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## TESTING, INSPECTION & CERTIFICATION OF POWER PLANT AND INDUSTRIAL FACILITIES

As an independent, recognized, accredited testing, monitoring and certification body, we support manufacturers, construction planners, contractors and operators in all important questions regarding product conformity, service life and condition assessment issues.

# TESTING, INSPECTION & CERTIFICATION OF POWER PLANT AND INDUSTRIAL FACILITIES



# ALL IN ONE HAND WITH APPLUS+ IMA DRESDEN

Operators of power plants and industrial facilities bear a great ecological as well as social responsibility. On one hand, millions of households, industry and public life want to be reliably supplied with electricity and heat. On the other hand, high environmental standards and the safety measurements must be met.

Our sign stands for taking responsibilities, therefore we are 100% committed for our suppliers, building designers and also building owners as a testing and monitoring service provider.

We will strongly advise you against the backdrop of globalization and regulation. In addition, we will guide you through the requirements, test procedures and specifications of the applicable standards, regulations and laws.

- + SUPPORTING STRUCTURE  
CONSTRUCTION PROFILES  
WALL CLADDING ELEMENTS  
ROOF ELEMENTS AND CEILINGS  
STAIRS, RAILINGS AND PLATFORMS  
BRIDGES AND BRIDGE DECKING
- + PIPES AND PIPE SYSTEMS:  
COOLING WATER  
CLEAN GAS DUCTS  
SCRUBBER  
SUSPENSION LINE  
TANKS AND VESSELS
- + DISTRICT HEATING PLANTS
- + SUPPLY AND DISPOSAL SYSTEMS



TEST BODY

INSPECTION BODY

MONITORING CENTER

CERTIFICATION BODY

Recognized testing body, inspection body, certification body for building products according to the German building code (LBO) / (SAC08)

Notified certification body according to the Construction Products Regulation (BauPVO) / (NB 2457)

# FOR MANUFACTURES AND SUPPLIERS



Tests and inspections carried out by Applus+ IMA Dresden independently prove the quality of your products. We guide you from product development and initial sample testing through quality assurance to approval and certification.

Our customers reliably take the final step towards securely placing their products on the market just by working with us.

Don't forget! Applus+ IMA Dresden is accredited and recognized by numerous bodies - this is also a bonus for your products.

- Accredited testing laboratories according to DIN EN ISO/IEC 17025
- Accredited certification body according to DIN EN ISO/IEC 17065
- Accredited inspection body according to DIN EN ISO/IEC 17020



According to accreditation certificate

# MATERIAL, COMPONENT AND SPECIAL TESTING

New ideas? New products? New markets?

We support our customers with the complex determination of material and component properties, approval testing and certification.

In our accredited laboratories we characterize your products and determine the application limits. We are also happy to advise you on the selection of materials and technology.

- Definition of test programs for the material and component verification depending on the respective application
- Preparation and execution of material tests for plastics, composites and metals incl. sample production
- Material and component characterization: Short-term properties (e.g. strength and stiffness), long-term properties (e.g. ageing, fatigue, damage behavior)



## TEST METHODS ON MATERIALS:

- **Mechanical test**
  - Static tests
  - Cyclical tests
  - Long-term tests
- **Physical tests**
  - Density
  - Fiber content
  - Microscopy
- **Thermal tests**
  - DSC
  - DMA
  - DIL
- **Chemical tests**
  - Influence of media
  - Permeation

## TEST METHODS ON COMPONENTS:

- Simulation of multi-axial loads, also on large structures
- Measurement support, e.g. recording of strains, deformations of strains, deformations (also three-dimensional), forces, vibrations, temperatures
- Recording of the onset and progress of damage through non-destructive testing (NDT) and structural monitoring (SHM)
- Carrying out the test in the laboratories of Applus+ IMA Dresden, at the customer's or at a field test

# APPROVAL TESTING, INITIAL MONITORING, PRODUCT CERTIFICATION

A certification confirms that a product meets all relevant safety and quality requirements and that it has the required product properties.

We take over the product testing for you and support you on the way to certification. Both, for tests that are required by law for market approval as well as for voluntary tests.



## OUR KNOW-HOW

- Initial inspection of your plant and the FPC
- Sampling for the initial testing
- Characterization of the properties of your materials, semi-finished products or components
- Comparison of the results with the requirement values for approval
- Transmission of the proof of compliance to the corresponding certification body
- If conformity is confirmed: issue of a certificate of conformity

### OUR TIP:

Set yourself apart from your competition and show your customers and consumers that you only offer high-quality products by taking the step to certification with us.



# INSPECTION OF FACTORY PRODUCTION CONTROL (FPC)

Every manufacturer has the obligation to continuously monitor its production at the manufacturing plant. Thus, you ensure that the technical specifications are met during manufacturing of the construction product.

As an independent testing and inspection body we take over the production control for you:

- Is the staff appropriately trained and fulfills its scope of activities?
- Checking the measuring systems for the current calibration status
- Reconciliation of the measurement results with the technical specifications
- Awarding the IMA test mark "IMA tested", also independent of certification programs

Your company does not have the technical and/or personnel resources for its own FPC? No problem. We would be happy to carry out the FPC for you or find you another accredited inspection body for the verification of the FPC.



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## EXTERNAL MONITORING AND INSPECTION

As a manufacturer of products subject to approval in the building industry, it is obligatory for you to have the factory production control monitored by an independent, recognized and partially accredited monitoring inspection body.

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## HELP WITH APPROVAL AND WITH THE AUTHORITY

Approval processes can be time-consuming. To avoid friction losses, we support our customers in communicating with the authorities.

Take advantage of this opportunity and involve Applus+ IMA Dresden in your planning even before the official application.

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## OUR SERVICE

- Regular review and assessment of the plant and the FPC (one to two times a year)
- Comparison of the effectiveness of the QM measures
- Documentation of the results in a monitoring or inspection report
  - Sampling
  - Product testing
- Recommendation for conformity assessment
- Independent random sample inspection on the material or component



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## MAINTENANCE OF CERTIFICATION

Carrying out the conformity assessment on the basis of the test and monitoring reports by the recognized and accredited certification body of Applus+ IMA Dresden.



## FOR BUILDING DESIGNER AND OPERATORS



The planning, construction and use of construction products are subject to the state building regulations in Germany or the European Construction Products Regulation (EU) 305 / 2011 (BauPVO) and must be complied with. In addition, there is the regular obligation to provide evidence of the condition of the products.

Applus+ IMA Dresden helps you as an approved monitoring and certification authority according to the state building regulations in Germany and as an accredited inspection and certification authority according to the BauPVO (ISO/IEC 17020 and ISO/IEC 17065) to comply with the legal requirements. We will guide you starting from the planning stage through the construction phase to the entire operating period.

- Accredited testing laboratories according to DIN EN ISO/IEC 17025
- Accredited certification body according to DIN EN ISO/IEC 17065
- Accredited inspection body according to DIN EN ISO/IEC 17020

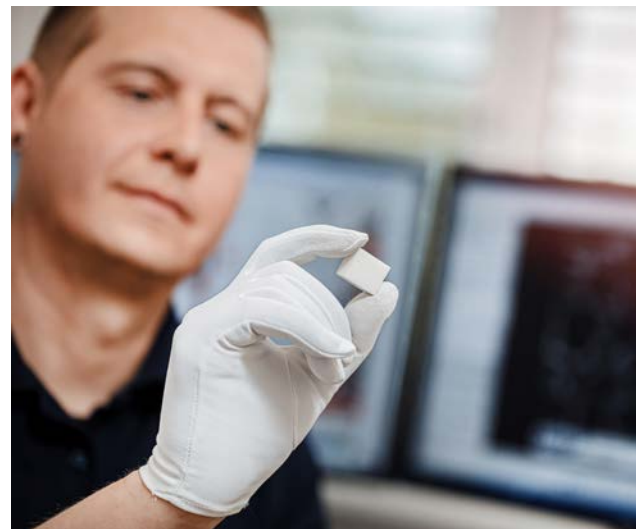
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## PLANNING AND TECHNICAL SUPPORT

As an architect or planner, you are responsible for the planning and dimensioning of building projects. For this purpose, you must always be informed about the current state and the general conditions of the building authorities.

We support you with our competence in all aspects of materials and components.

- Support in the preparation of tenders
- Technical evaluation of quotations
- Definition of the relevant quality characteristics
- Cost-requirement comparison



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## MONITORING AND CONSTRUCTION

Without professional supervision of the construction work many mistakes can occur that will cost you time and money. Here we are! You can rely on us as we carry out construction monitoring, called Onsite Inspection Services, within the scope of our approvals and accreditations worldwide.

Accordingly, we will significantly reduce consequential risks and lay a solid basis for long-term monitoring.

We secure by a construction supervision with our qualified personnel:

- Use of the intended material
- Sampling and comparative testing
- Monitoring of professional and damage-free installation
- Documentation of construction monitoring
- Compliance with the requirements from the approvals such as abZ (general building approval) or ZiE (approval in individual case)
- Recommendation of the conformity assessment and forwarding to the certification body

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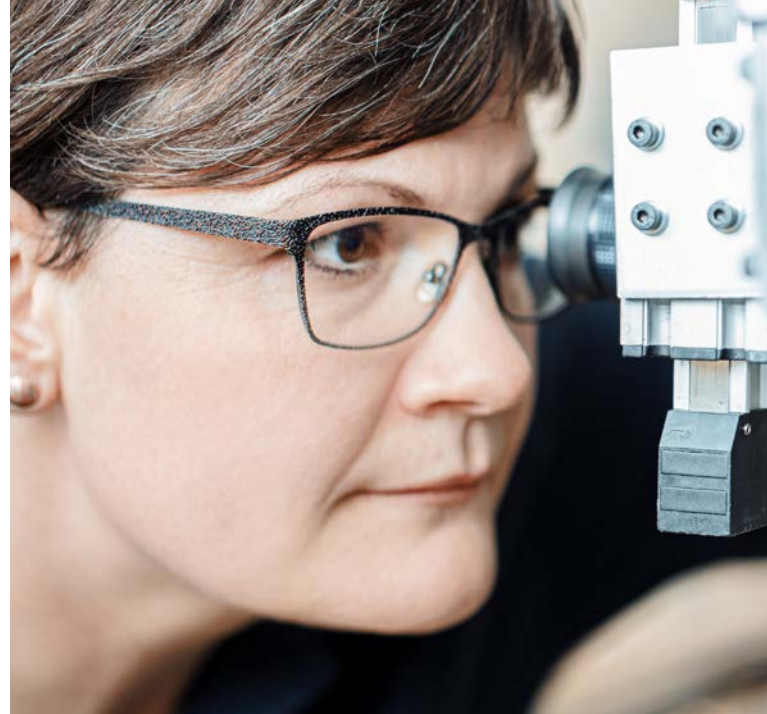
## CONDITION ASSESSMENT BY APPLUS+ IMA DRESDEN

With a professional assessment you will receive clear statements about the current condition of your building products on site or in our laboratory.

Operating conditions such as temperature, media, UV radiation or mechanical loads can lead to a change in the time-dependent properties of the materials depending on the material and manufacturing quality.

In order to detect and interpret this change of state, we are also at your site with our technology and our know-how.

Our aim is “No questions should be left unanswered” so we can help you to build a reliable basis for making decisions on necessary measures.



- Material and component testing
- Measurements of forces, deformations, strains or vibrations
- Integrity assessment from the strength and corrosion protection point of view
- Classification of damage
- Condition monitoring (SHM)
- Assessment of the condition
- Assessment of the performance
- Estimation of the remaining service life
- Recommendations for necessary measures



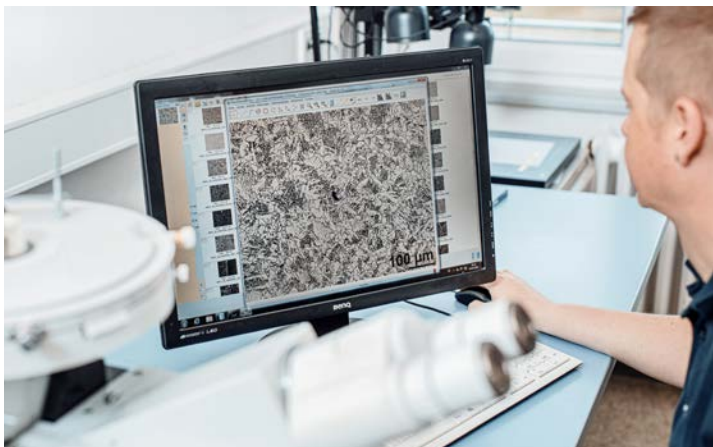


## DAMAGE ANALYSIS AND RECOMMENDATIONS

Not every change of state can be planned. Unfortunately, loads on the components, also in combination with quality defects, can lead to damage and spontaneous events. We support you in the recording and evaluation of these damages.

- Identification of the type of damage
- Classification of damage
- Condition assessment of the material or the component
- Determination of causes
- Deriving proposals for remediation or repair
- Monitoring the execution of repairs or refurbishments
- Helping to prevent future damage of the same origin

Together with our cooperating surveyors and experts, we will find the optimum solution for you to solve problems and increase operational safety.



## EXPERT ASSESSOR ACTIVITY

Are you looking for an appropriate expert for your damage analysis?

We can support you to the full extent in the preparation of a legally sound expert opinion through working with us.

- Individual creation of test or verification programs for damage investigations
- Interdisciplinary implementation of all necessary verifications
- Professional and independent assessment of the current position and recommendations using the damage documentation, component history, inspection and testing reports, etc.
- Preparation of a legally sound expert opinion - private and court - by experts cooperating with us

Let us advise you. We can draw on extensive experience in the fields of construction, plant engineering, installation technology and mechanical engineering.



## BENEFIT FROM THE COMPETENCE OF APPLUS+ IMA DRESDEN FOR YOUR POWER PLANT MONITORING.

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 10,000m<sup>2</sup> 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](mailto:sales@ima-dresden.de)

The testing services of Applus + IMA (IMA Materialforschung und Anwendungstechnik GmbH) are accredited in accordance with the DAkkS accreditation certificate.



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