Subsea drilling resistance measurement: inspection of underwater timber elements

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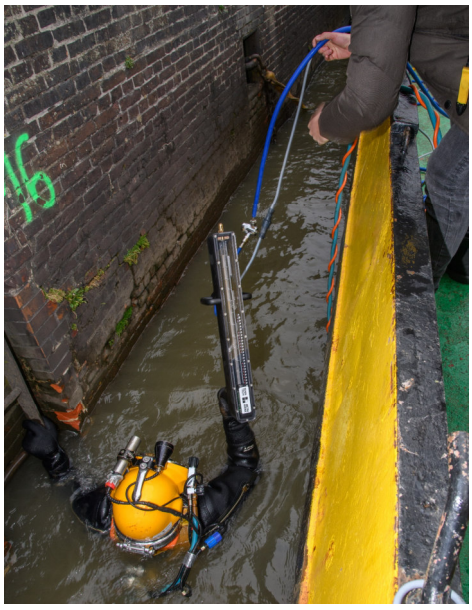
Building structures have to be inspected regularly for their traffic safety. For wooden foundation piles of piers and bridges lying under water, no suitable examination method has been available so far. After development and implementation of technical adaptations, the drilling resistance measurement is now also available for the subsea area.

Problem behind development

With rising water temperatures in general and increasing salt content in the Baltic Sea and the lower reaches of the Elbe and Weser rivers, the ship borer (*Teredo navalis*) is expanding. With corresponding damage to foundation piles of port facilities.

Due to their deepening, wooden foundations in the Elbe are increasingly dry. This means that - unlike in the past - they can be attacked and destroyed by fungi.

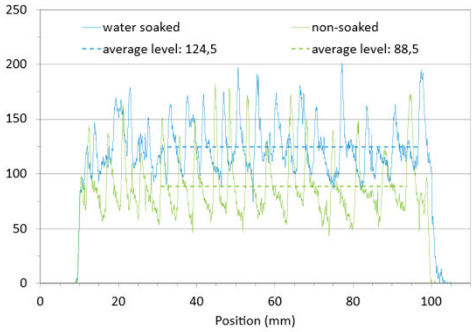


Verification in practical test

At the east pier of the fishing port in Hamburg-Altona, it was shown that comparable results are obtained with the subsea resistograph and the R6.

Wet versus dry wood

The characteristics of the drilling profiles of water soaked and non-soaked wood are similar, the drilling resistance level differs.



Not only in HH und Bremerhaven ...

.. is infrastructure founded on wooden piles. In Venice, facades also rest on wood, which is subject to biological degradation.

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