
WIND POWER LAB
Global Wind Turbine Experts
Training Sessions
With Wind Power LAB
www.windpowerlab.com

Why Train With Wind Power LAB?

Empower your team to achieve a strong understanding of wind turbine blade design through each operating stage across the entire lifecycle of a blade. Our custom curated training modules are tailored on specific asset types and plaguing issues.

Take a look at some of our training topics to learn more about the content we cover.

Our training topics include:

- Generic Blade Design & Structures
- Lightning & LPS
- Blade Defects
- Icing Damage & Mitigation

Training Topic

Generic Blade Design & Structures

Overview:

The Generic Blade & Design Structures training topic is an introduction into the arch blade types from major OEM designs. It covers design principles, specific characteristics and the main manufacturing methodologies.

Course Content:

- Blade structure, material and certification, including design procedure and testing.
- General blade manufacturing process.
- Basics of wind turbine blade pitch control system.
- Identification of blade defects from production, fatigue, environment, and external impacts.

Course Duration

2 hours online or 3 hours in office.

Training Topic

Lightning & LPS

Overview:

The Lightning & LPS topic will allow you to better understand general lightning behavior when interacting with blades and the key lightning characteristics. In this module, you will learn from case study examples which showcase different lightning damage cases.

Course Content:

- Lightning formation
- Interaction with wind turbine blades
- Lightning protection systems (LPS) and how they function
- Type of Lightning defects
- IEC Standards
- Monitoring and maintenance
- Case study examples

Course Duration

2 hours online or 2 hours in office.

Training Topic

Blade Defects

Overview:

The Blade Defect training provides a walkthrough of common defect root causes related to structural defects. This topic covers common external defects and identification of the individual defect types, including an overview of erosion stages and severity.

Course Content:

- Background theory on structural and non-structural defects
- Defect severity assessment and categorisation
- Common non-structural defects such voids, chipping, peeling etc.
- Common structural defects related to operation, manufacturing etc.
- LE erosion defect and mechanism

Course Duration

2 hours online or 3 hours in office.

Training Topic

Icing Damage & Mitigation

Overview:

Learn how to identify passive/ active de-icing systems and de-icing damage and issues. This training offers an overview on how to mitigate de-icing blade damage and understand the differentiation of ice-load and ice throw defects.

Course Content:

- Identification of de-icing systems Passive/active
- Identification of de-icing damages and issues
- Mitigation of de-icing related blade damages
- Differentiation of Ice load and Ice throw defects

Course Duration

2 hours online or 2 hours in office.

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WE CAN HELP

Wind Power LAB is a Danish company, founded in 2016 by a passionate group of wind power industry professionals. Our team of experts based in Copenhagen offers market leading expertise related to blade risk management. Our goal is to deliver the best available and robust solutions to empower our clients with the ability to make decisions to optimize their asset performance.

References Available Upon Request

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