



Laboratory Services for the Wind Energy Sector.

To ensure the success of your wind farm project, we provide a range of services to support you at every phase of the project life cycle – from site selection, design and manufacturing, right through to operation.

Product Certification	Project Certification	Manufacturing Surveillance
Health & Safety	Marine Warranty Survey	Periodic Inspections
Due Diligence	Laboratory Services	Expert Reports
Training / Education	Management System Certification	Grid Connection
Project Planning Services	Coating Inspection Services	CE Marking

Laboratory services for the wind energy sector

Wind energy plants are composed of many different components and materials, and they are built in regions with a variety of soil conditions and surroundings. Each component plays an integral role in the functionality and productivity of the wind turbine and therefore the quality and safety of all components is essential. Furthermore, the condition of the soil determines how the wind turbine can be safely implemented in the chosen area.

Project planners, operators and investors of wind farms need to be certain of all safety and quality aspects prior to construction and during operation, in order to minimize risks and protect their assets.

Our experience - your benefit

Thanks to our extensive knowledge in laboratory services and on-site inspections, we satisfy customers around the globe by providing research, testing, measurement, and certification services.

Our highly specialized test laboratories support our clients with analytical and physical investigations of a wide range of materials to ensure compliance with applicable regulations.

With our network of laboratories, we provide our clients with extensive testing services to determine the quality of the diverse materials used to construct wind farms, especially metals, and can provide an independent evaluation of site conditions. To ensure safety and efficiency during operation, we conduct on-site inspections and monitor wind energy projects throughout the world. Our services include visual inspection, destructive and non-destructive testing as well as damage analysis.

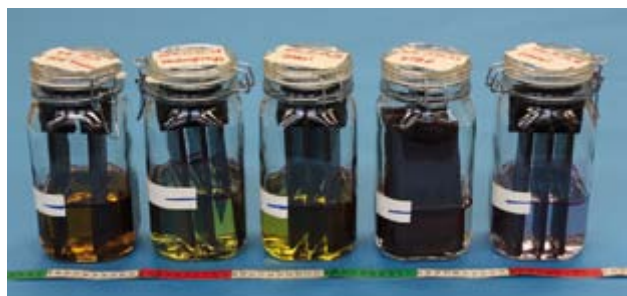
Our laboratory services for wind energy projects include:

Soil and rock mechanical laboratory analysis

To establish fundamental factors to classify the soil for building on and the construction materials, we investigate properties such as stability, deformation behavior and erosion resistance. In addition, we perform quality control with regards to the specific attributes required and report on suitable combinations of soil improvements and stabilization measures.

Onshore subsurface investigations and foundations for wind energy installations

We monitor and evaluate sounding and drillings in accordance with DIN 4021 and deliver an expert opinion on the foundations (minimum requirements, geotechnical category 2).



Material analyses of samples for quality control

We perform several tests on metals, plastics, concrete and coatings. These tests include chemical analyses and mechanical testing of metals, automatic deformation and tensile testing of plastics, visual inspections and inspections and measurement of the performance properties of coatings.

Salt mist corrosion testing for offshore wind turbine components

Corrosive atmospheres in coastal areas and offshore can cause damage to wind turbine components that permanently impairs their functionality. TÜV Rheinland now applies a new method of a cyclical salt spray testing with 6 levels of severity.

All services are carried out in TÜV Rheinland's own laboratories. TÜV Rheinland laboratories and non-destructive testing services are accredited by Deutsche Akkreditierungsstelle GmbH according to DIN EN ISO/IEC 17025.

Founded 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

TUVdotCOM. The noticeable difference.



The Internet platform TUVdotCOM makes the difference visible: with all the products, services, companies, systems and personnel that are tested by TÜV Rheinland; optimally documented and accessible from all over the world.

TÜV Rheinland Industrie Service GmbH
Wind Energy
Julius-Vosseler-Str. 42, D-22527 Hamburg
Phone +49 40 3787904-900
wind@de.tuv.com
www.tuv.com

 **TÜVRheinland®**
Precisely Right.