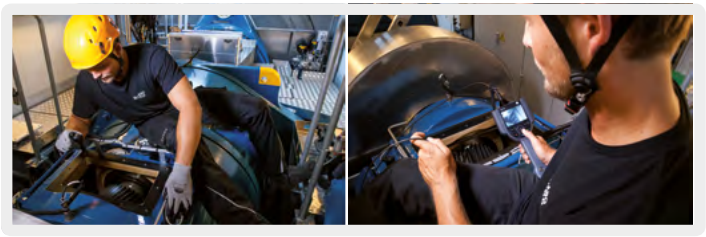
Wind Turbine Technology & Maintenance

Technicians regularly inspect the anemometer, wind vane and obstruction lights on top of the nacelle.



A technician assesses the condition of the gearbox via video endoscopy.

Measuring devices continously collect information on wind speed and wind direction and pass it on to the plant control system.

The plant control system processes the information coming from the measuring devices and, depending on wind conditions, determines the orientation of the rotor.

The generator transforms the kinetic energy from the rotor's turning motion into electrical energy.

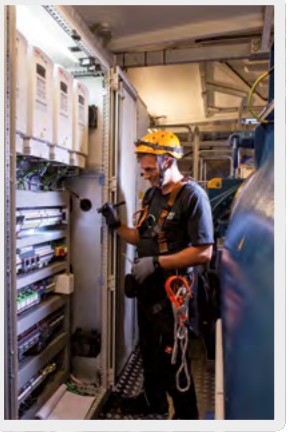
The gearbox increases the rotational speed by the factor 50 to 100.

The rotor shaft absorbs the rotational movement of the rotor and transmits it to the gearbox.

The hub transmits the rotational movement of the rotor blades onto the rotor shaft.

The motor turns the nacelle into the optimal position towards the wind.

The technicians enter the hub via the roof of the nacelle.



The technician takes a look at the switch cabinet in the nacelle.

The technicians also inspect the hydraulic systems including the oil filter of the gearbox.

Here the technician checks the slip ring transmission on the generator.

Each rotor blade has its own pitch control system, which aligns the rotor blades individually and serves as a brake and emergency shutdown system.