
**Geotechnical investigation and
testing — Field testing —**

**Part 10:
Weight sounding test**

Reconnaissance et essais géotechniques — Essais en place —

Partie 10: Essai de sondage par poids

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

ISO 22476-10 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 341, *Geotechnical investigation and testing*, in collaboration with ISO Technical Committee ISO/TC 182, *Geotechnics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 22476-10 cancels and replaces ISO/TS 22476-10:2005, which has been technically revised.

A list of all parts in the ISO 22476 series can be found on the ISO website.

Geotechnical investigation and testing — Field testing —

Part 10: Weight sounding test

1 Scope

This document specifies the equipment, execution and reporting requirements of the weight sounding test.

NOTE This document fulfils the requirements for the weight sounding test as part of the geotechnical investigation and testing according to EN 1997-1 and EN 1997-2.

This document specifies the procedure for conducting a test with the weight sounding device in natural soils, made ground, and fill either on land or on water. This document is applicable to the determination of the resistance of soil to the static load or the static load and the specified turning of the sounding point.

This document gives guidelines for the use of the weight sounding test to give a continuous soil profile and an indication of the layer sequence. The use includes the estimation of the density of cohesionless soils and the depth to very dense ground layers indicating the length of end-bearing piles.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14688 (all parts), *Geotechnical investigation and testing — Identification and classification of soil*

ISO 14689-1, *Geotechnical investigation and testing — Identification and classification of rock — Part 1: Identification and description*

ISO 22475-1, *Geotechnical investigation and testing — Sampling methods and groundwater measurements — Part 1: Technical principles for execution*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22475-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

weight sounding resistance

smallest standard load for which the penetrometer sinks without rotation, or the number of half turns per 0,20 m of penetration when the penetrometer has its maximum load and is rotated

3.2

manual weight sounding test

test made by loading and rotating the penetrometer by hand using a handle

Note 1 to entry: The penetrometer is loaded by weights.

3.3

mechanized weight sounding test

test in which loading and rotating the penetrometer is mechanical

Note 1 to entry: The penetrometer is loaded mechanically or by dynamometer or by weights.

4 Equipment

4.1 Penetrometer point

The dimensions of the penetrometer point are shown in [Figure 1](#). The diameter of the circumscribed circle of the screw-shaped point shall be 35 mm. The length of the point shall be 200 mm. The point, which has a screwed cone as shown in [Figure 1](#), shall be twisted one turn to the left over a length of 130 mm. The penetrometer point shall be made of high strength steel.

The diameter of the circumscribed circle for the worn point shall not be less than 32 mm. The maximum allowable shortening of the point tip due to wear shall be 15 mm. The tip of the point shall not be bent or broken.

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