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

### **Part 3: Standard penetration test**

#### **AMENDMENT 1**

*Reconnaissance et essais géotechniques — Essais en place —*

*Partie 3: Essai de pénétration au carottier*

*AMENDEMENT 1*



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## Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

Amendment 1 to ISO 22476-3:2005 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 341, *Geotechnical Investigation and Testing*, in collaboration with Technical Committee ISO/TC 182, *Geotechnics*, Subcommittee SC 1, *Geotechnical investigation and testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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# Geotechnical investigation and testing — Field testing —

## Part 3: Standard penetration test

### AMENDMENT 1

#### Page 1, Scope

Replace the first paragraph with the following:

This part of ISO 22476 deals with the equipment requirements for execution of and reporting on the standard penetration test to complement direct investigations (e.g. ISO 22475-1).

NOTE This part of ISO 22476 fulfils the requirements for standard penetration testing as part of geotechnical investigation and testing in accordance with EN 1997-1 and EN 1997-2.

#### Page 1, Normative references

Replace prEN ISO 22475-1 with the following:

ISO 22475-1:2006, *Geotechnical investigation and testing — Sampling methods and groundwater measurements — Part 1: Technical principles for execution*

#### Page 3, 4.3

After the first sentence of the first paragraph, add the following sentence:

The rod stiffness should be at least that of an AW rod for tests less than 20 m depth, and of a BW rod for greater depth. For definitions of AW and BW rods, see ISO 22475-1:2006, Table C.1.

At the end of the first paragraph, add the following:

The straightness shall be checked by applying one of the following procedures.

- Holding the rod vertically and rotating it. If the rod appears to wobble, the straightness is not acceptable.
- Rolling the rod on a plane surface. If the rod appears to wobble, the straightness is not acceptable.
- Sliding a straight hollow tube which is slightly longer than the rod over the rod. If the rod can pass through the tube without jamming, the straightness is acceptable.

Add the following as the last paragraph:

At greater depth and/or with greater borehole diameters, the vertical alignment of the rod string should be ensured by installing appropriate stabilizers. Also, a stabilizer should be used at the collar at the top of the borehole. Type and number of stabilizers shall be reported.

Page 4, 5.1

After the second sentence of the first paragraph, add the following:

The straightness shall be checked by applying one of the following procedures.

- Holding the rod vertically and rotating it. If the rod appears to wobble, the straightness is not acceptable.
- Rolling the rod on a plane surface. If the rod appears to wobble, the straightness is not acceptable.
- Sliding a straight hollow tube which is slightly longer than the rod over the rod. If the rod can pass through the tube without jamming, the straightness is acceptable.

At the end of the final paragraph, add the following sentence:

The calibration check shall be made annually and after all changes, repairs and modifications to the driving equipment.

Page 4, 5.2

In the second paragraph, replace “bottom discharge, from a safe distance of the test elevation” with “bottom discharge, from a safe distance above the test elevation.”

Page 4, 5.3

Replace the fourth sentence in the first paragraph with the following:

Then the sampler shall be driven in the same manner over a test drive of 300 mm. This shall be done in at least two increments (150 mm each). Alternatively, four increments (75 mm each) may be used.

In the last sentence of the first paragraph, replace the text in parentheses with the following:

$(N = N_n + N_{n+1}$  for 150 mm increments;  $N = N_n + N_{n+1} + N_{n+2} + N_{n+3}$  for 75 mm increments).

After the first paragraph, add the following paragraph:

The seating drive shall be 150 mm or 25 blows, whichever is reached first. If the seating drive is terminated at 25 blows, the depth of penetration shall be recorded and the start of the test drive measured from that depth.

In the last paragraph, replace “prEN ISO 22475-1” with “ISO 22475-1”.

Page 5, Clause 6

Replace the first paragraph with the following:

The test results shall be reported and interpreted as the seating drive,  $N_0$ , and the penetration blow resistance,  $\mathcal{N}$ , or the test drive blow number,  $N$ . They shall be reported without any corrections or adjustments. Corrections/adjustments may be considered for further interpretation.

Page 5, 7.1.1 a)

Replace “prEN ISO 22475-1” with “ISO 22475-1”.