

## Certification Letter

### Measuring Task

MIT-SCAN2-BT is a measuring device for the nondestructive measurement of steel dowels in concrete roads. It has been widely used for solid steel bars. However, there is little experience with dowel tubes. Investigations were made, in order to evaluate the measuring accuracy of the device, when the positions of dowel tubes are tested.

### Measuring Device Information

Manufacturer: MIT Mess- und Prüftechnik GmbH  
Device type: MIT-SCAN2-BT  
Serial number: 16EL485

### Bar Information

Manufacturer: O-Dowel  
Dimension: 457x42 mm  
Material: Steel  
Coating: Epoxy Coating and/or Galvanized Coating  
Caps: Steel or Plastic

### Procedure of Verification

The computation of bar positions requires a calibration as for other dowel types, which are usually characterized by their dimensions. The correct determination of bar positions – using the obtained calibration parameters – was verified in a specific test environment, which affords the adjustment of bar positions for several bars within a given grid. A representative sample of varying bar positions within the usual scope of validity was measured. The following parameters have been computed and compared with the actual bar positions: depth, side shift, horizontal and vertical misalignment.

### Result

The measuring tolerances of the dowel tube are within the same scope as the tolerances of solid dowel bars. It is possible to measure dowel tubes with the usually stated measuring tolerances of the testing device. Steel or plastic caps have no influence on the results.

Dresden, 07<sup>th</sup> of April 2017



**Inspector:** Dipl.-Ing. Matthias Herold