



European Qualification Profile

6. Maintenance and trouble-shooting - onshore

1. Production

2. Transport

3. Installation

4. Commissioning

5. Plant operation

6. Maintenance and trouble-shooting onshore

7. Maintenance and trouble-shooting offshore



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General assignment: Inspect the complete wind power installation using checklists and specified inspection routines and rectify any faults or malfunctioning of the machine.

Description/Scope of the assignment: Check individual components on the basis of checklists: inspect, adjust and/or replace components, replace and/or fill up lubricants, carry out functional checks. The work is to be performed at regular inspection intervals or in response to malfunctioning/fault reports registered by the operator

Key sub-assignments: The following key sub-assignments have been identified and specified in individual job profiles

6.1

Inspection and maintenance of electrical systems

6.2

Inspection and maintenance of mechanical and hydraulic systems

6.3

Inspection and maintenance of safety-relevant apparatus

6.4

Inspection and maintenance of rotor blades

6.5

Trouble-shooting and repair

6.6

Fire fighting

6.7

Rescue from heights

Job profile

Process stage 6 Maintenance and trouble-shooting onshore

Work assignment

6.1 Inspection, maintenance of electrical systems

Description

The electrical service routines serve to enable regular maintenance and rectify identified and non-identified malfunctioning of the machine's electrical components. Each assignment and sub-assignment is to be conducted with meticulous attention to the **Five Safety Rules** of electrical service work (EN 50110):

- Disconnecting
- Securing against reclosing
- Checking safe isolation from supply
- Earthing and short-circuiting
- Covering or providing barriers to adjacent live parts

Scope

The assignment is grouped into 2 sub-assignments:

1. Electric control cabinet service: maintenance of generator and power transmission components and the electrical blade pitch adjustment device and the power converter
2. Service of the medium-voltage equipment: inspection and maintenance of the transformer and the medium voltage switchgear and also isolation procedures to enable other maintenance work

Requirements

	<i>Knowledge</i>	<i>Skills</i>	<i>Competences</i>	<i>EQF-level</i>	<i>NQF-Reference</i>
6.1.1. Control cabinet					
6.1.1.1. Open and close the control cabinet	Authorization to open switch cabinet	Mechanical skills	Communication skills, Social skills	2	EFK/EUP (DE)
6.1.1.2. Disconnect the unit	Work safety regulations and procedures	Mechanical skills	Communication skills, Social skills Ability to read/understand electrical documentation	3-4	EFK (DE)
6.1.1.3. Locate and rectify pre-identified faults	Fault codes Electrical metrology Mechanical and electrical systems	Connect measuring and diagnosis devices Mechanical skills	Logical approach Read and understand electrical manuals and diagrammes Communication skills, Social skills	4	EFK (DE)
6.1.1.4 Locate and rectify unidentified faults	Systems knowledge (interdependencies) Fault codes Electrical metrology Mechanical and electrical systems	Connect measuring and diagnostic devices Mechanical skills	Logical approach Ability to read/understand electrical documentation Communication skills, Social skills	4-5	4-5



6.1.1.5 Service connections	Mechanical and electrical systems	Mechanical skills	Read and understand electrical manuals and diagrammes	3	EFK (DE)
6.1.1.6 Inspect all components and connections in the serviced area	Nominal loads	Mechanical skills	Awareness of limits Social skills	3-4	EFK (DE)
6.1.1.7 Carry out functional checks	Functional descriptions	Keyboard and switch operation	Logical approach Ability to read/understand electrical documentation	3-4	EFK (DE)
6.1.1.8 Documentation	Documentation system	PC skills	Understanding of documentation structure	3	EFK (DE)
6.1.2 Medium-voltage equipment					
6.1.2.1 Disconnect the unit	Work safety regulations, Grid characteristics Knowledge of machine constellation Personal protection means	Mechanical skills	Read and understand electrical manuals and diagrammes Communication skills, Social skills	3	EFK (DE)



6.1.2.2 Hand over the unit to the service team, issue instructions	Knowledge of machine constellation Methodology Work safety	Mechanical skills	Read and understand electrical manuals and diagrammes Communication skills, Social skills	3-4	EFK (DE)
6.1.2.3. Find and rectify identified (reported) or unidentified faults	Systems knowledge (interdependencies) Interpret fault codes Electrical metrology Mechanical and electrical systems	Mechanical skills	Logical approach Ability to read/understand electrical documentation Communication skills, Social skills	5	EFK (DE)
6.1.2.4 Inspect all components and connections in the serviced area	Nominal loads	Mechanical skills	Logical approach Ability to read/understand electrical documentation Communication skills	4-5	EFK (DE)
6.1.2.5. Carry out functional checks	Electrical functions	Mechanical skills	Read and understand electrical manuals and diagrammes Social skills Awareness of limits	4	EFK (DE)
6.1.2.6. Documentation	Documentation system	Mechanical skills PC skills	Logical approach Ability to read/understand electrical documentation Understanding of documentation structure	3-4	EFK (DE)