

Dr. D. Wehrhahn Measuring Systems for Quality Assurance

OVHWizard Contact Line Measuring System with DB Approval

The OVHWizard is a non-tactile contact line measuring system for determining the contact line height and stagger with and without uplift. The system operates with ultrasound according to the principle of runtime measurement.

This measuring principle offers the advantage over optically operating systems that it also works in direct sunlight, light rain or fog. Thanks to its weight of approximately 4 kg, it is

easy to handle and can be installed on every vehicle roof with a few actions. A simple RS232 connection to the PC or laptop enables communication with the measuring software.

Pulse Transmitter in use

A pulse transmitter of the vehicle or a light barrier and self-adhesive reflectors for attaching to the wheel can be used for determining the distance. The measured data are displayed on-

line, recorded and shown and saved in graph or table form by means of the included software. The postprocessing enables the measuring runs to be evaluated locally or at the office.

The system can be equipped with an optional camera system. The condition of the contact wire is recorded parallel to the measurement. The measured values for height and stagger are shown in the on-screen image. The image of the contact wire is available for every measured value for later observation of the measured values.

Evaluation of measured data

The measured data can be evaluated extensively later with the FMA software developed jointly with Siemens. The measurement can be correlated with existing line data. In addition it is possible to show every dropper of the measured line and list the deviations at each of these points next to the design in a table. This function enables the service teams to move exactly to the affected positions and make the specified corrections. In addition to the measured data for height and stagger the wind drift, longitudinal span, elasticity and other values relevant to the contact wire are calculated.

System with DB approval

The system is in use on measuring trolleys, two-way vehicles, service vehicles (MTW) and measuring trains. The system can be delivered with optional compensation of the vehicle movements. The system has had DB approval since February 2010.



PHOTO: SIEMENS/SBS FACTORY PHOTO

OVHWizard on a two-way vehicle