TECHNICAL SPECIFICATION

ISO/TS 24283-3

First edition

Geotechnical investigation and testing — Qualification criteria and assessment —

Part 3: Qualified enterprise

Reconnaissance et essais géotechniques - Critères de qualification et évaluation —
Partie 3: Entreprise qualifiée

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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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 182, *Geotechnics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 341, *Geotechnical Investigation and Testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 24283 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The ISO 24283 series specifies the qualification criteria for geotechnical investigation and testing and has three parts:

— Part 1: Qualified technician and qualified operator

— Part 2: Responsible expert

— Part 3: Qualified enterprise

The fulfilment of the technical criteria by the enterprise or the individual can be proven by:

a) a declaration of conformity by a contractor (first party control);

b) a declaration of conformity by a client (second party control);

c) a declaration of conformity by a conformity assessment body (third party control).

Geotechnical investigation and testing — Qualification criteria and assessment —

Part 3: Qualified enterprise

1 Scope

This document specifies the qualification criteria for enterprises performing sampling, testing, measuring, monitoring and installation of equipment (e.g. piezometers, borehole heat exchangers, inclinometers and extensometers) in the framework of geotechnical investigation.

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/TS 24283-1, *Geotechnical investigation and testing — Qualification criteria and assessment — Part 1: Qualified technician*

ISO/TS 24283-2, *Geotechnical investigation and testing — Qualification criteria and assessment — Part 2: Responsible expert*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
enterprise
public or private organisation providing services

3.2
qualified enterprise
enterprise (3.1) having documented competence to perform specified parts of sampling, laboratory and field testing, measuring, monitoring and installation of equipment

4 Qualification criteria

The enterprise carrying out sampling, laboratory and field testing, measuring, monitoring and installation of equipment should be able to demonstrate adequate competence and have:

a) experienced and qualified personnel and facilities to manage and to perform specified types of services complying with the relevant standards (see Bibliography);

b) items of equipment complying with the relevant standards (see Bibliography);

c) a health, safety and environmental system;

d) liability insurance;

e) a quality management system.

The enterprise shall ensure that all specified equipment complies with the appropriate technical specifications, is correctly maintained, calibrated and used according to specifications and operating manuals.

The enterprise shall have a minimum of one responsible expert according to ISO/TS 24283-2 and adequate numbers of qualified technicians and/or operators according to ISO/TS 24283-1 appointed for each project.

A qualified technician or operator according to ISO/TS 24283-1 shall perform specified parts of sampling, laboratory and field testing, measuring, monitoring and installation of equipment.

The enterprise shall appoint a minimum of one responsible expert according to ISO/TS 24283-2 for each project who checks and also signs the report(s).

It is presupposed that the enterprise complies with the actual bylaws, health, safety and environmental regulations and follows the technical rules for the corresponding field of activity.

The enterprise shall be covered for public liability.

The enterprise shall provide training of its personnel on a regular basis and maintain records of this training.

The qualification of external personnel and sub-contractors shall meet the same criteria and should be verified by the enterprise.

Assessment and re-assessment of enterprises should be carried out in accordance with Annex A.

Annex A
(informative)

Assessment and re-assessment of enterprises

A.1 Prerequisites for admission to assessment and re-assessment

The prerequisites for admission to the assessment and re-assessment are:

a) name(s) of responsible expert(s) according to ISO/TS 24283-2 with records concerning education, training, experience and certificate(s) relevant to the assessment;

b) name(s) of the qualified technician(s) and operators according to ISO/TS 24283-1 relevant to the assessment;

c) list of machines and equipment relevant to the assessment subject;

d) quality management system;

e) health, safety and environmental system.

The prerequisites for admission to the re-assessment is a certificate as qualified enterprise whose validity has not expired more than 12 months.

A.2 Assessment procedure

Arrangements should be made in advance for the assessor and enterprise to meet at the enterprise office and investigation site to demonstrate its skills, knowledge and safe working according to the set standards and procedures.

It may cover the following subjects:

— identification of soil and rock according to ISO 14688-1 and ISO 14689;

— sampling of soil and/or rock according to the ISO 22475 series according to sampling category A to E, C to E or only E;

— electrical cone penetration testing according to ISO 22476-1;

— mechanical cone penetration testing according to ISO 22476-12;

— standard penetration testing according to ISO 22476-3;

— borehole dynamic probing according to ISO 22476-14;

— dynamic probing to ISO 22476-2;

— Ménard pressuremeter testing to ISO 22476-4;

— flexible dilatometer testing according to ISO 22476-5;

— borehole jack testing according to ISO 22476-7;

— field vane testing according ISO 22476-9;

— weight sounding according to ISO 22476-10;

— flat dilatometer testing according to ISO 22476-11;

— measuring while drilling according to ISO 22476-15;

— geohydraulic testing according to the ISO 22282 series;

— laboratory testing according to the ISO 17892 series;

— geothermal response testing according to ISO 17628;

— installation of borehole heat exchangers according to ISO 17628;

— extensometer measuring according to ISO 18674-2;

— installation of extensometer equipment according to ISO 18674-2;

— inclinometer measuring according to ISO 18674-3;

— installation of inclinometer tubes in a borehole according to ISO 18674-3;

— groundwater measurements according to ISO 18674-4;

— Installation of piezometers according to ISO 18674-4.

NOTE This list represents the current status of available standards on sampling, testing, measuring, monitoring and installation of hereon related equipment. It can be extended when new standards are published and by national standards.

The duration of the assessment should be adapted to the complexity of the above techniques.

The assessed enterprise may choose the subjects individually according to its qualification.

A.3 Re-assessment procedure

An annual monitoring of compliance to the prerequisites of A.1 should be carried out by the qualified enterprise and documented.

The competence of the qualified enterprise in accordance with the qualification criteria should be verified by inspection after 3,5 years.

A full re-assessment similar to the first assessment should take place every seven years.

