

Maintenance checks report

Checklist name	Year
05_MV - Site proposal - season 6	6

Site	Turbine serial number	Order number
	WK49 - 1121489	60606610
Language	Revision date checklist	Approval date
en-US	2/21/2024	3/21/2024

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1. Tools

Tools				
Group	#	Name	Calibration ID	Remarks
1	1	,	https:// secure.elementmetech.com/ MIO3/dl?x=18E103AEEE212	

MIO3/dl?x=18E103AEEE212 3E52G264990?2661728-1



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2. Check details

2.1. Checks from the maintenance plan

ECN

AD 5	135_1_1_5_MV_year_null			
# #	Measuring points	Remarks	Tools	Status
π Locat	ion: Nacelle inside	Iveniairo	10015	Status
1	ATD000276.0: Generator - Overload clutch and bolts - Inspection			
'	ATD000276.0. Generator - Overload clutch and boits - Inspection			
2	ATD000276.1: Generator - Overload clutch body spring - Inspection			/
3	ATD000276.2: Generator - Overload clutch mark aligned with rotor mark - Inspection			
4	ATD000373.0: Slip ring unit - Power bushes and rings - Inspection			
5	ATD000373.1: Slip ring unit - Signal bushes and rings - Inspection			
6	ATD000377.0: Generator - Upper grounding brush - Inspection			<u> </u>
7	ATD000377.1: Generator - Upper grounding brush support component - Inspection			
8	ATD000377.2: Generator - Middle grounding brush - Inspection			
9	ATD000377.3: Generator - Middle grounding brush support component - Inspection			/
10	ATD000377.4: Generator - Bottom grounding brush - Inspection			
11	ATD000377.5: Generator - Bottom grounding brush support component - Inspection			
12	ATD000605.0: Generator - Enclosure of the machine and all holding fixtures - Inspection			
13	ATD000605.1: Generator - Stator covers seal & winding connections tightness and external damages - Inspection			
14	ATD000605.2: Generator - Terminal box and all the connections - Inspection			
15	ATD000605.3: Generator - Rotor - Inspection			
Locat	on: Tower			
16	ADWI017124.10: Main UPS - Cabinet structure - Inspection			/
17	ADWI017124.11: Main UPS - Battery trays - Inspection and torque			
18	ADWI017124.12: Main UPS - Platform fixation - Inspection and torque			/



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AD 5	-135_1_1_5_MV_year_null			[2/0]		
#	Measuring points	Remarks	Tools	Status		
Locat	Location: Tower					
19	ADWI017124.1: Main UPS - External cover panels - Inspection and torque					
20	ADWI017124.2: Main UPS - Cabinet doors are correctly closed and the handles work properly - Inspection	Remark 1 See annex 'Taken photos': 1 Remark 2		×		
21	ADWI017124.3: Main UPS - Upper/ lower locking plates - Inspection and torque	See annex 'Taken photos': 2 Remark 1 See annex 'Taken photos': 3 Remark 2 See annex 'Taken photos': 4		×		
22	ADWI017124.4: Main UPS - Fastening claws - Inspection and torque	occ annex raken photos. 4				
23	ADWI017124.5: Main UPS - Locking brackets - Inspection and torque	Remark 1 nearly worn out		×		
24	ADWI017124.6: Main UPS - Locking rods - Inspection and torque	See annex 'Taken photos': 5				
25	ADWI017124.7: Main UPS - Locking rod end - Inspection			/		
26	ADWI017124.8: Main UPS - Hinges - Auditory inspection					
27	ADWI017124.9: Main UPS - Internal structure - Inspection and torque	Remark 1 crack welding		×		
		See annex 'Taken photos': 6 Remark 2 See annex 'Taken photos': 7 Remark 3 how to reach the rear corner without dismounting back panel or roof?				
28	ATD000311.6: Wind turbine system - Emergency stop button at lift frame - Test					
29	ATD000383.0: Converter - Main components on the CCU - Inspection			/		
30	ATD000383.10: Converter - Ground connection - inspection					
31	ATD000383.11: Converter - Lateral fan with heater in CCU - inspection			<u> </u>		
32	ATD000383.12: Converter - Roof fan in FIU - Inspection			<u></u>		
33	ATD000383.13: Converter - Roof and door fan in POU - inspection					
34	ATD000383.14: Converter - Roof and door fan in DLU - inspection			/		



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AD 5	ND 5-135_1_1_5_MV_year_null					
#	Measuring points	Remarks	Tools	Status		
Loca	Location: Tower					
35	ATD000383.15: Converter - Pump - Auditory inspection					
36	ATD000383.16: Converter - Pump has no leakages - Inspection			/		
37	ATD000383.17: Converter - Vessel hoses - Inspection					
38	ATD000383.1: Converter - Cable connections on the CCU - inspection			/		
39	ATD000383.2: Converter - Main components on the FIU - Inspection					
40	ATD000383.3: Converter - Cable connections on the FIU - inspection					
41	ATD000383.4: Converter - Main components on the POU - Inspection					
42	ATD000383.5: Converter - Cable connections on the POU - inspection					
43	ATD000383.6: Converter - Main components on the DLU - Inspection			/		
44	ATD000383.7: Converter - Cable connections on the DLU - inspection					
45	ATD000383.8: Converter - Main components on the WCU - Inspection					
46	ATD000383.9: Converter - Cable connections on the WCU - inspection					
47	ATD000511.0: Converter cooling system - Pipe water circuit - Inspection					
48	ATD000512.2: Converter cooling system - Pump 1 slip ring sealing - Replace					
49	ATD000512.3: Converter cooling system - Pump 2 slip ring sealing - Replace					
50	ATD000538.0: Emergency lights UPS - Door fan - Auditory inspection			/		
51	ATD000538.1: Emergency lights UPS - Manual battery test - Test			/		
52	ATD000538.2: Emergency lights UPS - Fuses F4, F5, F6, F7, F8 and F9 - Inspection			<u></u>		
53	ATD000538.3: Emergency lights UPS - All internal components and wiring - Inspection					
54	ATD000538.4: Emergency lights UPS - Battery box - Inspection					
55	ATD000538.5: Emergency lights UPS - Thermostats properly adjusted - Inspection					



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AD 5-	AD 5-135_1_1_5_MV_year_null					
#	Measuring points		Remarks	Tools	Status	
Locat	ion: Tower					
56	ATD000538.6: Emergency lights UPS - Measuremer	t points - Measure				
	G6 Resistance	+10.96 mOhm				
	G1 Resistance	+12 mOhm				
	G1 Voltage	+12.92 V				
	G2 Voltage	+12.94 V				
	G3 Resistance	+11.17 mOhm				
	G3 Voltage	+12.96 V				
	G4 Resistance	+11.42 mOhm				
	G4 Voltage	+12.95 V				
	G5 Resistance	+10.87 mOhm				
	G5 Voltage	+12.93 V				
	G2 Resistance	+11.38 mOhm				
	G6 Voltage	+12.99 V				
57	ATD000538.7: Emergency lights UPS - Tightness of and the fixed terminal adapter on the back - Inspection				<u> </u>	
58	ATD000538.8: Emergency lights UPS - Filter and exl Replace, if necessary	naust filter mats -			<u> </u>	
59	ATD000559.2: Platform 6 - Bolted joints according to	ATD000562 - inspection			<u> </u>	
60	ATD000586.0: Main UPS - Remote battery test - Tes	t	Remark 1			
	Capacity	+50 kWh	will be done by Senior Techs remotely due to interference with EIPs of other			
	Report other tool usage		tasks			
	Via Visu					
	Battery tester	No				
61	ATD000586.10: Main UPS - Batteries cabinet - Inspe	ection	Remark 1 crack welding		×	
			See annex 'Taken photos': 8			



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AD 5	-135_1_1_5_MV_year_null				
#	Measuring points		Remarks	Tools	Status
Locat	ion: Tower				
62	ATD000586.11: Main UPS - Measurement points - N	1easure			
	G1-G32 Voltage	+429 V			
	G33-G64 Voltage	+429 V			
	G1-G32 Stock number				
	27105HRD02				
	G1-G32 Type number				
	CLM CTL 100-12				
	G33-G64 Stock number				
	27105HRD02				
	G33-G64 Type number				
	CLM CTL 100-12				
63	ATD000586.1: Main UPS - Cabinet - Inspection				/
64	ATD000586.2: Main UPS - Filter mats - Replace				/
65	ATD000586.3: Main UPS - Manual by-pass (UPS disconnection) activation/ restarting performed? - Inspection				
66	ATD000586.4: Main UPS - LEDs states of rectifier and inverter - Inspection				/
67	ATD000586.5: Main UPS - Output voltages of the rectifier - Measure				
	Voltage in RCB	+410 V			
68	ATD000586.6: Main UPS - Output voltages of the sta	atic by-pass - Measure			
	Voltage in Q1 +410 V				
69	ATD000586.7: Main UPS - Output voltages of the inv	verter - Measure			
	Voltage in OCB	+400 V			
70	ATD000586.8: Main UPS - UPS battery cabinet temp	perature (VISU) -			/
	Temperature (VISU)	+18,4 °C			
71	ATD000586.9: Main UPS - Output voltages from batt	tery cabinet - Measure			/
	Voltage in BCB: 435.8V (25°C)	+438 V			
72	ATD000613.0: Medium-Voltage cabling - Converter i	nput/ output MV cables -			<u></u>
73	ATD000613.1: Medium-Voltage cabling - S1-S2 MV	cables - Inspection			/



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AD 5	AD 5-135_1_1_5_MV_year_null				
#	Measuring points		Remarks	Tools	Status
Loca	tion: Tower				
74	ATD000613.2: Medium-Voltage cabling - Cables alo switchgears in the S3 and the connection chambers	-			
75	ATD000644.1: Auxiliary transformer - Earthing conne	ections - Inspection			
76	ATD000644.2: Auxiliary transformer - Oil leakage - In	nspection			
77	ATD000644.4: Auxiliary transformer - Terminal conn	ections - Inspection			<u></u>
78	ATD000647.0: Main transformer - Oil leakage - Inspection				/
79	ATD000647.1: Main transformer - Paint - Inspection				
80	ATD000647.2: Main transformer - Earthing connection - Inspection				
81	ATD000647.4: Main transformer - Cooling system - I	nspection			
82	ATD000647.5 : Main transformer - Resistance therm	ometer - Test			
	Temperature difference	+0.5 °C			
83	ATD000668.3: UPS - Axial fans - Replace				
84	ATD000668.4: UPS - Filter fans - Replace				
85	ATD000690.1: Converter - Filter mats - Replace				

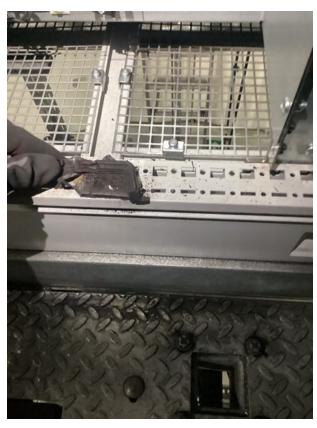


3. Annexes

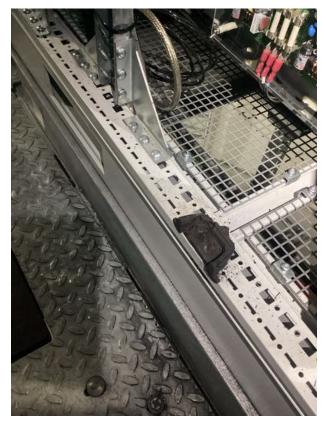
3.1. Taken photos



1 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 20 - Remarks



2 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 20 - Remarks



3 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 21 - Remarks





4 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 21 - Remarks



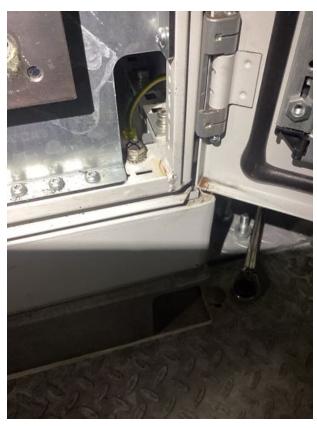
5 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 23 - Remarks



6 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 27 - Remarks



7 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 27 - Remarks



8 Figure from Checklist 'AD 5-135_1_1_5_MV_year_null', Task 61 - Remarks