

Bauer Spezialtiefbau

Rope Inclinometer

Verticality measurement
of cased pile borings

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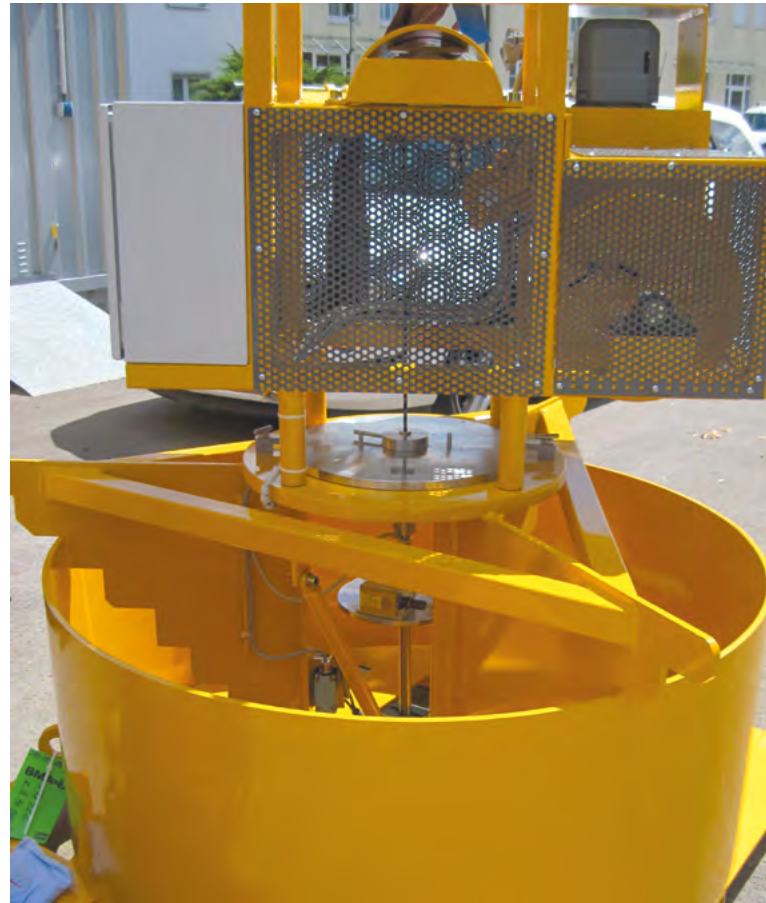
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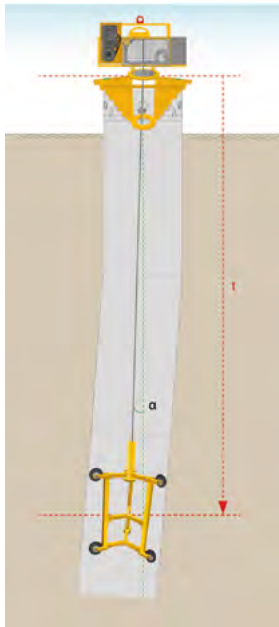


903.063.2 BST 10/2024



Description

The **Rope Inclinometer** for measuring the verticality of cased bore holes for bored piles was developed by the **Technical Service** Department of BAUER Spezialtiefbau GmbH. The measuring system has been used in its basic form for over twenty years and is constantly being further developed and advanced. The use of modern electronics ensures high measuring accuracy and reliability. The system is designed for verticality testing of cased piles with standard sizes from 620 to 1,500 mm. The system can be adapted for other drilling diameters. The system is used as standard for measuring depths of up to 40 m.



Schematic diagram



Schematic diagram of the Rope Inclinometer

Measuring principle

The Rope Inclinometer consisting of a cable winch and an inclinometer sensor is mounted on the base frame. The centering slide is attached to the rope. For a measurement, the Rope Inclinometer is centered on the casing, and the measuring rope is attached centrally to the centering slide. The centering slide is lowered to the respective measuring depths by means of the winch. The inclination of the rope is measured in two orthogonal planes (x, y) using the inclinometer. The deflection of the rope at the level of the centering slide and, using that, the inclination of the pile drilling are determined from the depth of the centering slide and the x/y inclination values.

Measured data

The data acquired with the Rope Inclinometer at the respective measurement depths can be processed with an evaluation program. A two-dimensional or three-dimensional representation is the possible result.



Rope Inclinometer in use on a construction site