IS 9401 (Part 15/Sec 1) : 1993
(Reaffirmed 1998)

भारतीय मानक

नदी घाटी परियोजनाओं में कार्य मापन की पद्धतियाँ (बाँध और सम्बद्ध संरचनाएँ)

भाग 15 अन्वेषण कार्य

खंड 1 बोर छेद वेधन

Indian Standard

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

PART 15 INVESTIGATION WORKS

Section 1 Drilling of Bore Holes

UDC 627·8 : 622·241 : 69·003·12

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FOREWORD

This Indian Standard (Part 15/Section 1) was adopted by the Bureau of Indian Standards, after the draft finalized by the Measurement of Works of River Valley Projects Sectional Committee had been approved by the River Valley Division Council.

In the measurement of works of river valley projects a large diversity of methods exist at present according to local practices. This lack of uniformity creates complications regarding measurements and payments. Keeping in view the large amount of financial outlay involved in river valley projects and also the fact that the authorities responsible for completing these projects, are of the state level or national level, it is felt that a suitable methodology is needed for adopting uniform practices towards the measurement of works so that the scope of complications and misinterpretation of items of work is reduced, as far as possible. This standard is being formulated in various parts so as to cover each type of work separately. This part is being formulated in two sections. Section 1 covering bore hole drilling and Section 2 Exploratory drifting. This standard is intended to provide a uniform basis for measuring the work done in respect of bore hole drilling for River Valley Projects.

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 '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

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

PART 15 INVESTIGATION WORKS

Section 1 Drilling of Bore Holes

1 SCOPE

This standard covers the method of measurement of drilling of bore holes (Investigation works) for River Valley Projects.

2 REFERENCES

2.1 The following Indian standards are necessary adjuncts to this standard:

IS No.	*Title*
4078 : 1980	Code of practice for indexing and storage of drill cores (*first revision*)
4464 : 1985	Code of practice for presentation of drilling information and core description in foundation investigation (*first revision*)

3 GENERAL RULES

3.1 Clubbing of Items

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

3.2 Booking of Dimensions

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

3.3 Description of Items

The description of each item shall, unless stated otherwise, be held to include where necessary, conveyance and delivery, handling, loading and unloading, storing fabrication, hoisting, lowering, all labour for finishing to required shape and size, setting, fixing in position, etc.

3.4 Units of Measurement

All works shall be measured net in decimal system, as executed in its place, to the nearest 0·01 m.

3.5 Works to be Measured Separately

Works executed in the following conditions shall be measured separately.

3.5.1 Works executed in the following conditions shall be measured separately:

a) Work in or under water,

b) Work in liquid mud/marshy land, and

c) Work under tides.

3.5.2 Situation like hole in the river bed (under water) river banks, sloping abutments, road level, underground cavities where work is to be executed shall be stated, whether the hole is vertical or inclined shall also be stated.

3.5.3 The level of high and low water tides, where occuring shall be stated.

3.6 Bill of Quantities

The bills of quantity shall fully describe the material and workmanship and accurately represent the work to be executed.

3.7 A general description of the nature of the site (including climate) shall be stated.

3.8 The following work shall not be measured seperately and allowance for the same shall be deemed to have been made in the description of the main item:

a) Preparation of bench/platform/trestle and approach paths for each bore hole location,

b) Recovery of cores,

c) Recording and maintenance of all records during the course of drilling with list of drill holes alongwith the depth bored, for each hole (*see* IS 4464 : 1985),

d) Marking the actual location, depth drilled, collar elevation and angle of hole on the map,

e) Placement of core in the core boxes with proper marking and carefull transportation of core boxes to the storage site (*see* 4078 : 1980),

f) Logging of bore holes,

g) Water supply and associated arrangements, and

h) Bentonite, if needed for drilling in overburden.

4 MEASUREMENT OF WORKS

4.1 The measurement of depth drilled shall be reckoned from the collar elevation to apex of drill bit. Different sizes of drilling shall be measured seperately.

4.1.1 Drilling in over burden and in hard rock shall be measured separately in metres.

4.1.2 Casings, if required to be left permanently in the hole shall be fully described and measured seperately in running metres.

4.1.3 Permeability tests shall be fully described and measured seperately in numbers.

4.2 Coreboxes shall be measured in numbers.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.