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METHOD OF MEASUREMENT OF BUILDING
AND CIVIL ENGINEERING WORKS

PART XII PLASTERING AND POINTING

(*Third Revision*)

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Indian Standard

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Indian Standard

METHOD OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART XII PLASTERING AND POINTING

(*Third Revision*)

0. FOREWORD

0.1 This Indian Standard (Part XII) (Third Revision) was adopted by the Indian Standards Institution on 14 May 1976, after the draft finalized by the Civil Works Measurement Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 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 one construction agency and another 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 inadequate understanding of various systems followed.

0.3 Among the 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 revised in 1964.

0.4 In the course of usage of this standard (IS : 1200-1964*) by various construction agencies in the country, several clarifications and suggestion for modifications were received and as a result of study, the Sections, Committee decided that its scope, besides being applicable to buildings shall be expanded so as to cover civil engineering works like industrial and river valley project works.

*Method of measurement of building works (revised).

0.5 Since various trades are not related to one another, the Committee decided that each type of trade as given in IS:1200-1964* be issued separately as a different part which will be helpful to specific users in various trades. This part covering method of measurement of plastering and pointing applicable to building as well as civil engineering works was, therefore, issued as a second revision in 1971.

0.6 In the course of use of this standard in the past five years based on the suggestions received, certain amendments were issued to this standard. This third revision also incorporates all those amendments.

0.7 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†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard (Part XII) covers the method of measurement of plastering and pointing for buildings and other civil engineering works.

2. GENERAL RULES

2.1 Clubbing of Items—Items may be clubbed together provided detailed drawings or specifications or both are prepared for such items and method of measurement is agreed to be on the basis stated in the 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 or depth or thickness.

2.3 Description of Items—Description of each item shall, unless otherwise stated, be held to include, wherever necessary, conveyance; delivery; handling; unloading; storing; necessary scaffolding; protective cover; cleaning stains from floors, walls, return of packings, etc; and other incidental changes.

2.4 Dimensions—All work shall be measured net as executed in the decimal system, as given below:

- a) Dimensions shall be measured to the nearest 0.01 m, and
- b) Areas shall be worked out to the nearest 0.01 m².

*Method of measurement of building works (*revised*).

†Rules for rounding off numerical values (*revised*).

2.5 Bills of Quantities — Items of work shall fully describe materials and workmanship and accurately represent the work to be executed.

2.6 Preparatory Work — Preparatory work, such as raking out joints, scarifying and cleaning, shall be included in the description of item unless otherwise specified.

3. PLASTERING

3.1 Plaster work shall be classified according to the material used and each classification shall be measured separately. The following particulars shall be given for each classification:

- a) Mix of mortar;
- b) Number of coats and thickness of each coat;
- c) Nature of surface treatment,
- d) Nature of base;
- e) Curved work, conical work, spherical work and elliptical work stating the radius; and
- f) Any special treatment of base.

3.1.1 Description shall include arrises, internal 'rounded angles, external chamfers and/or rounded angles not exceeding 80 mm in girth.

NOTE — For work exceeding 80 mm girth, see 3.4.

3.1.2 In case of fibrous plaster, particulars of methods of application and of treatment of joints shall also be given.

3.1.3 Work in repairs shall be so described stating thickness of dubbing, if any.

3.2 Plastering on roofs, ceilings and walls shall be measured separately.

3.3 Removing plaster by scraping or otherwise shall be measured separately in square metres.

3.4 Plastering in isolated widths or in widths not forming part of general plastering work (as in bands, cornices, sunk panels, etc) and in chamfers, rounded angles exceeding 80 mm in girth shall be measured as below:

- a) 30 cm or below in width/girth, in running metres; and
- b) Width/girth above 30 cm in square metres.

3.5 Plastering at a height greater than 10 m above ground/datum level shall be measured separately in stages of 5-m height except interior plastering in case of building which shall be measured separately for each storey.

3.6 All plastering shall be measured in square metres unless otherwise described.

3.7 Cutting to edges shall be measured separately in running metres or alternatively described and included in the item.

3.8 Deductions

3.8.1 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 in each 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 to plaster 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 plastered with same plaster, deduction shall be made for one face only.
 - 2) When two faces of wall are plastered with different types of plaster or if one face is plastered and the other pointed, deduction shall be made from the plaster or pointing on the side on which width of reveals is less than that on the other side but no deduction shall be made on the other side. Where widths of reveals on both faces of wall are equal, deduction of 50 percent of area of opening on each face shall be made from areas of plaster and/or pointing as the case may be.
 - 3) When only one face is plastered and the other face is not, full deduction shall be made from plaster if width of reveal on plastered side is less than that on unplastered side but if widths of reveal on both sides are equal or width of reveal on plastered side is more, no deduction shall be made.
 - 4) When width of door frame is equal to thickness of wall or is projecting beyond thickness of wall, full deduction for opening shall be made from each plastered face of the wall.

3.8.2 In case of openings of area above 3 m^2 each, deduction shall be made for opening on each face but jambs, soffits and sills shall be measured.

NOTE — In calculating areas of openings, the extra width of rebated reveals, if any, shall be excluded.

3.9 Ceilings shall be measured between walls or partitions and dimensions before plastering shall be taken. Width covered by cornices or coves, if any, shall be deducted.

3.10 Soffits of stairs shall be measured as plastering on ceilings. Flewing soffits shall be measured separately.

3.11 Ribs and mouldings on ceilings shall be measured as for cornices (*see 3.4*), deduction being made from plastering if width/girth exceeds 15 cm.

3.12 Measurement of wall plastering shall be taken between walls or partitions (dimensions before plastering being taken) for length and from top of floor or skirting to ceiling for height. Depth of cornices or coves, if any, shall be deducted.

3.12.1 Sides of pilasters, projections, etc, shall be added to plaster on walls.

3.12.2 Mouldings, architraves, ceiling ribs, cornices and the like on pilasters and around openings, etc, shall be measured separately as in **3.4**.

3.13 Length shall be measured in running metres at the centre of girth. Girth shall be measured along curve of moulding.

3.14 Moulded cornices and coves shall be measured in square metres, the area being arrived at by multiplying length by girth.

3.15 Forming letters or figures in plaster shall be enumerated stating the height.

3.16 Plastering on lathing shall be measured separately stating the number of coats and thickness of each coat.

3.16.1 Lathing shall be fully described and measured net; wood and steel lathing shall be measured separately [*see IS:1200 (Part XXI)-1973** and *IS:1200 (Part VIII)-1974†*] respectively.

3.16.2 Laps, gauge and mesh of steel lathing shall be stated, no allowance being made for laps or cutting.

3.16.3 Size of laths, their distance apart and the kind of timber shall be stated in the case of wood lathing.

3.16.4 Connector lathing shall be measured separately.

*Method of measurement of building and civil engineering works: Part XXI Woodwork and joinery (*second revision*).

†Method of measurement of building and civil engineering works: Part VIII Steel and iron work (*third revision*).

3.17 Plastering on honeycomb work shall be described and measured in square metres on the basis of overall superficial area without deducting openings.

4. POINTING

4.1 Proportions of materials shall be described. Various types of pointing shall be measured separately. Pointing on different types of walls, floors, roofs, etc, shall be measured separately. Type and material of surface to be pointed shall be described.

4.2 Pointing in single detached joints as for flashings shall be measured in running metres.

4.3 Pointing brick and tile work with mortars of matching shades shall be measured separately.

4.4 Pointing shall be measured in square metres.

4.5 Removing pointing by raking or otherwise shall be measured in square metres.

4.6 Deductions

4.6.1 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, 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 pointed with the same type of pointing, deduction shall be made for one face only.
 - 2) When two faces of wall are pointed with different types of pointing or if one face is plastered and the other pointed, deduction shall be made in the plaster or pointing on the side on which the width of reveals is less than that on the other side, but no deduction shall be made from plaster or pointing on the other side. Where widths of reveals on both faces of wall are equal, deduction of 50 percent of area of opening on each face shall be made from areas of plastering and/or pointing as the case may be.

- 3) When width of door frame is equal to thickness of wall or is projecting beyond thickness of wall, full deduction for opening shall be made from each pointed face of the wall.
- 4) When only one face is pointed and the other face is not pointed, full deduction shall be made from pointing if width of reveal on the pointed side is less than that on unpointed side, but if widths of the reveals on both sides are equal or width of reveal on pointed side is more, no deduction shall be made nor any addition shall be made for reveals, jambs, soffits, sills, etc.

4.6.2 In case of openings of area above 3 m² each, deduction shall be made for opening on each face but jambs, soffits and sills shall be measured.

NOTE — In calculating areas of openings, extra width of rebated reveal, if any, shall be excluded.

4.7 Raking-out joints shall be measured in square metres or alternatively included in description of item.

4.7.1 Raking-out single detached joint shall be measured separately in running metres.

4.8 Pointing on honey-comb work shall be described and measured in square metres on the basis of overall superficial area without deducting openings.