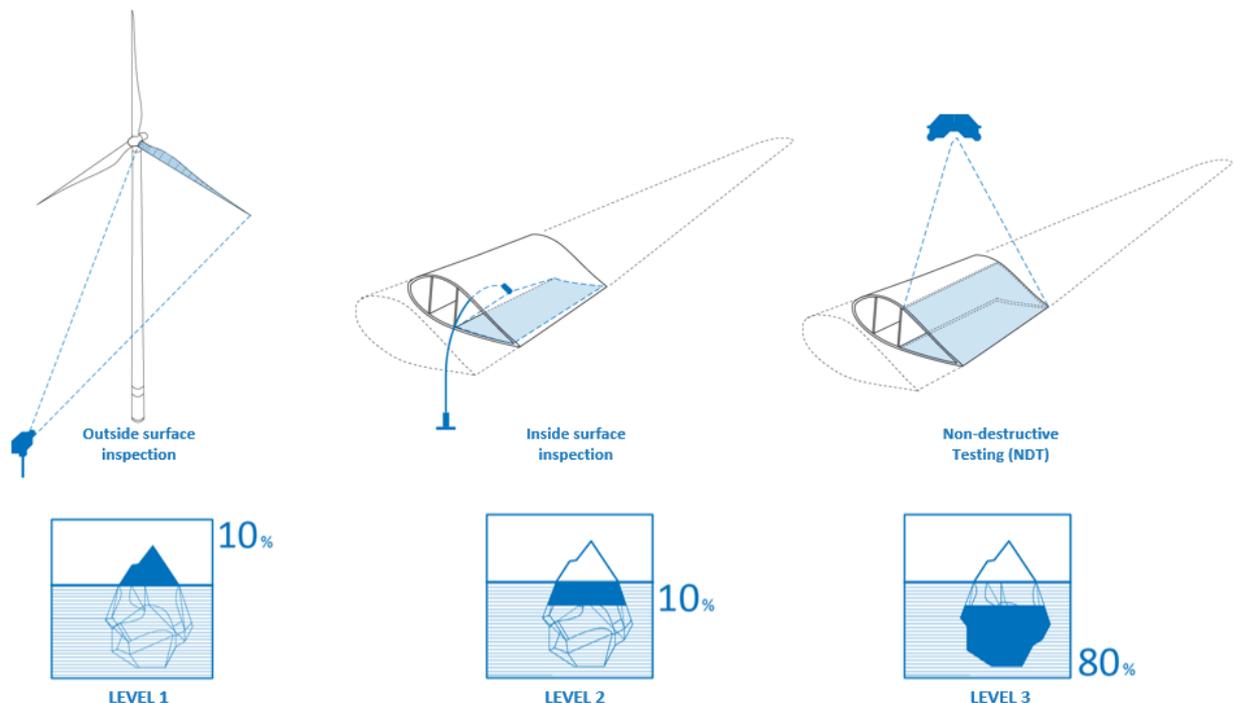


Wind Turbines Blades - New Concepts for End of Warranty Inspection - EWIC

The EWIC project will demonstrate how the value of end of warranty inspections can be enhanced – with the overall objective to reduce LCoE and extend the operational life time of the blades.

Vattenfall, E.ON, HOFOR together with The Blade Group Network – consisting of more than 30 wind turbine owners – have strongly encouraged that new concepts for the inspection of turbine blades at



Picture: Currently, there are no official statistics for structural damages on the blades and especially not for newer turbines where the failure rate is significant higher than for small turbines. However, the area is of high importance to the wind turbine owners and a well-known fact. Still most of inspections are performed on the outside of the blade, which only shows the “top of the iceberg”. Inspecting inside the blade, in the areas that are critical, will show the small part underneath the “iceberg”, and if NDT are used, a higher picture of the damages will be shown.

Often, the results of inadequate inspection are formation of structural damages, that in worst case leads to blade failure or total turbine failure.

the end of warranty need to be developed. Their wish is to profoundly incorporate results of the latest research activities and extensive field experience in this work.

Press release 29.01.2018, Roskilde

The wind turbine owners have teamed up with OffshoreEnergy.dk, Bladena, Total Wind BLAEST, Kirt-Thomsen and FORCE Technology to achieve this objective – optimize the quality of the blade inspection method and develop a common understanding/standard for how this work should be done in the future.

Anders Sjøe-Jensen, CEO at Bladena and former CEO of GE Offshore and Vestas Offshore, says:

“As a standard, blades have for many years been inspected from the outside without any internal inspections. We know today, that even if the blade surface looks intact there may be serious issues to be found on the inside the blades and even inside the panel structures. Therefore, the implementation of new inspection methods is to extend the lifetime by reducing maintenance costs and minimizing the future down-time.”

Hence, the EWIC project partners have agreed to thoroughly investigate options for inspections of the blades from the inside and inside the material.

The project will define the details of how inside visual inspections should be carried out. The deployment of small size cameras and NDT in critical areas will be explored.

Visual inspection and NDT techniques will be combined with knowledge about theoretical failure modes, failure modes found in the laboratory tests and with data from blades damaged in the field. This will allow the definition of an optimal strategy for the use of NDT methods such as thermography and ultrasound in selected areas.

Offshoreenergy.dk has facilitated the 1 million DDK funding of the project through the European Regional Development Fund under the heading CRIF - Cost Reduction and Innovation Forum. Glenda Napier, the CEO of Offshoreenergy.dk, expects major benefits to come out of the project:

“We are delighted to support the idea of developing new methodologies for this important activity in the life of turbine blades and that it can be shared by all of the industry players – leading to overall cost reductions for the industry.”

Bladena is heading the technical part of the EWIC project as project manager.

EWIC was kicked off on the 23rd of January in the Bladena offices in Roskilde, Denmark. The partners attending were sharing knowledge and brainstorming to create a roadmap for this year’s activities covering topics like innovative inspection methods, selection of focus area/techniques based on large scale of data, development of inspection and test equipment prototype, field test etc.



EWIC Kickoff Meeting January 2018: The partners met at Bladena