

#### Wind solutions

# Main bearing damage detection with $BLADEcontrol^{\circledR}$

We also keep an eye on your main bearing

Would you like to find out more about the condition of your turbines? Then use the extended features of BLADEcontrol<sup>®</sup>! In addition to active rotor blade monitoring, you can now also monitor the condition of your main bearing. With BLADEcontrol<sup>®</sup> we can detect main bearing damage up to one year before a shutdown-relevant condition occurs.

#### **Your benefits:**

- No additional hardware installation
- Detection of fatigue damage on
  - outer and inner ring
  - rolling elements
  - cage
- Detection of wear in the raceway of the outer and inner ring
- Localization of damages
- Customer website: condition visualization in the WebVis interface



This allows you to proactively counteract unplanned downtimes and further reduce the risk of yield losses. Damage on the main bearing can be detected without the installation of an additional drivetrain CMS, which makes our solution particularly attractive for direct-drive turbines.

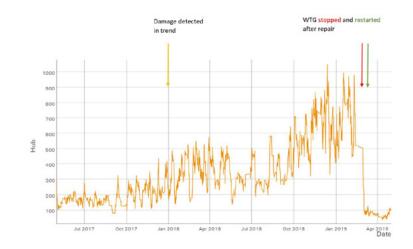
The only requirement for integrated main bearing monitoring is an installed BLADEcontrol® system for rotor blade monitoring. No other hardware is required. Take a look at the following examples from the field showing what can be detected on the main bearing using BLADEcontrol®.

#### **Examples of damage progression of main bearing**

### 1. Defect on the main bearing outer ring

Wind turbine stopped on February 12, 2019, repair completed on February 28, 2019. The damage trend already recognizable in January 2018.

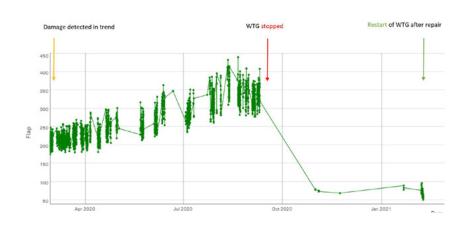
• up to 13 month in advance



## 2. Defect in the rolling element of the main bearing

Wind turbine stopped on September 10, 2020, repair completed on February 7, 2021. Alarm notification of damage possible from March 2020.

• up to 6 month in advance



Let's discuss your specific project!

Make an appointment with us or send us an e-mail.

We look forward to speaking with you!



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