

## Attendant profile

Attendant profile: WTG Service technicians, Site Managers, Wind farm owners and operators

## Course duration

1 day, 7 lessons

## Pre-requisites for participation

None

## Course outcome

To qualify participant to perform inspection and documentation of Lightning Protection System [LPS] on all types of WTG blades, according to GBS documentation.

## Objectives

After the training, the participant has achieved knowledge for:

- General construction of WTG lightning protection system on blades.
- Electrical resistance and measuring units
- Health risk involved working on LPS?
- Replacement of wear parts on LPS

And have achieved the following competences:

- Carry out General Visual Inspection from ground level
- Carry out Close Visual inspection of lightning receptors
- Measure out resistance in LPS use of milliohm meter
- Recognize typical lightning damages on blade surface and structure
- Use correct terms for LPS communication.
- Fill in documentation.

## Training method

Theoretical training  
Practical exercises

## Success criteria

Minimum 80% correct answers on theoretical test  
Approval of practical test

## Training modules

### 1 Training information

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- Practical information on the training course
- Presentation of participants
- Reason for training
- Objectives for training course
- Success criteria

### 2 LPS construction in blades

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- Purpose for installing LPS
- Function of LPS
- Various LPS
- Terms and definitions

### 3 Basic electric

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- Resistance
- Cables and connectors
- Test equipment
- Measuring units

## 4 Health and safety

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- Risk when working on LPS
- Weather conditions
- Handling tools
- Chemicals

## 5 Lightning damages

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- Statistic of blade damages
- Root causes for damages
- Typical lightning damages
- Lightning damage catalogue

## 6 Inspection from ground

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- Photo equipment
- Photo inspection
- Assessing photos

## 7 Inspection from height

- Access to blade external and internal
- Surface inspection visual
- Measure function of lightning protecting system
- Investigating external damages
- Internal inspection visual
- Investigating internal damages
- Replace lightning registration card

## 8 Documentation of LPS function

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- Purpose for blade status report
- Categorization of lightning damages
- Filling in report template

## 9 Replacement of receptors

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- Best practice for replacing receptors
- Spare parts
- Tools
- Sealing materials
- Test of function

## 10 Practical exercises

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- General Visual Inspection
- Close Visual inspection – function test
- Detailed Visual Inspection of damage
- Replace lightning receptors
- Reading and replacing lightning card

## 11 Tests

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- Theoretical test representing objectives for training course