

SLOVENSKI STANDARD

SIST EN ISO 22282-1:2012

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**Geotehnično preiskovanje in preskušanje - Hidrogeološke preiskave - 1. del:
Splošna pravila (ISO 22282-1:2012)**

Geotechnical investigation and testing - Geohydraulic testing - Part 1: General rules (ISO 22282-1:2012)

Geotechnische Erkundung und Untersuchung - Geohydraulische Versuche - Teil 1:
Allgemeine Regeln (ISO 22282-1:2012)

Reconnaissance et essais géotechniques - Essais géohydrauliques - Partie 1: Règles
générales (ISO 22282-1:2012)

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Ta slovenski standard je istoveten z: EN ISO 22282-1:2012

ICS:

93.020	Zemeljska dela. Izkopavanja.	Earthworks. Excavations.
	Gradnja temeljev. Dela pod	Foundation construction.
	zemljo	Underground works

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 22282-1

June 2012

ICS 93.020

English Version

**Geotechnical investigation and testing - Geohydraulic testing -
Part 1: General rules (ISO 22282-1:2012)**

Reconnaissance et essais géotechniques - Essais
géohydrauliques - Partie 1: Règles générales (ISO 22282-
1:2012)

Geotechnische Erkundung und Untersuchung -
Geohydraulische Versuche - Teil 1: Allgemeine Regeln
(ISO 22282-1:2012)

This European Standard was approved by CEN on 31 May 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 22282-1:2012) has been prepared by Technical Committee CEN/TC 341 "Geotechnical Investigation and Testing", the secretariat of which is held by ELOT, in collaboration with Technical Committee ISO/TC 182 "Geotechnics".

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 December 2012, and conflicting national standards shall be withdrawn at the latest by December 2012.

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

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INTERNATIONAL STANDARD

ISO
22282-1

First edition
2012-06-01

Geotechnical investigation and testing — Geohydraulic testing —

Part 1: General rules

**Reconnaissance et essais géotechniques — Essais géohydrauliques —
Partie 1: Règles générales**
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

ISO 22282-1 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).

ISO 22282 consists of the following parts, under the general title *Geotechnical investigation and testing — Geohydraulic testing*:

— Part 1: General rules

— Part 2: Water permeability tests in a borehole using open systems

— Part 3: Water pressure tests in rock

— Part 4: Pumping tests

— Part 5: Infiltrometer tests

— Part 6: Water permeability tests in a borehole using closed systems

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Introduction

The EU water directive requires the member states to increase activities that protect groundwater and fresh surface water both quantitatively and qualitatively^[1]. At the same time, society requires more water and thus more construction projects below groundwater level in even deeper waters. In addition, the sea level may rise as a result of climate change. This contradiction requires engineers working on construction projects below groundwater level to make more reliable predictions on the effects of such structures on the groundwater conditions. This can partly be achieved by better assessment of the permeability of the ground by *in situ* tests as required in EN 1997-1:2004, 3.3.9.1. EN 1997-2:2007 contains the following stipulations, requirements and recommendations:

“2.1.4 Groundwater –

(1) Groundwater investigations shall provide all relevant information on groundwater needed for geotechnical design and construction.

(2) Groundwater investigations should provide, when appropriate, information on:

- the depth, thickness, extent and permeability of water-bearing strata in the ground, and joint systems in rock;
- the elevation of the groundwater surface or piezometric surface of aquifers and their variation over time and actual groundwater levels including possible extreme levels and their periods of recurrence;
- the pore water pressure distribution;
- the chemical composition and temperature of groundwater.

(3) The information obtained should be sufficient to assess the following aspects, where relevant:

- the scope for and nature of groundwater lowering work;
- possible harmful effects of the groundwater on excavations or on slopes (e.g. risk of hydraulic failure, excessive seepage pressure or erosion);
- any measures necessary to protect the structure (e.g. water proofing, drainage and measures against aggressive water);
- effects of groundwater lowering, desiccation, impounding, etc. on the surroundings;
- the capacity of the ground to absorb water injected during construction work;
- whether it is possible to use local groundwater, given its chemical constitution, for construction purposes.”

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