

Vibration Measurements at Wind Turbines/ Rotor Balancing

Many wind turbines suffer from increased vibrations caused by rotor imbalance, accelerating component wear.

Most of the rotors are not inspected thoroughly, neither at commissioning nor during operation, e. g. check of:

- Blade pitch angle
- Aerodynamic components
- Dynamics and vibrations

Our periodical vibration inspections reveal that 20 % of the wind turbines are affected by rotor imbalance.

The consequences of rotor imbalance can be detected in all essential wind turbine components.

- Increased amplitudes of vibrations and noise
- Cracks in rotor blades
- Damage of pitch mechanism
- Loss of lubrication at the rotor blade bearings
- Gearbox damage
- Cracks in the nacelle frame
- Wear of yaw brakes

Our vibrations analysis is an effective tool for a significant reduction of wind turbine vibrations.

Our vibration prevention package

- Check of rotor and nacelle vibrations
- Detection of mass and aerodynamic imbalance
- Blade angle check
- Drive train condition monitoring

Your benefit

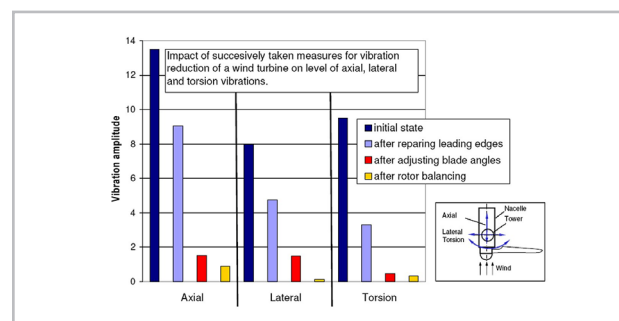
- Reduced component wear and repair costs
- Increased efficiency, energy production, life time and subsequent economic profit
- Elimination of the vibration causes and not only repair of their consequential damages!



On site vibration measurement



Test mass application for imbalance measurement



Vibration reduction by actions taken at a wind turbine with heavy leading edge erosion