

भवन और सिविल इंजीनियरिंग कार्यों की
मापन पद्धति
भाग 13 भवन की सतहों की पेंटिंग
(छठा पुनरीक्षण)

Method of Measurement of Building
and Civil Engineering Works
Part 13 Painting of Building Surfaces
(Sixth Revision)

ICS 17.020; 91.040.01; 93.010

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FOREWORD

This Indian Standard (Part 13) (Sixth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Method of Measurement of Works of Civil Engineering (Excluding Water Resources Development) 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, the fourth revision in 1987 and the fifth revision on 1994.

This 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.

Significant modifications in this revision are:

- a) The standard title has been modified;
- b) Acrylic emulsion, and decorative items have been included under decorative treatments; and
- c) The previous amendments have been included.

This standard contributes to the Sustainable Development Goal 9 ‘Build resilient infrastructure, promote sustainable industrialization and foster innovation’.

The composition of the Committee responsible for 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 : 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.

*Indian Standard***METHODS OF MEASUREMENT OF BUILDING AND CIVIL
ENGINEERING WORKS****PART 13 PAINTING OF BUILDING SURFACES***(Sixth Revision)***1 SCOPE**

This standard (Part 13) covers the methods of measurement of painting of surfaces in building and civil engineering works.

2 TERMS AND DEFINITIONS

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

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 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) Acrylic emulsion;
- e) Waterproof paint (colour/colourless);
- f) Chalk whitening to cloth or hessian surface;
- g) Linseed oil and cement to steel and iron work, cement slurry wash; and
- h) Decorative papers and fabrics, etc.

2.3.1 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 lichen shall be measured separately and materials described.

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

2.5 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.

2.6 Number of Coats — Decorative treatment shall be fully described stating the number of coats in each case.

2.7 Old Treated Surfaces — Work on old treated surfaces shall be measured separately and so described.

2.8 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.

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

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

2.9 Walls, Ceilings, etc — Work on walls, ceilings and sloping roofs shall each be measured separately.

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 m².

3.2 Deductions

3.2.1 For jambs, soffits, sills, etc; for openings not exceeding 0.5 m² each in area; for ends of joists, beams, posts, girders, steps, etc, not exceeding 0.5 m² each in area; and for openings exceeding 0.5 m² and not exceeding 3 m² 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 m² 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; and

- b) Deductions for openings exceeding 0.5 m² but not exceeding 3 m² 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; and
 - 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 m² 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 similar items.

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

Method of Measurement of Works of Civil Engineering Construction (Excluding Water Resources Development) Sectional Committee, CED 44

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity (<i>Flat No.-370 Asiad Village Complex Siri Fort, New Delhi - 110049</i>)	SHRI SARVAGYA KUMAR SRIVASTAVA (<i>Chairperson</i>)
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Border Roads Organization, New Delhi	SHRI R. SRINIVASA RAO
Central Public Works Department, New Delhi	SHRI PREM MOHAN SHRI DINESH K. UJJAINIA (<i>Alternate</i>)
Central Water Commission, New Delhi	SHRI AJAY SHIVLAL BANODE SHRI KIRAN PRAMANIK (<i>Alternate</i>)
CSIR - Central Building Research Institute, Roorkee	DR S. K. SINGH SHRI SUBHASH CHAND BOSE GURRAM (<i>Alternate I</i>) SHRIMATI HINA GUPTA (<i>Alternate II</i>)
Engineers India Limited, New Delhi	SHRI INDRAJIT NEOG SHRI RABISANKAR KARMAKAR (<i>Alternate</i>)
Guru Gobind Singh Indraprastha University, New Delhi	SHRI SHAILESH SHARMA
Hindustan Construction Company Limited, Mumbai	SHRI HARISH M. P.
Institute of Valuers, New Delhi	COL (RETD) B. B. SHARMA SHRI AJIT FAUZDAR (<i>Alternate</i>)
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Member Secretary
SHRIMATI DIVYA S.
SCIENTIST 'D'/JOINT DIRECTOR
(CIVIL ENGINEERING), BIS

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