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Part 8: Measurement of loads: Load cells

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

Partie 8: Mesure de charges: Cellules de charge

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Foreword

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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).

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Geotechnical investigation and testing — Geotechnical monitoring by field instrumentation —

Part 8:
Measurement of loads: Load cells

IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

1 Scope

This document specifies the measurement of forces by means of load cells carried out for geotechnical monitoring. 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.

This document is applicable to:

— performance monitoring of geotechnical structures such as anchors, tiebacks, piles, struts, props and steel linings;

— checking geotechnical designs and adjustment of construction in connection with the observational method;

— evaluating stability during or after construction.

This document is not applicable to devices where the load is purposely applied to geotechnical structures in the wake of geotechnical field tests such as calibrated hydraulic jacks for pull-out tests of anchors or load tests of piles.

NOTE 1 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 load cells as part of the geotechnical investigation and testing in accordance with References [2] and [3].

NOTE 2 ISO 18674-7 is intended to define the measurement of forces by means of strain or displacement gauges.

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 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

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

3 Terms and definitions

For the purposes of this document the terms and definitions given in ISO 18674-1 and the following apply.

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