



Wind Turbine Uptower Bearing Maintenance

Recommended for

Wind power industry uptower maintenance personnel, including: field service technicians, onsite wind farm management, fitters, installers, engineering support staff, condition monitoring staff, and reliability engineering. Also, those interested in improving the reliability of in-service wind turbines with world class maintenance and repair practices.

Course objective

Improve the service life of machinery in operational wind turbines. Achieve extended service life using best-in-class maintenance and repair practices of components common to all wind turbines. Emphasis is on safe, precision maintenance and relubrication of bearings and related components in operational wind turbines. Onsite repairs are also included.

2009 course schedule

On-site only

2009 tuition

On-site	
per class	\$12,995
# people	16
17+ people	\$395 per person

2 days

A written examination is included with this course and is conducted on the afternoon of the final day of class.

Course description

Improve the service life of in-service wind turbines

Focus on components common to all wind turbines

- Each part contains:
 - Key concepts for uptower personnel
 - Hands-on practical work exercises

Blade hub

- Bearing arrangements: Slewing rings
- Slewing ring installation
- Lubricating/re-lubricating bearings with grease

Main shaft bearings

- Bearing arrangements
- Controlling expansion: locating/ non-locating concept
- Lubricating bearings and housings with grease
- Procedures for dismounting and mounting couplings
- Inspections for main shaft bearing problems

Wind turbine gearboxes

- Bearing arrangements
- Static/splash and circulating oil lubrication
- Oil change-out procedures
- Contamination detection & control

Wind turbine generators

- Bearing arrangements
- Long-life grease lubrication – large generators
- Cylindrical shaft and housing fits
- Safe dismounting and mounting
- Controlling fretting corrosion
- Controlling stray currents

Yaw section

- Bearing arrangements
- Long-life grease lubrication
- Visual inspection

Retrofitting

- Automatic lubrication systems