

PMZ KASSEL

PRÜF- UND MESSTECHNIK ZENTRUM KASSEL GMBH



PMZ Prüf- und Messtechnik Zentrum Kassel GmbH

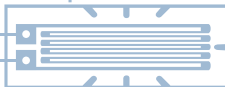
- IN-SERVICE MEASUREMENTS
- DURABILITY TESTING
- STATIC HIGH-LOAD TESTING
- ENVIRONMENT SIMULATION
- HYDRAULIC PRESSURE TESTS
- VIBRATION TESTING



Deutsche
Akkreditierungsstelle
D-PL-11296-01-00

Accredited test laboratory
according to DIN EN ISO/IEC 17025 for the accreditation
scope as depicted in the accreditation certification annex PL-11296-01.

www.p mz -kassel.de



DURABILITY TESTING

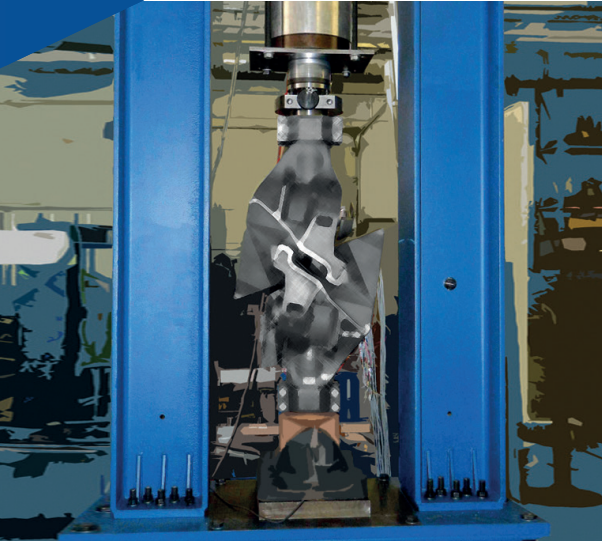


Our durability tests using hydraulic or pneumatic test cylinders cover a broad spectrum. We customize equipment usage in line with the requisite number of cylinders and the client's force and displacement requirements.

Our equipment can carry out translational durability testing for dynamic loads at up to 630 kN and rotational testing for up to 16 kNm in a multi-channel setup. In addition, we operate resonance test benches for up to 200 kN. Dynamic durability tests can be carried out according to standard or customer specifications.

All necessary device components, consisting of development, design and manufacturing, to get from one source.

STATIC HIGH-LOAD TESTING

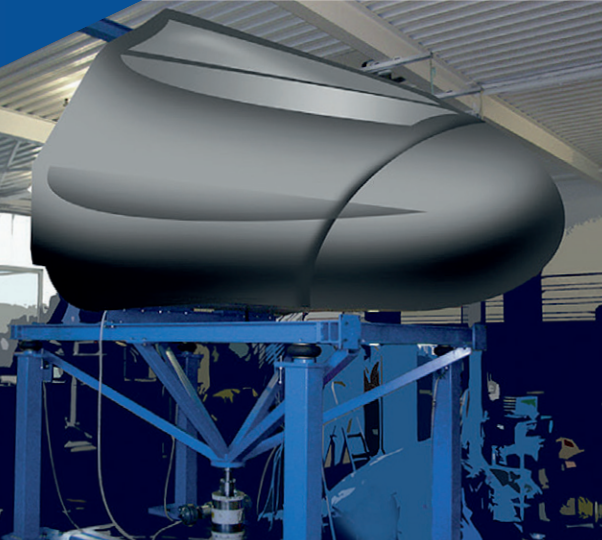


Predefined test specifications or standard requirements form the basis for static tension and pressure tests. By default, we use measurement applications (e.g. strain gauge measuring points) during testing.

Our static high-load tests cover a broad spectrum, including:

- tensile test bench for up to 1,500 kN
- pressure test bench for up to 2,000 kN
- special portal frame for excess lengths up to 4 m

VIBRATION TESTING



Our vibration test rigs are operated servo-hydraulically and are specially designed for testing large and heavy specimens.

Test specimen weights of over 5,000 kg and dimensions of over 5 m can be loaded by our test frame in 3 coordinate directions.

We focus primarily on analyses according to railway standard DIN EN/IEC 61373, but we also carry out testing in other areas as per customer requirements and standards.

IN-SERVICE MEASUREMENTS



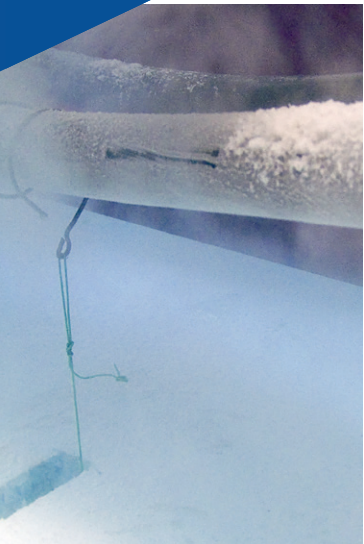
Internal (PMZ) or external (client-side) in-service measurements are carried out to analyse causes for damages and failures of systems and components.

Both load peaks and local loads are investigated. Our test and measuring equipment, which is actively monitored, allows the standard recording of different physical measurement variables.

We have sensors to capture the following physical values:

- force
- torque
- pressure
- material strain (strain gauge)
- displacement
- acceleration
- temperature

ENVIRONMENTAL SIMULATION



We carry out environmental simulations in the form of corrosion testing or as VDA alternating cycle tests in our accredited facility based on test specifications or standard requirements (a.o. DIN EN ISO 9227).

We can accommodate component lengths up to 1,300 mm, and our test chamber with a volume of 0.83 m³ and dimensions of 1,300 x 750 x 850 mm is capable of supporting heavy specimens.

The PMZ Kassel has temperature chambers to handle extreme temperatures of + 1,000 °C to - 80 °C.



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