

(PREVIEW)

IS 6955 : 2008

## *Indian Standard*

# **SUBSURFACE EXPLORATION FOR EARTH AND ROCKFILL DAMS – CODE OF PRACTICE**

*(First Revision)*

### **1 SCOPE**

**1.1** This standard gives guidance on the type, extent and details of subsurface explorations needed in connection with earth and rockfill dams. It is not possible to lay down the required extent of exploration to cover all types of cases. The standard provides guidelines for planning the exploratory work through various stages of the project development. These recommendations may have to be modified for individual projects depending upon the site conditions and other conditions peculiar to each project, such as, height, importance of the dam and the heterogeneity of foundation formations.

**1.2** The term subsurface exploration, as used herein, covers all types of exploration connected with determination of the nature and extent of soil and/or rock below the natural ground surface at/or near the dam site.

**1.3** This Code does not however cover the types and methods of exploration for materials of construction for earth and rockfill dams, such as, soil, rock and material for riprap protection. These will be covered by a separate Code on subsurface exploration for construction materials

### **2 REFERENCES**

The standards listed in Annex A 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 these standards are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

#### **ANNEX A**

*(Clause 2)*

#### **LIST OF REFERRED INDIAN STANDARDS**

<i>IS No.</i>	<i>Title</i>
2 : 1960	Rules for rounding off numerical values ( <i>revised</i> )
1122 : 1974	Method of test for determination of true specific gravity of natural building stones ( <i>first revision</i> )
1123 : 1975	Method of identification of natural building stones
1124 : 1974	Method of test for determination of water absorption, apparent specific gravity and porosity of natural building stones ( <i>first revision</i> )

<i>IS No.</i>	<i>Title</i>
1498: 1970	Classification and identification of soils for general engineering purposes ( <i>first revision</i> )
1892 : 1979	Code of practice for subsurface investigations for foundations ( <i>first revision</i> )
2131: 1981	Method for standard penetration test for soils ( <i>first revision</i> )
2720 (Part 2): 1973	Method of test for soils: Determination of water content ( <i>second revision</i> )
(Part 3/Sec 1) : 1980	Determination of specific gravity, Section 1 Fine grained soils ( <i>first revision</i> )
(Part 3/Sec 2) : 1980	Determination of specific gravity, Section 2 Fine , medium and coarse grained soils
(Part 4) : 1985	Grain size analysis ( <i>second revision</i> )
(Part 5) : 1985	Determination of liquid and plastic limit ( <i>second revision</i> )
(Part 7) : 1980	Determination of water content dry density relation using light compaction ( <i>second revision</i> )
(Part 10) : 1991	Determination of unconfined compressive strength ( <i>second revision</i> )
(Part 13) : 1986	Direct shear test ( <i>second revision</i> )
(Part 14) : 1983	Determination of density index (relative density) of cohesionless soils ( <i>first revision</i> )
(Part 15) : 1965	Determination of consolidation properties ( <i>first revision</i> )
(Part 21) : 1977	Determination of total soluble solids ( <i>first revision</i> )
(Part 22) : 1972	Determination of organic matter ( <i>first revision</i> )
(Part 23) : 1976	Determination of calcium carbonate ( <i>first revision</i> )
(Part 24) : 1976	Determination of cation exchange capacity
(Part 28): 1974	Determination of dry density of soils in place, by the sand replacement method ( <i>first revision</i> )
(Part 29) : 1975	Determination of dry density of soils in-place by the core-cutter
(Part 34) : 1972	Determination of dry density of soils in-place by rubber-balloon method
3025 : 1964	Method of sampling and test (physical and chemical) for water used in industry
4078 : 1980	Code of practice for indexing and storage of drill cores ( <i>first revision</i> )
4434 : 1978	Code of practice for <i>in-situ</i> vane shear test for soils ( <i>first revision</i> )
4453 : 1980	Code of practice for subsurface exploration by pits, trenches, drifts and shafts ( <i>first revision</i> )
4464: 1985	Code of practice for presentation of drilling information and core description in foundation investigation ( <i>first revision</i> )
4968	Method for subsurface sounding for soils:
(Part 1) : 1976	Dynamic method using 50 mm cone without bentonite slurry ( <i>first revision</i> )
(Part 2) : 1976	Dynamic method using cone and bentonite slurry ( <i>first revision</i> )
(Part 3) : 1976	Static cone penetration test ( <i>first revision</i> )
5529	Code of practice or <i>in-situ</i> permeability test
(Part 1) : 1985	Test in overburden ( <i>first revision</i> )
(Part 2) : 2006	Code of practice for <i>in-situ</i> permeability tests: Part 2 Tests in bedrock ( <i>second revision</i> )
6403: 1981	Code of practice for determination of bearing capacity of shallow foundations ( <i>first revision</i> )
6926 : 1996	Diamond core drilling – Site investigation for river valley projects - Code of practice ( <i>first revision</i> )
7422	Symbols and abbreviations for use in geological maps, sections and subsurface exploratory logs:
(Part I) : 1974	Abbreviations
(Part 2) : 1974	Igneous rocks
(Part3) : 1974	Sedimentary rocks
(Part 4) : 1985	Metamorphic rocks
(Part 5) : 1992	Line symbols for formation contacts and structural features
15662 : 2006	Geological exploration for gravity dams and overflow structures Code of practice

<i>IS No.</i>	<i>Title</i>
15681 : 2006	Geological exploration by geophysical method (seismic refraction) — Code of practice
15686 : 2006	Recommendations for preparation of geological and geotechnical maps for river valley projects
15736 : 2006	Geological exploration by geophysical method (electrical resistivity) — Code of practice