

भारतीय मानक

बिटूमैन आधारित नमदा — परीक्षण पद्धतियाँ

भाग 6 जल अवशोषण परीक्षण

Indian Standard

BITUMEN BASED FELTS — METHODS OF TEST

PART 6 WATER ABSORPTION TEST

UDC 691.165 : 620.193.19

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard (Part 6) was adopted by the Bureau of Indian Standards, after the draft finalized by the Water-Proofing and Damp-Proofing Sectional Committee had been approved by the Civil Engineering Division Council.

Bitumen felts may be of different types depending upon the raw material used and their construction. IS 1322 : 1993 'Specification for bitumen felts for water proofing and damp-proofing (*fourth revision*)' and IS 7193 : 1993 'Specification for glass fibre based coal tar pitch and bitumen felts (*first revision*)', cover bitumen felts of hessian based and glass fibre base respectively. The above standards require, amongst other requirements, detailed testing of each of these products. Various methods of test relating to each product for determination of physical properties have been included in the separate standards. All types of felts have to satisfy some common essential physical requirements for which methods of test are same. A series of standards covering methods of test have, therefore, been formulated to cover the determination of various physical requirements of bitumen felt. This standard covers water absorption test. Other parts of the standard are as follows :

- Part 1 Breaking strength test
- Part 2 Pliability test
- Part 3 Storage sticking test
- Part 4 Pressure head test
- Part 5 Heat resistance test
- Part 7 Determination of binder content

The composition of the technical committee responsible for the formulation of this standard is given in Annex A.

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 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***BITUMEN BASED FELTS — METHODS OF TEST****PART 6 WATER ABSORPTION TEST****1 SCOPE**

This standard (Part 6) covers the method for determination of the water absorption of bitumen felt when immersed in water at the normal atmospheric temperature for 24 hours.

2 REFERENCE

The Indian Standard IS 4911 : 1986 'Glossary of terms relating to bituminous water-proofing and damp-proofing of building' is a necessary adjunct to this standard.

3 TERMINOLOGY

3.0 For the purpose of this standard, the definitions given in IS 4911 : 1986 shall apply.

4 APPARATUS**4.1 Balance****4.2 Trough to Immerse Sample in Water****4.3 Arrangement for Hanging the Samples Diagonally****5 PROCEDURE**

5.1 From the sample selected, cut a strip 300 mm wide across the roll. Divide this into

three equal test pieces 300 × 300 mm and weigh the central test piece to nearest 0.1 g.

5.2 Immerse the central test piece completely in distilled water for 24 hours.

5.3 Remove the test pieces and hang the test pieces immediately diagonally for air drying in room at $27 \pm 2^\circ\text{C}$ and 65 ± 5 percent relative humidity for 45 minutes. Reweigh the sample to nearest 0.1 g.

6 CALCULATION

Calculate the water absorption as the percentage weight increase as given below:

$$\text{Water absorption} = \frac{M_2 - M_1}{M_1} \times 100$$

where

M_1 = mass of the piece before immersion in distilled water, and

M_2 = mass of the piece after hanged for 45 minutes.

7 REPORTING

Reporting shall include the following:

- a) Date of testing,
- b) Type of conditioning, and
- c) Observation.

ANNEX A
(Foreword)

COMMITTEE COMPOSITION

Composition of Water-Proofing and Damp-Proofing Sectional Committee, CED 41

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No. 4, Sapan Baug, Near Empress Garden, Pune-411001

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Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

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Regional Offices :

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg
NEW DELHI 110002

Telephone
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CALCUTTA 700054

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Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113

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