



Optocone

starting a new era in CPT data acquisition



features

- wireless
- reliable and accurate
- easy-to-use
- time-saving

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wireless CPT

It is possible to replace the awkward measuring cable by a reliable wireless system for electrical cone testing. The system ensures more convenient CPT operations and higher productions. And moreover – ever thought of mechanical automation of rod handling? A piece of cake now that the cable is out of the way! See leaflet S38 AUTOCOSON for more information.



description

The system consists of an adapter piece which is connected on top of the electrical cone, very much like the usual screw-thread adapter. The adapter piece contains all electronics for optical data transmission of 6 soil parameters and a non-volatile memory for backup data. A data scan is made 5 times per second, which is transmitted to a camera installed over the upperbeam of the CPT unit through a light transducer in the CPT rod. When placing the CPT rods the light transducers are positioned on top of each other without having to be connected. The camera transmits the data to the data acquisition system where it is immediately stored and shown on screen. By means of an optical transmitter, commands can be sent to the cone from the data acquisition system. Data transmission can be interrupted for ± 8 seconds for adding on new CPT rods, without loss of data on the screen.

main features

- optical transducer data transmission
- memory inside the adaptor for wireless testing and back-up data
- possibility for automated rod handling

compatibility

- suitable for all onshore (electrical) CPT units
- suitable for all A.P. van den Berg standard electrical cones
- existing CPT units can be adapted
- existing cones can be adapted

special applications

The Optocone is ideally suited for special applications, like the Drilling Rig Conversion Kit (see leaflet S20), where the CPT pushing piece with integrated camera are used to perform CPT's with a drilling rig. The required pushing capacity is supplied by the drilling rig's travelling table. Another application is wireless cone penetration testing with the HYSON 100 kN-LW lightweight, single-cylinder CPT unit (see leaflet S05). Elimination of the cable makes electrical CPT's with this type of equipment much more convenient.



specifications

- data acquisition of the parameters: cone tip resistance, local friction or cone tip resistance + local friction, porewater pressure, inclination
- resolution cone tip resistance, local friction, cone tip resistance + local friction and pore-water pressure : 16 bits
- resolution inclination and inclination X-Y: 8 bits
- measuring depth can be extended with optional repeaters
- scanning rate 5 scans/s
- scanning rate of the non-volatile memory 1 scan/s up to 7,5 hrs
- diameter of the adaptor piece $\varnothing 36$ mm
- data storage in ASCII or GEF format

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