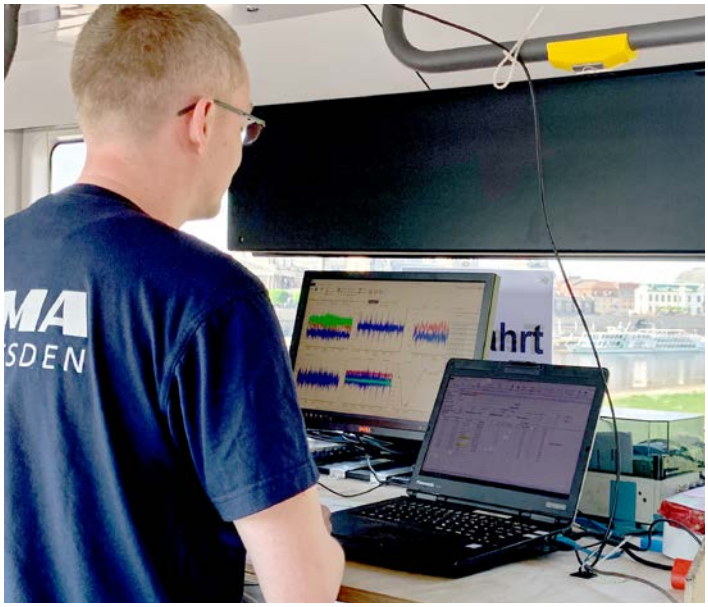
Applus+ IMA DRESDEN



ENGINEERING

MOBILE MEASUREMENTS DURING OPERATION

Use the competence of Applus+ IMA Dresden for your measurement campaigns.
We carry out measurement drives and long-therm measurements.

APPLUS+ IMA DRESDEN – AND IT WORKS.

As an independent and reliable development and testing centre for rail vehicles, we support manufacturers and suppliers in the development process and assist transport companies with damage analysis and product optimisation. As such, we offer solutions that provide developers and engineers with reliable support in ensuring product and operational safety and quality assurance.

As such, we bring together engineers and technicians from several fields of expertise – measurement and control engineering, computing, construction, test design and assessment. We aim to provide testing and engineering solutions that help customers to test forward-looking products thoroughly and validate them quickly, while complying with strict legal requirements.

STRESS MEASUREMENTS AND TEST DRIVES

Utilising appropriate measurements, measuring runs and continuous monitoring enables us to record loads in actual applications – whether for approval trials and tests, calculation and simulation or for structure optimisation in problem cases.
We execute measurements of mechanical and electrical variables with static and dynamic loads under

We execute measurements of mechanical and electrical variables with static and dynamic loads under operating conditions, install complete measurement chains including the process adaptation.
Our many years of experience guarantee effective problem solutions for status, condition and load analysis.

MODERN MEASURING SYSTEMS

Digital measurement technology as well as numerous, various transducer types enable collection, recording and processing of static and dynamic parameters

- force
- torque
- pressure
- path
- elongation
- strain
- speed
- acceleration
- relative air humidity
- calculated variables

- We can register elongation and strain in two ways – firstly as DMS based and, on the other hand, as optical (ARAMIS system, with in-plane and out-of-plane measurements for deformations).
- Rapid processes, such as free fall trials, are implemented by means of a high-speed camera.

- We not only evaluate the measured data values with commercially available software but also with our own software and visualise this data in real-time, such as for rain flow classification (also in real time), envelope calculation and according to additional algorithms.
- Telemetry systems enable us to collect and record measurement data from rotating components.

NO DISTANCE IS TOO FAR FOR US

Irrespective of whether Helsinki or Melbourne, Düsseldorf and Dresden – our on-site measuring service can provide numerous possibilities: with high channel counts and sampling rates, harsh environmental conditions, autonomous measuring in the regular utilisation or under test conditions – we can provide you with as much measurement data as you require.

In addition to executing measuring runs, we can also provide you with customised complete solutions: Creating measuring concepts, FE analysis, application of sensor technology, dismantling, measurement data evaluation and derivation as well as implementation of appropriate test procedures.

We provide the test in accordance with the application guidelines for distance and route trials for the rail vehicle sector according to DIN EN 13749 and VDV 152.

LONG-TERM MEASUREMENTS

We can support you with long-term measurements for data acquisition in actual operation, for example for the assessment of the impact and effects on the service life or the operating strength verification.

Furthermore, we can develop systems for monitoring of structures, components, systems and plants, which are directly tailor-made to your specific requirements – reliably informing about load or damage incidents immediately. We measure analogue signals such as DMS, accelerations and paths in conjunction with GPS and bus data during numerous assignments in various areas . This provides us and you with extensive assessments including location-based evaluation of measurement data with durations of several years.

Our knowledge and experience enables us to create soundly based test load concepts for executing component testing, also in-house at the customers.

MEASURING SERVICES

- Approval measurements
- Validation measurements
- Measuring for investigating damage cases and problem cases
- Driving technical measurements
- Load collective measurements
- Force measurements
- Measuring wheelsets
- Measuring brake systems
- Torsional vibrations
- Assuming railway operational services for measuring runs
- Modal analysis and operating vibration analysis
- Measuring railway noise and vibrations
- Electrical measurements
- Special measurements
- Pantograph measurements
- Structure monitoring

BENEFIT FROM THE COMPETENCE OF APPLUS+ IMA DRESDEN FOR YOUR RAIL VEHICLE COMPONENTS.

IMA Materialforschung und Anwendungstechnik GmbH, in short Applus+ IMA Dresden, is the development and test centre which can speed up the process for your new developments and ensure that they are suitable for the market. As an independent test provider we guarantee reliable results and strict confidentiality.

Whenever it comes down to strength, resistance, validation or material characteristic data, then Applus+ IMA Dresden can combine the efforts with regard to test standards, approval and certification tests as well as experimental investigations. We have over 10,000m² of test area in certified and accredited testing laboratories where we can test innovative products and technologies from aerospace, rail vehicle, automotive and medical technologies, shipbuilding, plastic, metal and electrical industries and other industrial branches. You can rely on us: the testing tasks at Applus+ IMA Dresden will be processed according to the current state of the art technology and enjoy worldwide acceptance and trust.

Since May 2021, IMA Dresden is part of Applus Laboratories.
Please do not hesitate to contact us for any questions or inquiries at sales@ima-dresden.de

DAkkS
Deutsche
Akkreditierungsstelle
D-PL-13119-02-00
According to accreditation certificate

CONTACT

IMA Materialforschung und Anwendungstechnik GmbH
Wilhelmine-Reichard-Ring 4
01109 Dresden
Germany

phone: +49 (0)351 8837-6200
fax: +49 (0)351 8837-530
mail: sales@ima-dresden.de

PHOTO CREDITS

Shutterstock: Cover) Background: Who is Danny / Zug: Denis Belitsky
Page 2) Town: zhu difeng
Andreas Scheunert (Lichtwerkedesign): other

www.ima-dresden.de
www.appluslaboratories.com

Visit us: