



SriVaru Green Energy
Service Private Limited

Hoto Inspection Report – V47

Report No	HIR /2024-25/SVGE/ 055
Date	29-05-2024
Inspected By	Mr. S. Rajkumar , Mr. Rajkumar
Site Operator	Mr. Kanagaraj

Customer	M/S Indoflex Wind Power (P) LTD		
WEG No	PS729	Location	01
Tower Height	50 Meters	HTSC No	039224391526
Capacity	600 kW	Site	Anupatti
Model	Vestas V47	D.O.C	27.03.2010

V47 BOTTOM

1	EB Customer Yard System	
1.1	Earth Pit slot	ok
1.2	EB, Customer, Control Room Painting	ok
1.3	EB Side Lightning Arrester (KV)	3 no's not available, to be replaced
1.4	Customer Side Lightning Arrester (KV)	3 no's not available, to be replaced
1.5	EB Side, Customer Side Handle Earth	Customer side not available
1.6	All Insulator	Ok
1.7	EB Meter Glass	Ok
1.8	EB Side, Customer Side AB switch Working Condition	Ok
2	Power Transformer	
2.1	Transformer Oil Level	Glass not visible
2.2	Transformer Temperature Gauge	Ok
2.3	Transformer Oil Leakage	Ok
2.4	Transformer Breather Silica gel	Expired, to be replaced
2.5	Transformer Termination & Cover Bolt	Ok
2.6	Transformer Earth Plate Connection	Ok
2.7	Transformer Gland & Earth	Not available
3	Safety	
3.1	Earth Rod – 3No's	Not available
3.2	Fire Extinguisher	Ok
3.3	Fire Bucket Sand – 2 No's With stand	Bucket 1 no not available
3.4	33KV Hand Gloves	Ok
3.5	Rubber Mat	Ok
3.6	Safety Guide Photo	Ok
3.7	First Aid Box	Not available

4	Control Room	
4.1	Tube Light In & Out	1 No Not available
4.2	Light MCB – 2 Pole	Ok
4.3	Room Window Glass	Ok
4.4	Power Cable Stand Platform	Ok
5	Ground To Top Cable System	
5.1	3 Phase Cable 4 Core	Ok
5.2	Auxiliary Cable 5 Core	Ok
5.3	Light Cable 4 Core	Ok
5.4	EMC Cable 10 Core	Ok
5.5	Earth Cable Top to Bottom	Ok
5.6	Fiber Optic Cable	Ok
6	Ground Main Panel System	
6.1	Watchdog	Not available
6.2	Timer	Not available
6.3	Air To Air 6" Cooler Fan (2 No's)	Ok
6.4	Stabilizer 2KVA	Not available
6.5	Capacitor 4" Cooling Fan (2 No's)	Ok
6.6	Den Card Surge Arrester	Ok
6.7	63A Fuse	Ok
6.8	2S Relay	Ok
6.9	1B Relay	Ok
6.10	24V Indication Lamp	Ok
6.11	Thyristor	Ok
6.12	EH 550 Contactor	Ok

6.13	RCC Circuit	Ok
6.14	Generator Breaker Mechanism	Ok
6.15	Controller Switch Mechanism	Ok
6.16	Gen Cable Termination Ground	Ok
6.17	CT Coil (600/1) – 3No's	Ok
6.18	Panel Door Hinge	Ok
6.19	Panel Door Lock	Ok
6.20	1.5V Processor Cell Box	Ok
6.21	Power Cable PG - Gland	PG 16 each 1 no not available
6.22	1 A Transformer	Ok
6.23	EMC Switch	Ok
6.24	Trip Q8 Test (MENU 13A)	Ok
7	ACB System	
7.1	Ammeter	Ok
7.2	Voltmeter	Failed
7.3	Ammeter, Voltmeter selector switch	Ok
7.4	230V Indication Lamp (R, Y, B)	2 nos failed R, B
7.5	25VA Transformer	1 no not available
7.6	350VA Transformer	Not available
7.7	2A Glass Fuse & 20A Fuse Holder	Ok
7.8	ACB Safety Acrylic Sheet	Not available
7.9	ACB Current Coil (800/1) (3No's)	Ok
7.10	ACB Termination Cable & Bus pare	Ok

7.11	ACB Handle Rod	Ok
7.12	ACB Working Condition	Ok
8	Additional Panel System	
8.1	400A MCB Mechanism	Ok
8.2	Cooling Fan 4"	Ok
8.3	Dust Filter Cover	Ok
8.4	Danger Cover	Ok
8.5	Door Lock	Ok
9	Pitch System Checking	
9.1	Balluff Sensor Value 0.041, 9.853	Negative :0.048 Positive 9.840
9.2	Hydraulic Pump Holding Time 0 To 200 bar	49 seconds
9.3	proportional Valve Holding Time (180 To 200 Bar Time)	140 seconds
9.4	Sine Test	Ok
9.5	Pitch Acc Bar	93
9.6	Alarm Lock Fault Check	Low working pressure 169 bar
10	All Temperature °c	
10.1	Ambient	35
10.2	Gen 1	90
10.3	Nacelle	44
10.4	Control	48
10.5	Hydraulic	54
10.6	Gear Oil	66
10.7	Gear Bearing	70

11 Tower system		
11.1	Top to bottom all bolts	Ok
11.2	Tower earth	Ok
11.3	Tower vibration	Ok

12.1 MAIN PANEL CAPACITOR TEST				
	STEP 1 25 X 2	STEP 2 25 X 2	STEP 3 25 X 2	STEP 4 25 X 2
L1 – V 387	27	30	30	38
L2 – V 385	14	31	30	38
L3 – V 384	26	32	29	38

12.2 ADDITIONAL PANEL CAPACITOR TEST				
	STEP 1 25 X 2	STEP 2 25 X 2	Grid 25 X 1	Additional
L1 – V 378	34	36	18	
L2 – V 379	35	34	16	
L3 – V 378	34	36	16	

GROUND REMARKS:

1. EB DP structure Lightening arrester 3 no's failed, to be replaced.
2. Customer DP structure Lightening arrester 3 no's failed, to be replaced.
3. Power transformer oil level glass not clear
4. Power transformer gland earth not available.
5. Power transformer silica gel expired, to be replaced.
6. Earth rod set not available.
7. Fire extinguisher expired.
8. First aid box not available.
9. Power transformer side outer tube light not available.
10. Watch dog not available
11. Timer not available
12. 2KVA stabilizer not available
13. Volt meter 1 no failed.
14. 230V indicator 2 nos failed.
15. 25 VA transformer 1 no not available
16. 350 V light transformer 1 no not available
17. Main panel 1st step 25 kvar capacitor 1 no failed.
18. Additional panel 1st step contactor 1 no failed.



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V47 TOP

13	Hydraulic Unit System	
13.1	Hydraulic Unit Damper	Ok
13.2	Hydraulic Motor Bearing Noise	Ok
13.3	Hydraulic Cooling Fan Leaf & Cover	Ok
13.4	Hydraulic Oil Level	Ok
13.5	Hydraulic Oil Condition	Ok
13.6	Oil Level Sensor CT3218 – 3 Led	Ok
13.7	Hydraulic Oil Leakage	Ok
13.8	Pitch Cylinder Oil Leakage	Ok
13.9	Balluff Sensor Safety Cover	Ok
13.10	17 Bar Pressure Switch	Ok
13.11	10 Bar Pressure Switch	Ok
13.12	Pitch & Brake Pressure Relief valve	Ok
13.13	Hydraulic Motor Cable	Ok
13.14	Hydraulic Hose A	Ok
13.15	Hydraulic Hose B	Ok
13.16	Hydraulic Hose C	Ok
13.17	Hydraulic Hose D	Ok
13.18	Hydraulic Dummy Hose & Adapter	Ok
13.19	Hydraulic Hose Laying Sandwich	2 nos not available
13.20	Pitch Cylinder Safety Cover	Ok
13.21	Brake Accumulator	Ok
14	Gear Box System	
14.1	Gear Oil Level	Level low, need to be top up 20 Ltr (Approx.)
14.2	Gear Oil Condition	Ok


14.3	Air Filter	Ok
14.4	Gear Oil Filter	Ok
14.5	Gear Box Magnetic Rod	Ok
14.6	Gear Box Manifold Oil Leakage	Ok
14.7	Radiator Oil Leakage	Ok
14.8	Gear Oil Hose L	Ok
14.9	Gear Oil Hose S	Ok
14.10	Gear Box Noise	Ok
14.11	Gear Stay Function	2 nos failed
14.12	Low Speed Oil Seal	Ok
14.13	Hallow Shaft Cover Crack	Ok
14.14	Low Gear Oil Switch CT 3133 – 6 Led (750RPM)	In parameter set as 1250 RPM
14.15	Pitch Bearing	Ok
14.16	Gear oil leakage	Ok
14.17	Gear box 'I' Hook	Ok
15	Yawing System	
15.1	Yaw Motor Cable	Ok
15.2	Yaw Motor Leaf & Cover	Ok
15.3	Warm Gear Noise & Bearing	Ok
15.4	Warm Gear Oil Level	Ok
15.5	Warm Gear Oil Leakage	Ok
15.6	Yaw Top Teeth	Ok
15.7	Yaw Top Safety Cover (Aluminum)	Ok
15.8	Yaw Stopper Block M16	Ok

15.9	Yaw Top Bed Bolt	Ok
16	Generator System	
16.1	Gen Bearing Noise	Ok
16.2	Gen Cooling Fan Leaf	Leaf 1 no damaged
16.3	Gen Damper	Settle down
16.4	Gen Termination	Ok
16.5	Gen Cable Gland	Ok
16.6	Gen Cable Clamp & Plate	Ok
16.7	Gen Nipple	Ok
16.8	Gen Bed Earth	Ok
16.9	Gen, I Hook	Ok
17	Brake System	
17.1	Brake Pad Thickness	8mm
17.2	Brake Pad Bypass Box - 4 (1-2)	Ok
17.3	Brake Pad Signal - 3 Set (Generator Side or Gear Box Side)	1 signal connected (Gen) panel side
17.4	Brake Caliber – 3No's	Ok
17.5	Brake Caliber Metal Hose	Ok
17.6	Brake Disc Thickness	Ok
17.7	Brake disc heat absorb	Ok
17.8	Brake Disc Cover Top and Bottom	top side cover not available
17.9	CD Coupling Disc	Ok
17.10	CD Coupling Cover	Ok
17.11	Fire Safety Sheet	Not available
17.12	CD Coupling Noise	Ok

18	Battery Box System	
18.1	12V Battery	Ok
18.2	24V Charger	Ok
18.3	Box 230V Cable	Ok
18.4	Box 8 Core 24V Cable	OK
18.5	Timer Make	Omron
18.6	Battery Box Cover	Damaged
18.7	Top Panel Loop Check (95-21) (21-12) (11-31)	Ok
18.8	Soft Brake Working	Ok
18.9	Soft Brake Modification	Ok
18.20	2S Relay Make	Omron
19	Nacelle Light System	
19.1	16 A Switch Box	Damaged
19.2	Top, Front & Back Tube Light	Front side failed
19.3	Tube Light Cable	Ok
20	Top Panel System	
20.1	Contactor Yaw CW	Ok
20.2	Contactor Yaw CCW	Ok
20.3	Contactor Hydraulic	Ok
20.4	Contactor Low speed	Ok
20.5	Contactor High Speed	Ok
20.6	Contactor Exhaust Fan	Ok
20.7	Thermal Relay Yaw CW	Ok
20.8	Thermal Relay Yaw CCW	Ok
20.9	Thermal Relay Hydraulic	Ok

20.10	Thermal Relay Low Speed	Ok
20.11	Thermal Relay High Speed	Ok
20.12	Thermal Relay Exhaust Fan	Ok
20.13	2S Relay	Ok
20.14	1B Relay	Ok
20.15	VOG CT279	Not available
20.16	Top Panel Cooling Fan	Ok
20.17	Main Bearing Emergency Button	Ok
20.18	Top Panel Emergency Button	Ok
20.19	Yaw Top Emergency Button	Ok
20.20	Top Panel Door	Ok
20.21	Top Panel Door Hinge	Ok
20.22	Top Panel Damper	Ok
20.23	Top Panel stand clamp	Ok
20.24	SMPS	Ok
20.25	1.5V Processor Cell Box	Ok
20.26	Rectifier	Ok
20.27	Trip Q8 Switch Working	Ok
21	Main Shaft System	
21.1	Main Bearing Noise & Play	Ok
21.2	Main Bearing Grease Leakage	Ok
21.3	Main Bearing Front and Back Cover	Ok
21.4	Rotor Sensor	Ok
21.5	VOG Sensor	Ok

21.6	Generator sensor	Ok
21.7	Main Bearing 24V Junction Box	OK
21.8	Air Breather	Ok
21.9	Nipple Main Bearing	Ok
22	Blade System	
22.1	Blade Crack	Ok
22.2	Blade Arm Bearing	3 nos worn out
22.3	Blade Bearing Play	Ok
22.4	Blade Inspection Closing Cover- 3	Ok
22.5	Pitch Shaft Sliding shoe	Ok
22.6	Pitch Bolt M12 (8 No's)	Ok
22.7	Blade Flop Cover	3 nos not available
22.8	Hub Entrance Door	Ok
22.9	Blade Breather	Ok
22.10	Nose Cone Crack	Ok
22.11	Nose Cone 'L' Clamp	Ok
22.12	Nose Cone Zig Door	Ok
22.13	Nose cone Ring U Clamp	Ok
22.14	Blade Lip Seal Grease Leakage in and out	Leakage observed in outer side
22.15	Blade Safety Lock Block	Ok
23	Gear Oil Cooler Motor System	
23.1	Motor Bearing Noise	Ok
23.2	Cooler Motor Leaf Cover	Ok
23.3	Motor Cable Slow	Cable damaged

23.4	Motor Cable High	Damaged
23.5	Air Duct Cover	Not available
23.6	Cooler Motor Bed Stand	Ok
23.7	Big Leaf	Ok
24	Power Cable Twisting	
24.1	Twist Sensor	Ok
24.2	Power Cable Twist	Ok
24.3	Cable Round Ring	Ok
24.4	 Clamp	Ok
24.5	Bottom to Top cable laying	Ok
24.6	Nacelle Platform Cable Holding Sandwich	Ok
24.7	Power Cable Insulation	Ok
24.8	Nacelle Platform Small Cable Lock Clamp	Ok
25	Hoist System	
25.1	Remote Function	Hoist crane failed, starting load problem
25.2	Hoist 230v Box	Ok
25.3	Chain Bag & Clamp	Not available
25.4	Chain Hook	Ok
25.5	Hoist Noise	Ok
25.6	Hoist 230v Cable	Ok
25.7	Hoist Chain Block	Ok
25.8	Safety Chain & Lock Hook	Safety chain not available
25.9	Hoist make	Ok
26	Anemometer	
26.1	Anemometer Bearing	Ok
26.2	Anemometer Cup, Holder & Cable	Ok

26.3	stand	Ok
27	Wind vane System	
27.1	Wind vane Bearing	Ok
27.2	Wind vane Holder & Cable	Ok
27.3	Wind vane Cap Nut	Ok
28	Nacelle Door System	
28.1	Nacelle Cover Crack	Ok
28.2	Nacelle Back Door	Ok
28.3	Nacelle Sky Window Top	Ok
28.4	Nacelle Lightning Spike	Ok
28.5	Lightning Spike Earth	Ok
28.6	Nacelle damper Front & back	Ok
28.7	Vibration Sensor	Ok
28.8	Nacelle Platform Steel Door	Ok
28.9	Nacelle Platform Ladder	Ok
28.10	Nacelle Cover Damper	Ok
29	Exhaust Fan System	
29.1	Motor Bearing Noise	Exhaust motor not available
29.2	Fan Leaf & Cover	Exhaust motor not available
29.3	Bush, Waser & Bolt	Exhaust motor not available
29.4	Motor Cable	Exhaust motor not available
29.5	Big Fan Leaf	Exhaust motor not available
30	Rotor And Blade Safety System	
30.1	Rotor Lock Bush - 4	Ok
30.2	Rotor Lock Hide Pin -4	2 nos not available

30.3	Rotor Big Plate -1	Ok
30.4	Rotor Small Plate -1	Ok
30.5	86 Rocket - 3	Ok
30.6	86 Thread Rod - 3	1 no not available
30.7	washer -3, Nut -3	3 + 3 no not available
30.8	Grease Tray - 3	Ok
30.9	Disc Lock Bolt -1	Ok
31	Gear Box inner components	
31.1	Gear bearing High speed Play	Ok
31.2	Gear bearing Low speed Play	Ok
31.3	Check gear box body damages	Ok
31.4	Check in side of Gear box	Ok
31.5	Gear teeth @ low speed	Ok
31.6	Gear teeth @ high speed	Ok
31.7	Gear teeth @ intermediate	Ok
31.8	Gear intermediate pinion	Ok
31.9	Planetary gear	Ok
31.10	Gear Pump oil circulation	Ok
32	Blade Bearing	
32.1	Every 5 th blade bearing bolts M20 to be check out of 60No's	Ok
32.2	Blade Vertical play to be checked	Ok
32.3	Blade horizontal play to be checked	Ok
33	Transformer and generator	
33.1	Necessary to check Transformer terminal box	Ok
33.2	Necessary to check Generator terminal box	Ok

TOP REMARKS:

1. Gear stay 2 nos failed, need to be replaced
2. Hydraulic hose laying sandwich 2 nos not available
3. Gear oil level low, need to be top up
4. Generator cooling fan leaf 1 no damaged
5. Brake pad signal pad connected in panel side
6. Safety chart not available
7. 12V battery box damaged, need to be replaced
8. 16A switch box damaged, need to be replaced
9. Top tube light front side 1 no failed
10. VOG CT279 not available, circuit bypass
11. Blade lip seal leakage observed
12. Gear oil motor low & high speed cable damaged
13. Air duct cover not available
14. Winch starting problem, need to be repaired
15. Winch chain bag and clamp not available
16. Safety chain not available
17. Exhaust motor complete set not available
18. Rotor lock pin 2 nos not available
19. 86 thread rod 1 no not available
20. M24 washer 3 nos & nut 3 nos not available

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Sl.No.	Observation details as of WEG Ltd inspection	Photos showing remarks/ Witness	Sl.No.	Observation details as of WEG Ltd inspection	Photos showing remarks/ Witness
1	Gear stay 2 nos failed, need to be replaced		9	Brake pad signal pad connected in panel side	
2	12V battery box damaged, need to be replaced		10		
3	Generator cooling fan leaf 1 no damaged		11		
4	Gear oil motor low & high speed cable damaged		12		
5	VOG CT279 not available, circuit bypass		13		
6	Watch dog not available		14		
7	Timer not available				
8	Exhaust motor complete set not available				

Conclusion:

In general, various missing components and un-repairable failed components have to be replaced along with the repair / servicing of various defective parts identified in the inspection. It appears that proper preventive maintenance and immediate attention to various issues has to be addressed.