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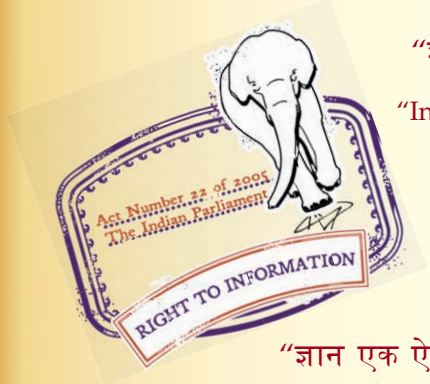

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IS : 1200 (Part XX) - 1981
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Indian Standard

METHOD OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART XX LAYING OF GAS AND OIL PIPE LINES

(Third Revision)

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METHOD OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART XX LAYING OF GAS AND OIL PIPE LINES

(Third Revision)

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Indian Standard

METHOD OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART XX LAYING OF GAS AND OIL PIPE LINES

(Third Revision)

0. FOREWORD

0.1 This Indian Standard (Part XX) (Third Revision) was adopted by the Indian Standards Institution on 27 February 1981, 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 the planning and execution of any civil engineering work, from the time of first estimates to the final completion and settlement of payments. The methods being followed for measurement are not uniform, and considerable differences exist between the practices followed by different construction agencies and also by 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 organization with the departments responsible for the work, a unification of the various systems at the 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 the various systems followed.

0.3 Among the various civil engineering items, measurement of building had been the first to be taken up for standardization and this standard having provisions relating to building works, was first published in 1958 and was revised in 1964.

0.4 In the course of usage of this standard by various construction agencies in the country, several clarifications and suggestions for modifications were received and as a result of study, the technical committee responsible for this standard decided that the scope of this standard besides being applicable to building should be expanded so as to cover method of measurement applicable to civil engineering works like industrial and river valley project works.

0.5 Since measurement of one type of trade is not related to that of another one, and also to facilitate the second revision of IS : 1200-1964*, the Sectional Committee decided that each type of trade as given in IS : 1200-1964* be issued separately as different parts. This will also be helpful to the specific users in various trades in using the standard. This part covering the method of measurement of laying of gas and oil pipelines, including appurtenant items applicable to bulding as well as civil engineering works, was therefore, issued as the second revision in 1969. The third revision has been done so as to keep the provisions in line with method of measurement now followed by majority of organizations.

0.6 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†. 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 XX) covers the method of measurement of laying of gas and oil pipelines.

2. GENERAL RULES

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

2.2 Booking of Dimensions — In booking 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 — The description of each item shall, unless otherwise stated, be held to include, where necessary, conveyance and delivery, handling, loading, storing, fabrication, hoisting, all labour for finishing to required shape and size, setting, fitting and fixing in position, straight cutting and waste, return of packings and other incidental operations.

2.4 Dimensions — All work shall be measured net as fixed to the nearest 0·01 metre, unless otherwise stated hereinafter.

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

*Method of measurement of building and civil engineering works (*revised*).
†Rules for rounding off numerical values (*revised*).

2.6 Work to be Measured Separately — Work executed in the following conditions shall be measured separately:

a) Work in or under water,

b) Work in liquid mud,

c) Work in or under foul positions, and

d) Work interrupted by tides.

2.6.1 The levels of high and low water tides, where occurring, shall be stated.

2.6.2 Where special pumping due to causes other than rains and subsoil water is resorted to, the same shall be measured separately, unless otherwise stated, in kilolitres of water against a separate specific provision(s) made for this purpose [*see* **2.7** of IS : 1200 (Part I) 1974*].

2.7 Measurement in Stages — Work shall be measured under the following categories in convenient stages stating the height or depth:

a) Below ground/datum line, and

b) Above ground/datum line.

NOTE — The ground/datum line shall be specified in each case.

3. METHOD OF MEASUREMENT OF GAS AND OIL PIPELINES

3.1 Gas and oil pipelines shall be classified according to their diameter, length of each pipe, kind of material, the quality of pipe and the method of joining and shall be measured in running metres inclusive of all joints. The measurement shall be taken along the central line of the pipes and fittings or specials. All fittings or specials shall be enumerated separately as *'extra over'* the pipes. Cutting and jointing the pipes to such fittings or specials shall be deemed to be included with the item of fittings or specials.

3.1.1 Alternatively, gas and oil pipes shall be classified according to their diameter, kind of material, quality of the pipe and shall be measured in running metres. The measurement shall be taken along the central line of the pipes and in between the fittings or specials. All joints, fittings or specials shall be fully described and enumerated separately. Cutting of pipes for jointing to such fittings or specials shall be deemed to be included with the item of fitting or specials.

3.2 Components for supporting pipes, like hangers, chairs, pillars, etc, shall be fully described and enumerated separately.

*Method of measurement of building and civil engineering works: Part I Earthwork (*third revision*).

3.3 Pipes laid or fixed in ducts, trenches and chases shall be so described in each case.

3.4 Pipes embedded in floor screed shall be so described.

3.5 Excavation of Trenches — Method of measurement for excavation of trenches for laying pipelines and other allied works and refilling the trenches, etc, shall be as given in IS : 1200 (Part I)-1974*.

3.6 Concrete beds, haunchings and coverings, including any formwork required, shall be described and measured in running metres stating size of the pipe, dimensions and mix of concrete.

3.7 Heat Treatment — Heat treatment shall be fully described and enumerated separately unless otherwise stated.

3.8 Tests — Hydrostatic tests and radiographic tests shall be separately described and measured in running metres for hydrostatic tests and per centimetre length for various sizes of pipes for radiographic tests.

3.9 Pigging, Pickling and Purging — Pigging, pickling and purging with inlet gases shall be separately enumerated.

3.10 Insulation

3.10.1 All insulation to pipe work shall be fully described and measured in running metres, unless otherwise stated, stating the type and size of the pipes. The measurement shall be taken along the central line of the pipes and fittings or specials. No separate measurement shall be made for bevelling of insulation at ends flanges, etc.

3.10.2 Insulation around valves, and other ancillaries and to pipe fittings shall be fully described and enumerated separately, as '*extra over*' the insulation to pipe work.

3.11 Miscellaneous Works

3.11.1 Miscellaneous works, such as crossing of railway lines and culverts, cutting and reconditioning of pavements, deviation of piplines and cables, dismantling and reconditioning of works, etc, shall be measured as per relevant standard.

3.11.2 Connection to submains or other pipelines shall be fully described and enumerated.

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*Method of measurement of building and civil engineering works: Part I Earthwork (*third revision*).

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