'.

5) Hence, the Indian Standard IS 11452 is to be withdrawn and superseded by IS 16052 (Part4), IS 16052 (Part5) , IS 16052 (Part 7) for determination of bond strength, sieve analysis and, drying and firing shrinkage respectively.

Please examine the document and share your comments regarding further improvement in the document.

Last date for sharing the comments is : 07 December 2023

The comments should be shared in the prescribed template through this portal only; and the comments so received shall be taken up by the Sectional Committee for necessary action. For any other query, please write an email at mtd@bis.gov.in to the undersigned at Bureau of Indian Standard, Manak Bhawan, 9, Bahadur Shah Zafar Marg, New Delhi.

In case no comments are received, we would presume your approval of the documents. However, in case we receive any comments on the document, the same shall be put up to the Sectional Committee for necessary action.

Thanking You,

Yours faithfully,
(SANJIV MAINI)
Head (Metallurgical Engineering Department)
Email: mtd@bis.gov.in

व्यापक परिचालन में मसौदा(दे)

हमारा सन्दर्भ : MTD15/T-174 & T-115 दिनांक : 06-10-2023

तकनीकी समिति : Refractories Sectional Committee Sectional Committee, MTD 15

प्राप्तकर्ता : रूचि रखने वाले सभी निकाय

महोदय/या,

निम्नलिखित मसौदा तैयार किया गया है :

प्रलेख संख्या : MTD 15 (23720) WC
शीर्षक :

कृपया इस/इन मानक(को)/संसोधन(नो) के मसौदे(दो) का अवलोकन करें और अपनी सम्मतियाँ यह बताते हुए भेजें कि यदि ये मानक(को) के संशोधन(नो) के रूप में प्रकाशित हो तो इन पर अमल करने में आपके व्यवसाय अथवा कारोबार में क्या कठिनाइयां आ सकती हैं।

सम्मत्तियाँ भेजने की अंतिम तिथि : 07 December 2023

सम्मतियाँ, यदि कोई हों तो, कृपया यहाँ क्लिक करके ऑनलाइन पोर्टल के माध्यम से ऊपर दी गयी अंतिम तिथि तक दर्ज कराएं।

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

धन्यवाद।

भवदीय/भवदिया,

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