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भारतीय मानक

बिटूमैन आधारित नमदा — परीक्षण पद्धतियाँ

भाग 1 टूटन सामर्थ्य परीक्षण

Indian Standard

BITUMEN BASED FELT — METHODS OF TEST

PART 1 BREAKING STRENGTH TEST

(Incorporating Amendment No. 1)

UDC 691.165 : 620-172-24

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

Price Group 1

FOREWORD

This Indian Standard (Part 1) 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 : I993 'Specification for glass fibre base coal tar pitch and bitumen felts (*first revision*)', cover bitumen felts of hessian base 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 tests 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 breaking strength test. Other parts of the standard are as follows:

Part 2 Pliability Test

Part 3 Storage Sticking Test

Part 4 Pressure Head Test

Part 5 Heat Resistance Test

Part 6 Water Absorption 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.

This edition 1.1 incorporates Amendment No. 1 (August 1999). Side bar indicates modification of the text as the result of incorporation of the amendment.

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 FELT — METHODS OF TEST

PART 1 BREAKING STRENGTH TEST

1 SCOPE

This standard (Part 1) covers method for the determination of breaking strength of bitumen based felts.

2 REFERENCE

The Indian Standard IS 4911 : 1980 '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, following definition shall apply.

3.1 Breaking Strength

Breaking strength is the force which is required for breaking the test piece.

4 APPARATUS

4.1 A standard constant-rate-of transverse type cloth testing machine having the rate of transverse of the moving jaw as 450 mm/min.

4.2 Cutting tools for preparation of the samples.

5 PROCEDURE

5.1 Preparation of Test Sample

From the sample of felts, 5 test pieces 75 mm wide and 180 mm long between the grips shall be cut in both longitudinal and transverse direction (*see* Fig 1).

5.1.1 *Conditioning*

The test pieces shall be conditioned for 48 hours at 27 ± 2°C and 65 ± 5 percent relative humidity.

5.2 Testing

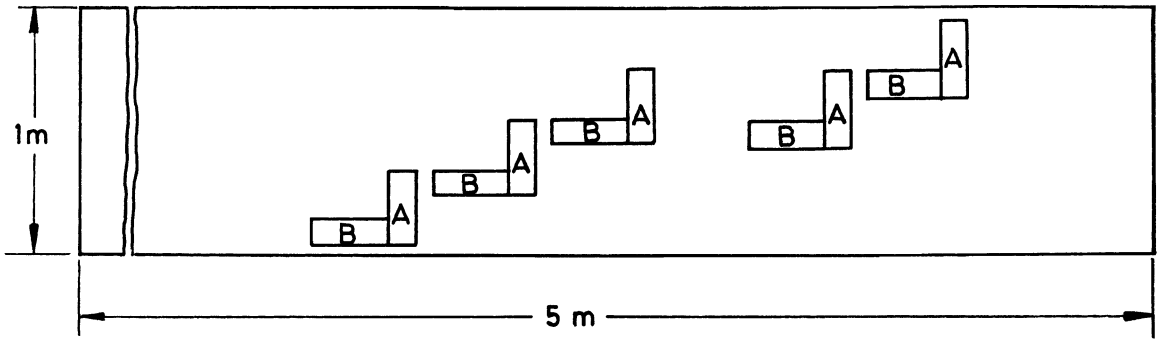
Each of the test pieces shall be fixed between the jaws of the testing machine fixed at a distance of 180 mm and the breaking point to be noted from the dial gauge. The force shall be read from the dial gauge. All the five samples cut from both the directions shall be tested.

NOTE — The test shall be carried out not earlier than 3 days from the date of manufacture.

6 REPORTING OF THE RESULT

6.1 Record the breaking strength for each of the test piece.

6.2 The value of breaking strength in warp and weft shall be average of the five test pieces in both the directions.



A, B — Samples for breaking strength test.

FIG. 1 TYPICAL LAYOUT FOR CUTTING TEST PIECE FROM THE ROLL FOR BREAKING STRENGTH FOR WARPWAY AND WEFTWAY

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

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

Chairman	*Representing*
PROF M. S. SHETTY	In Personal Capacity (*No. 4 Sapan Baug, Near Empress Garden, Pune 411001*)
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