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भारतीय मानक मसौदा
नदी घाटी परियोजनाओं में कार्य मापन की पद्धति
(बाँध और संबंध संरचनाएं)

भाग 10 फॉर्मवर्क

(IS 9401 भाग 10 का पहला पुनरीक्षण)

Draft Indian Standard

METHOD OF MEASUREMENT OF WORKS IN RIVER VALLEY PROJECTS
(DAMS AND APPURTENANT STRUCTURES)

PART 10 FORMWORK

[First Revision of IS 9401 (Part 10)]

Measurement and Cost Analysis of Works for River
Valley Projects Sectional Committee, WRD 23

Last date for Comments:
29 March 2025

FOREWORD

(Formal clauses of the foreword will be added later)

In measurement of quantities, in construction of river valley projects a large diversity of methods exists at present according to local practices. This lack of uniformity creates complication regarding measurement. This standard is intended to provide a uniform basis for measurement of formwork in the construction of river valley projects.

The provisions contained in this standard shall generally have precedence over the provisions in IS 1200 (Part 5) : 1982. However, the provisions of both the standards may be considered complimentary and supplementary to each other.

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.

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(DAMS AND APPURTENANT STRUCTURES)****PART 10 FORMWORK**

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Measurement and Cost Analysis of Works for River
Valley Projects Sectional Committee, WRD 23Last date for Comments:
28 March 2025**1 SCOPE**

This standard (Part 10) covers the method of measurement of formwork with particular reference to River Valley Projects, where it is required to be measured separately.

2 REFERENCES

The standards given below contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
IS 1200 (Part 5) : 2013	Method of measurement of building and civil engineering works: Part 5 formwork (<i>fourth revision</i>)

3 GENERAL RULES**3.1 Clubbing of Items**

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

3.2 Booking of Dimensions

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

3.3 Description of Items

The description of each item shall, unless stated otherwise, be held to include where necessary, transportation, handling, loading, unloading, storing, fabrication, hoisting, lowering, all labours for finishing to required shape, size and levels, striking and removal.

3.4 Unit of Measurements

All works shall be measured net in decimal system, fixed in its place as given below:

- a) Dimensions to the nearest 0.01 m; and
- b) Areas to the nearest 0.01 m².

3.5 Bills of Quantities

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

4 DESCRIPTION OF FORMWORK

4.1 The formwork shall include the following:

- a) Splayed edges, notchings, allowance for overlaps, and passings at angles, sheathing battens, strutting, bolting, nailing, wedging, easing, striking and removal;
- b) All supports, struts, braces, wedges as well as mud sills, piles or other suitable arrangements to support the formwork;
- c) Bolts, wire ties, ropes clamps spreaders, nails or any other items to hold the sheathing together;
- d) Filleting to form chamfered edges;
- e) Dressing with oil or use of Mould Releasing Agent to prevent adhesion;
- f) Raking or circular cutting; and
- g) In the event of gangways/stairways become slippery, spreading of sand and cleaning or otherwise to remedy the defect.

5 TYPE OF FORMWORK

5.1 Formwork for different type of finished surface shall be classified as follows:

FINISH F1 — Surface where roughness is not objectionable and which are not exposed in general or likely to be plastered subsequently. Form sheathing may be of any material.

FINISH F2 — Surfaces permanently exposed to view but no special finish specified. Form material may be plywood, steel plate or thin steel lined wooden board.

FINISH F3 — Surfaces which are exposed permanently and where appearance is of special importance, sheathing formed from tongue and groove boards or plywood sheets.

FINISH F4 — Sheathing, having special lining or any other arrangement to give accurate alignment and extra smooth evenness of surface.

FINISH F5 — Slipform shuttering.

6 METHOD OF MEASUREMENT

6.1 Formwork shall be measured separately for straight surfaces and curved surfaces.

6.2 Formwork shall be measured in square metres of the actual surface in contact with concrete or any other material requiring formwork. Formwork to small features shall be enumerated. Formwork left in shall be so described.

6.3 Where formwork is required to be lined with wall-board/hard board/polythene sheet/paper lining or to be coated with mould liquid or lime white, such formwork shall be as described and measured separately.

6.4 Where lining of wall board, asbestos, cork slab and the like is of permanent character, and is to be left in permanently, such lining shall be measured separately and the description shall include all necessary fixing.

6.5 No deductions shall be made for any opening less than 0.4 m². No deductions shall, however, be made for any opening/cutouts when slipform technique is used.