



RAILWAY TECHNOLOGY

Mobile Ultrasonic Hollow Axle Testing System



With this latest generation of hollow shaft testing systems, bip technology GmbH for the first time closes the gap between manual testing and the mobile test systems on the market. The innovative and novel protected system concept makes it possible to test wheel set shafts even in the smallest space or in areas which can only be reached via stairs. The system concept is aimed at all depots and companies with difficult access possibilities to the wheelsets or with decentralized workshops.

The system is built according to a modular concept. All modular parts are designed for weights less than 10 kg. The system can easily be stored in the trunk of a estate car. Three suit cases are placed on top of each other, the lines are connected and the test can start after connecting to a 220V network.

Of course, this test device fulfills all requirements from the maintenance guidelines for the mechanized and automated non destructive testing of wheelset shafts with longitudinal boreholes on installed and dismantled wheelsets of different designs for transverse, longitudinal and volume errors.

The test facility consists of:

- probe carrier and feed system
- US test system incl. Evaluation and control computer
- Control, data acquisition and evaluation
- Oil supply
- Shaft connection adapter





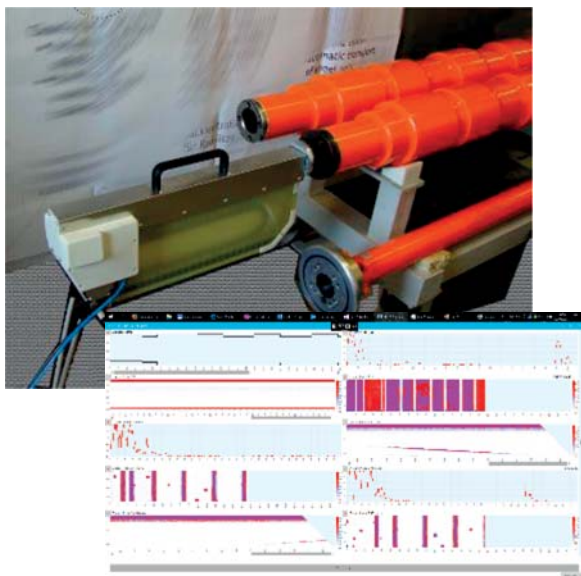
Mechanical Concept

The innovative concept of the system is the completely new design and construction of the handling. The 5 equipment components required for the testing are each in unit weight less than 15 kg and thus easy to handle. The extremely handy feed unit can easily be docked on the shaft without any tools.



Testing Concept

In the field of ultrasound technology will be referred to the proved concept by Helix-Scan. After docking, the probe moves to the input start position at the shaft end and then checks when retracting. All process parameters such as feed, step width and probe speed can be adjusted according to the test task and the sensitivity. A new feature, however, is the entire software interface, which has been designed to be user-friendly and can be found in all BIP-US systems in the future.



Testing results

The evaluation contains all the known possibilities of automated test systems. In addition to the online A, B and C images, the cursor button can also be used to access any positions after checking. Zoom functions can be used in all areas. Adjustable registration limits and visibility are just as standard as creating the results logs.

Technical Data

Basic unit for all shaft diameters

Transportable in a estate car, single piece weight less than 15 kg

Finding cross-sections, longitudinal errors (from DM 50mm) and volume errors

Systems available for all diameters between 30 mm and 110 mm

Test duration approx. 10 min

Automatic test execution and documentation of test results

Status as of 09/2022