



# Condition-oriented Maintenance Inspections

## Condition-oriented Maintenance Inspections of Wind Energy Converters

Since the start of 2003 the insurers can demand a condition-oriented maintenance inspection, especially with older and more damage-prone wind energy converters or due to a change of insurers. On commission from investors and management, and as experts in the field, **SV-Veltrup** carries out condition-oriented maintenance inspections of wind energy converters.

### Goal

The condition-oriented maintenance inspection follows on demand of the insurers in accordance with the agreed insurance liability or on conclusion of a new contract for old wind energy converters. Furthermore, this is of interest to the investors as it goes beyond a periodic inspection, testing the technical condition of the wind energy converter and giving special emphasis to the drivetrain and the rotor blades.

Goal of the inspection is:

- to establish the current technical condition of the WEC,
- to identify and specify emerging defects,
- to help avoid follow-on damages through early detection of emerging defects,
- to fulfill the requirements of the insurers.

### Scope

In a normal case the inspection is carried out according to the respective insurance requirements and in line with the „ principles for the condition-oriented maintenance inspection of WECs“ of the Federal Wind Energy Expert Commission.

The main parts of the inspection consist of the testing of the entire drivetrain with the aid of a flexible videoscope and a vibration measurement (CMS measurement - for more information see the flyer on vibration analysis).

For particular areas such as vibration analysis (the evaluation of the CMS measurement in a machine test report) or scanning electron microscopy in order to examine problem-prone or critical components, persons of special know-how are called in or special facilities (laboratories, institutes) are consulted.

The inspection coverage also includes ascertaining whether essential preconditions for an inspection are present, whether the requirements demanded of maintenance, management and the periodic inspections are met and whether any emerging defects in the drivetrain and in the rotor blades exist.

### Results

The results are compiled in a full-length inspection report as an original document as well as a PDF (portable document format) file; here all ascertained defects are named, described and documented - with photographs, to a great extent.

Further, the inspection report includes necessary measures for maintenance and repair as well as time recommendations for such measures.

Beyond this, the entire inspection results are printed on a one-page summary to be handed in to the insurers.



Sachverständigenbüro Veltrup  
Weidegrund 9  
26188 Edewecht-Friedrichsfehn  
Tel. 04486 - 93 08 38  
Fax 04486 - 93 08 58  
info@sv-veltrup.de  
www.sv-veltrup.de