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Edition 6.1
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भारतीय मानक

भवन निर्माण और सिविल इंजीनियरी कार्यों की मापन पद्धतियाँ

भाग 13 भवन सतहों की सफेदी, रंगीन पुताई, डिस्टेम्पर व रोगन

(पाँचवा पुनरीक्षण)

Indian Standard

METHODS OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART 13 WHITE WASHING, COLOUR WASHING, DISTEMPERING AND PAINTING OF BUILDING SURFACES

(Fifth Revision)

(Incorporating Amendment No. 1)

UDC 62.003.12 : 698.12

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

Price Group 2

Methods of Measurement of Works of Civil Engineering (Excluding River Valley Projects) Sectional Committee, CED 44

FOREWORD

This Indian Standard (Fifth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Methods of Measurement of Works of Civil Engineering (Excluding River Valley Projects) Sectional Committee had been approved by the Civil Engineering Division Council.

Measurement occupies a very important place in planning and execution of any civil engineering work from the time of first estimates to final completion and settlement of payments of the project. The methods followed for measurement are not uniform and considerable differences exist between practices followed by different construction agencies and also between various Central and State Government departments. While it is recognized that each system of measurement has to be specifically related to the administrative and financial organizations within the department responsible for work, a unification of the various systems at technical level has been accepted as very desirable, specially as it permits a wider circle of operation for civil engineering contractors and eliminates ambiguities and misunderstandings arising out of the inadequate understanding of various systems followed.

Among various civil engineering items, measurement of building had been first to be taken up for standardization and this standard, having provisions relating to all building works, was first published in 1958 and then revised in 1964. In its second revision, the standard was issued in different parts corresponding to different trades in building and civil engineering works. This part covering methods of measurement of white-washing, colour washing, distempering and painting applicable to building as well as civil engineering works was, therefore, issued as a second revision in 1970. The third revision of the standard was published in 1976 and the fourth revision in 1987.

This fifth revision has been brought out to incorporate the changes found necessary in light of the usage of this standard and the suggestions made by various bodies implementing it. The principal modifications made are in respect of conversion of areas of uneven surfaces into equivalent plain areas, wherein provision for sponge finished plaster has also been included.

The composition of the technical committee responsible for preparation of this standard is given at Annex A.

This edition 6.1 incorporates Amendment No. 1 (May 2002). 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 measurement, 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

METHODS OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART 13 WHITE WASHING, COLOUR WASHING, DISTEMPERING AND PAINTING OF BUILDING SURFACES

(Fifth Revision)

1 SCOPE

1.1 This standard (Part 13) covers the methods of measurement of white washing, colour washing, distempering and painting of building surfaces in civil engineering works.

2 GENERAL RULES

2.1 Clubbing of Items

Items may be clubbed together provided these are on the basis of detailed description of item, stated in this standard.

2.2 Booking of Dimensions

In booking of dimensions the order shall be consistent and generally in the sequence of length, breadth or width and height.

2.3 Description of Items

Description of each item shall unless otherwise stated, be held to include, where necessary, conveyance; delivery; handling; unloading; storing; waste; return of packings; necessary scaffolding; protective cover; and cleaning stains from floors, walls, glass panes, etc.

2.4 Bills of Quantities

Item of work shall fully describe materials and workmanship, and accurately represent the work to be executed.

2.5 Number of Coats

Decorative treatment shall be fully described stating the number of coats in each case.

2.6 Preparatory Work

Preparatory work, such as brooming down, steel wire brushing, scrapping washing and rubbing down, shall be described and included in the main item.

2.6.1 Preparatory work on new surfaces and primary coats, if any, shall be described and included in the main item.

2.6.2 Preparatory work on old treated surfaces shall be described and included in the main item.

2.7 Classification

Various decorative treatments shall be measured separately under the various classification as given below and materials and type of surfaces to be treated shall be fully described:

a) Whitewash, colour wash, etc;

b) Non-washable distemper;

c) Washable distemper;

d) Waterproof paint (colour/colourless);

e) Chalk whiting to cloth or hessian surface;

f) Linseed oil and cement to steel and iron work; and

g) Cement slurry wash.

2.7.1 Priming and alkali neutralizing treatments, scrapping of surface, washing surfaces spoilt by smoke soot, removal of oil and grease spots, treatment for disinfection with efflorescence, moulds moss, fungi, algae and litchen shall be measured separately and materials described.

2.8 Walls, Ceilings, etc

Work on walls, ceilings and sloping roofs shall each be measured separately.

2.9 Old Treated Surfaces

Work on old treated surfaces shall be measured separately and so described.

3 MEASUREMENT

3.1 All work shall be measured net in square metres, the decimal system as executed and as given below:

a) Dimensions shall be measured to the nearest 0.01 m, and

b) Areas of individual items shall be worked out to the nearest 0.01 m^2.

3.2 Deductions

3.2.1 For jambs, soffits, sills, etc; for openings not exceeding 0.5 m^2 each in area; for ends of joists, beams, posts, girders, steps, etc, not exceeding 0.5 m^2 each in area; and for openings exceeding 0.5 m^2 and not exceeding 3 m^2 each in area, deductions and additions shall be made in the following manner:

a) No deduction shall be made for ends of joists, beams, posts, etc, and openings not exceeding 0.5 m^2 each and no addition shall be made for reveals, jambs, soffits, sills, etc, of these openings nor for finish around ends of joists, beams, posts, etc.

b) Deductions for openings exceeding 0.5 m^2 but not exceeding 3 m^2 each shall be made as follows and no addition shall be made for reveals, jambs, soffits, sills, etc, of these openings:

1) When both faces of wall are provided with the same finish, deduction shall be made for one face only.

2) When each face of wall is provided with a different finish, deduction shall be made for that side on which width of reveal is less than that of the other side but no deduction shall be made on the other side; where width of reveals on both faces of wall are equal or deduction of 50 percent of area of opening on each face shall be made from area of finish.

3) When only one face is treated and other face is not treated, full deduction shall be made if width of reveal on the treated side is less than that on the untreated side, but if width of reveal is equal or more than that on the untreated side, neither deduction for the opening nor addition for reveals, jambs, soffits, sills, etc, shall be made.

4) When width of door frame is equal to thickness of wall or is projecting beyond the thickness of wall, full deduction for opening shall be made from each face of wall.

5) When the reveal is only on one side, full deduction for the face having no reveal shall be made and for the face having reveal, deduction of 50 percent of the opening shall be made.

3.2.2 In case of openings of areas above 3 m^2 each, deductions shall be made for openings, but jambs, soffits and reveals shall be measured.

3.3 No deduction shall be made for attachment, such as casings, conduits, pipes, electric wiring and the like.

3.4 Corrugated surfaces shall be measured flat as fixed and not girthed. Quantities so measured shall be increased by the following percentages and the resultant shall be included in general areas:

a)	Corrugated steel sheets	14 percent
b)	Corrugated asbestos cement sheets	20 percent
c)	Semi-corrugated asbestos cement sheets	10 percent
d)	Nainital pattern roofs (plain sheeting with rolls)	10 percent
e)	Nainital pattern roofs with corrugated sheets	25 percent

3.5 Cornices and other wall features, when not picked out in a different finish/colour, shall be girthed and included in general area.

3.6 The painting for building surfaces shall be kept separate and the surfaces to be painted shall be described. It shall be stated whether measurements are flat or girthed. Alternatively, different surfaces may be grouped into one general item, areas of uneven surfaces be converted into equivalent plain areas by increasing the areas as under:

a) External walls of plain brickwork faced with recessed, raised or weather stuck pointing—20 percent

b) Sand face plaster with up to 4 mm size—50 percent

c) Rough cast plaster with stone aggregate up to 10 mm—100 percent

d) Pebble dash finish beyond 10 mm—275 percent

e) Sponge finished plaster—25 percent

3.7 For RCC *JALLIES*, the quantity of area shall be increased by the following percentages:

a)	for painting of one side	100 percent
b)	for painting of one side and inside (that is through the thickness)	150 percent
c)	for painting of both sides and inside (that is through the thickness)	200 percent

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Composition of Methods of Measurement of Works of Civil Engineering (Excluding River Valley Projects) Sectional Committee, CED 44

Chairman	*Representing*
SHRI A. C. PANCHDHARI	In personal capacity (*B-18, Sehyadri Apartment, Plot 9-A, Indraprastha, Extension, New Delhi 110092*)
Members	
SHRI B. G. AHUJA	Builders Association of India, Bombay
SHRI S. P. AHUJA SHRI D. B. DESHPANDE (*Alternate*)	Public Works Department, Bombay
SHRI K. D. ARCOT SHRI T. V. SITA RAM (*Alternate*)	Engineers India Ltd, New Delhi
SHRI R. K. BHATIA SHRI R. K. CHADHA (*Alternate*)	Haryana Irrigation Department, Chandigarh
SHRI S. K. CHAKRABORTY SHRI A. C. CHATTERJEE (*Alternate*)	Calcutta Port Trust, Calcutta
SHRI O. P. CHOPRA SHRI S. V. N. RAJU (*Alternate*)	Engineer-in-Chief's Branch, Army Headquarters, New Delhi
DIRECTOR COSTS ENGINEERING DEPUTY DIRECTOR BOSTS ENGINEERING (*Alternate*)	Central Water Commission, New Delhi
SHRI P. K. GANGAPAHYAY	Hindustan Steel Works Construction Ltd, Calcutta
SHRI N. K. NANDI SHRI G. B. JAHAGIRD (*Alternate*)	The National Industrial Development Corporation Ltd, New Delhi
JOINT DIRECTOR SHRI A. K. LAL (*Alternate*)	National Buildings Organization, New Delhi
SHRI R. L. KAUL SHRI D. K. RASTOGI (*Alternate*)	Ministry of Surface Transport (Roads Wing), New Delhi
SHRI K. S. KHARB SHRI K. L. PRUTHI (*Alternate*)	Institution of Surveyors, New Delhi
SHRI R. P. LAHIRI	In personal capacity (*I-1801, Chitranjan Park, New Delhi 110019*)
SHRI K. K. MADHOK SHRI R. K. BAHL (*Alternate*)	MES Builders Association of India, New Delhi
SHRI DATA S. MALIK SHRI BALBIR VERMA (*Alternate*)	The Indian Institute of Architects, Bombay
SHRI H. D. MATANGE	Gammon India Ltd, Bombay
SHRI C. B. PATEL SHRI D. KAR (*Alternate*)	M. N. Dastur & Co Pvt Ltd, Calcutta
SHRI K. B. RAJORIA	The Institution of Engineers (India), Calcutta
DR R. B. SINGH	Banaras Hindu University, Varanasi
SUPERINTENDING ENGINEER	Public Works Department, Lucknow
SUPERINTENDING ENGINEER (S & S) EXECUTIVE ENGINEER (S & S) (*Alternate*)	Central Public Works Department, New Delhi
SHRI M. R. TILLOO SHRI M. P. MARWAH (*Alternate*)	Indian Roads Congress, New Delhi
SHRI Y. R. TANEJA, Director (Civ Engg)	Director General, BIS (*Ex-Officio Member*)

Secretary

SHRI SANJAY PANT
Assistant Director (Civ Engg), BIS

Bureau of Indian Standards

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BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002.
Telephones: 323 01 31, 323 33 75, 323 94 02

Telegrams: Manaksanstha
(Common to all offices)

Regional Offices:		Telephone
Central	: Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	323 76 17 323 38 41
Eastern	: 1/14 C. I. T. Scheme VII M, V. I. P. Road, Kankurgachi KOLKATA 700054	337 84 99, 337 85 61 337 86 26, 337 91 20
Northern	: SCO 335-336, Sector 34-A, CHANDIGARH 160022	60 38 43 60 20 25
Southern	: C. I. T. Campus, IV Cross Road, CHENNAI 600113	235 02 16, 235 04 42 235 15 19, 235 23 15
Western	: Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400093	832 92 95, 832 78 58 832 78 91, 832 78 92

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