ICS 13.080.20, 93.020 SLOVENSKÁ TECHNICKÁ NORMA Február 2020

STN	**Geotechnický prieskum a skúšanie Geotechnický monitoring pomocou terénnych prístrojov Časť 5: Meranie zmien napätia pomocou tlakových buniek (ISO 18674-5: 2019)**	**STN EN ISO 18674-5** 72 1034

Geotechnical investigation and testing - Geotechnical monitoring by field instrumentation - Part 5: Stress change measurements by total pressure cells (TPC) (ISO 18674-5:2019)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/20

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 18674-5

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English Version

Geotechnical investigation and testing - Geotechnical monitoring by field instrumentation - Part 5: Stress change measurements by total pressure cells (TPC) (ISO 18674-5:2019)

Reconnaissance et essais géotechniques - Surveillance géotechnique par instrumentation in situ - Partie 5: Mesures avec capteurs hydrauliques (ISO 18674-5:2019)

Geotechnische Erkundung und Untersuchung - Geotechnische Messungen - Teil 5: Spannungsänderungsmessungen mittels Druckmessdosen (ISO 18674 5:2019)

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EN ISO 18674-5:2019 (E)

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European foreword

This document (EN ISO 18674-5:2019) has been prepared by Technical Committee ISO/TC 182 "Geotechnics" in collaboration with Technical Committee CEN/TC 341 “Geotechnical Investigation and Testing” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2020, and conflicting national standards shall be withdrawn at the latest by April 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 18674-5:2019 has been approved by CEN as EN ISO 18674-5:2019 without any modification.

INTERNATIONAL STANDARD

ISO 18674-5

First edition
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Geotechnical investigation and testing — Geotechnical monitoring by field instrumentation —

Part 5: Stress change measurements by total pressure cells (TPC)

Reconnaissance et essais géotechniques — Surveillance géotechnique par instrumentation in situ —

Partie 5: Mesures de la variation de pression par cellules de pression totale (TPC)

Reference number
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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).

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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*.

A list of all parts in the ISO 18674 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.

INTERNATIONAL STANDARD **ISO 18674-5:2019(E)**

Geotechnical investigation and testing — Geotechnical monitoring by field instrumentation —

Part 5: Stress change measurements by total pressure cells (TPC)

1 Scope

This document specifies the measurement of stress changes by means of total pressure cells (TPC). General rules of performance monitoring of the ground, of structures interacting with the ground, of geotechnical fills and of geotechnical works are presented in ISO 18674-1.

If applied in conjunction with ISO 18674-4, this document allows the determination of effective stress acting in the ground.

This document is applicable to:

— monitoring changes of the state of stress in the ground and in geo-engineered structures (e.g. in earth fill dams or tunnel lining);

— monitoring contact pressures at the interface between two media (e.g. earth pressure on retaining wall; contact pressure at the base of a foundation);

— checking geotechnical designs and adjustment of construction in connection with the Observational Design procedure;

— evaluating stability during or after construction.

Guidelines for the application of TPC in geotechnical engineering are presented in Annex B.

NOTE This document fulfils the requirements for the performance monitoring of the ground, of structures interacting with the ground and of geotechnical works by the means of total pressure cells as part of the geotechnical investigation and testing according to EN 1997-1[1] and EN 1997-2[2].

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 18674-1:2015, *Geotechnical investigation and testing — Geotechnical monitoring by field instrumentation — Part 1: General rules*

ISO 18674-4, *Geotechnical investigation and testing — Geotechnical monitoring by field instrumentation — Part 4: Measurement of pore water pressure: Piezometer*

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

