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STN	**Geotechnický prieskum a skúšanie Hydrogeologické skúšky Časť 4: Čerpacie skúšky (ISO 22282-4: 2021)**	**STN EN ISO 22282-4 72 1040**

Geotechnical investigation and testing - Geohydraulic testing - Part 4: Pumping tests (ISO 22282-4:2021)

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. 09/21

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EN ISO 22282-4

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ICS 93.020

Supersedes EN ISO 22282-4:2012

English Version

Geotechnical investigation and testing - Geohydraulic testing - Part 4: Pumping tests (ISO 22282-4:2021)

Reconnaissance et essais géotechniques - Essais géohydrauliques - Partie 4: Essais de pompage (ISO 22282-4:2021)

Geotechnische Erkundung und Untersuchung - Geohydraulische Versuche - Teil 4: Pumpversuche (ISO 22282-4:2021)

This European Standard was approved by CEN on 10 December 2020.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN ISO 22282-4:2021) 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of an identical text or by endorsement, at the latest by October 2021, and conflicting national standards shall be withdrawn at the latest by October 2021.

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.

This document supersedes EN ISO 22282-4:2012.

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Endorsement notice

The text of ISO 22282-4:2021 has been approved by CEN as EN ISO 22282-4:2021 without any modification.

INTERNATIONAL STANDARD

ISO 22282-4

Second edition
2021-03

Geotechnical investigation and testing — Geohydraulic testing —

Part 4: Pumping tests

Reconnaissance et essais géotechniques — Essais géohydrauliques —

Partie 4: Essais de pompage

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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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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).

This second edition cancels and replaces the first edition (ISO 22282-4:2012), which has been technically revised.

The main changes compared to the previous edition are as follows:

— editorial changes;

— correction of formulae.

A list of all parts in the ISO 22282 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

General rules on the planning and execution of geohydraulic field tests are covered by ISO 22282-1.

A pumping test consists in principle of:

— drawing down the piezometric surface of the groundwater by pumping from a well (the test well);

— measuring the pumped discharge and the water level in the test well and piezometers, before, during and after pumping, as a function of time.

INTERNATIONAL STANDARD **ISO 22282-4:2021(E)**

Geotechnical investigation and testing — Geohydraulic testing —

Part 4: Pumping tests

1 Scope

This document establishes requirements for pumping tests as part of geotechnical investigation service in accordance with EN 1997-1 and EN 1997-2.

This document applies to pumping tests performed on aquifers whose permeability is such that pumping from a well can create a lowering of the piezometric head within hours or days depending on the ground conditions and the purpose. It covers pumping tests carried out in soils and rock.

The tests concerned by this document are those intended for evaluating the hydrodynamic parameters of an aquifer and well parameters, such as:

— permeability of the aquifer,

— radius of influence of pumping,

— pumping rate of a well,

— response of drawdown in an aquifer during pumping,

— skin effect,

— well storage,

— response of recovery in an aquifer after pumping.

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 14688-1, *Geotechnical investigation and testing — Identification and classification of soil — Part 1: Identification and description*

ISO 14689, *Geotechnical investigation and testing — Identification, description and classification of rock*

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

ISO 22282-1, *Geotechnical investigation and testing — Geohydraulic testing — Part 1: General rules*

ISO 22475-1, *Geotechnical investigation and testing — Sampling methods and groundwater measurements — Part 1: Technical principles for the sampling of soil, rock and groundwater*

