

# TECHNICAL AUDIT REPORT

GREENSOLVER  
28 Boulevard Haussmann  
75009 Paris



Location of intervention: Wind farm "  
Source de Sèves », 50490 ? Vaudrimesnil.

Mission completed on 11/12/2024

Names of verifiers: AUVRAY Pierre-SOCOTEC

Name of the escort: Enzo GEBLEUX - EDPR

Case number: 2412H0270000001

Intervention number: H0270241200000000329

Mission type: Technical audit of a wind farm.

## 1. Characteristics of the wind farm:

Name of the wind farm:	Source of Sèves
Operating company:	EDPR
Geographic coordinates:	? ? Latitude: 49° 9' 26.3" ? ? Longitude: -1° 26' 43.6"
Location:	Vaudrimesnil 50490 ? Saint-Sauveur-Villages
Constitution of the park:	5 wind turbines & 1 meteorological mast

## location of the wind farm site:



## 2. Documents provided:

provided	References	Dates	Comments
Prevention Plan	PDP V12	10/12/2024	Studied
Previous reports of periodic general inspection (Lift, Hoist, Fire Extinguisher, RESQ, LDV, Elec BT)	Socotec	04/2024	Studied

### 3. Characteristics of the audited turbines:

Identification:	VDN 2
Manufacturer:	Siemens Gamesa
Model:	SG97 T120
Power (W):	2 MW
Tower height (m):	120 m
Rotor (m) :	97 m
Maintainer:	SGRE



~~Photo representative of an SG97 T120 wind turbine~~

### 4. Characteristics of the audited delivery point:

Number of PDL associated with the wind farm:	1
Manufacturer and model of the PDL:	ORMAZABAL
Maintainer:	/

Severity level of states: Normal state - No action required.

Degraded state - Action required, low importance

Critical state - Action required, high importance

Critical state - Action required, high importance, critical state ? Action required, immediate importance

5. Inspection results:

Audited turbine VDN 2

Tower base:

	Description	Status	Observations	of Images
Access	of the ICPE sign at the entrance to the access	in a normal state	No defect was found during of the audit	
	of the access path	is normal	No defect was found during of the audit	
	of the access staircase condition , conservation, bolting	, normal state	No defect was found during of the audit	

Access	visual inspection of foundations, "and search for cracks and deterioration," "bolts"	in a degraded state	<p>Foam has appeared which making the foundation slippery</p> <p>EDPR Comment: The control will be carried out during the next maintenance by SGRE</p>	
	visual inspection of the surrounding area, vegetation, ruts, mud, ?	normal condition	No defect was found during of the audit	
	of the access door condition, filter, grille, locking	in a degraded state	<p>the display on the door is damaged by the weather weather</p> <p>Comment EDPR: A check will be made during the next inspection of the site by EDPR</p>	
general condition of the platform	condition of the platform, deformation, bolting, cleanliness, trap,	normal state	No defect was found during of the audit	
of the general state interior	condition of the walls, presence of oil, cleanliness.	in normal condition	No defect was found during of the audit	

General condition interior	elevator	in normal condition	No defect was found during of the audit	
	of the condition of HT cells	in a normal state	No defect was found during of the audit	
	of the electrical cabinets cabinets	in normal condition	No defect was found during of the audit	
	of the state and presence of postings mandatory	Normal state	No defect was found during of the audit	

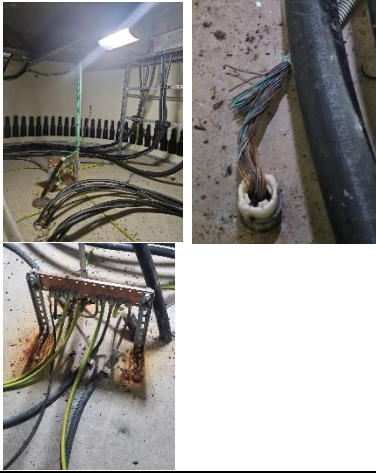

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Round:



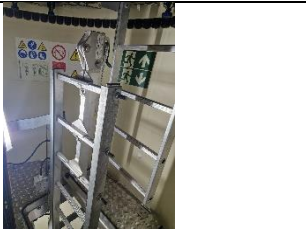

Critical state - Action required, high importance, critical state ? Action to be taken, immediate importance

	Description	Status	Observations	of Images
of the Fondation	of cleanliness	of a serious condition	caused by a corroded and damaged earth cable  EDPR Comment: A specific inspection will be carried out during the year (QAQC Foundation)	
	Illumination	in a normal state	No defect was found during of the audit	
	Access	Normal state	No defect was found during of the audit	
	Serrage	in a normal state	No defect was found during of the audit	
of the audit Section 1	of cleanliness	normal condition	No defect was found during of the audit	
	of lighting	in normal state	No defect was found during of the audit	
	Access - gate	Normal state	No defect was found during of the audit	



Section 1	Serrage	in a normal state	No defect was found during of the audit		
of the audit Section 2	of cleanliness	normal condition	No defect was found during of the audit		
	of lighting	in normal state	No defect was found during of the audit		
	Access - gate	Normal state	No defect was found during of the audit		
	Serrage	in a normal state	No defect was found during of the audit		
3	of cleanliness	normal condition	No defect was found during of the audit		
	of lighting	in normal state	No defect was found during of the audit		
	Access - gate	Normal state	No defect was found during of the audit		
	Serrage	in a normal state	No defect was found during of the audit		



Section 4	of Cleanliness	of Deterioration	of oil around the tower at bolt level	
	lighting	in good condition	No defects were found during of the audit	
	Access - gate	Normal state	No defect was found during of the audit	
	Serrage	in a normal state	No defect was found during of the audit	
of Yaw section	of cleanliness	normal condition	No defect was found during of the audit	
	of lighting	in normal state	No defect was found during of the audit	
	Access - gate	Normal state	No defect was found during of the audit	
	Serrage	in a normal state	No defect was found during of the audit	




Severity level of states: Normal state - No action required.




Degraded state - Action required, low importance

Critical state - Action required, high importance

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Unit:

	Description	Status	Observations	of Images
of Nacelle	of cleanliness/ General	Deteriorated condition	Slight grease overflow under the slow tree  Comment EDPR: The necessary cleaning will be carried out by SGRE during the next maintenance.	
	of lighting	in normal state	No defect was found during the audit	
	access	Normal state	No defect was found during the audit	
	display	Normal state	No defect was found during the audit	

Nacelle	Evacuator - ResQ	- Degraded Condition	The case is slightly damaged, dirty  Comment from EDPR: EDPR will look to change the box		
	the box Palan	is in normal condition	No defect was found during the audit		
	of electrical cabinets	in normal condition	No defect was found during the audit		



Severity level of states: Normal state - No action required.

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Critical state - Action required, high importance

Critical state - Action required, high importance, critical state ? Action required, immediate importance

Gear Box :

	Description	Status	Observations	of Images
of the General Condition	of cleanliness, of the presence of hoods and screens, electrical and mechanical risks and mechanical	and degraded state	<p>the entire gearbox is very correct. However, the layout and and the dispersion of electrical cables need to be reconsidered. In this conception, there is a risk of wear of electrical cables. The installation of ducts would avoid this risk and improve optimization of space</p> <p>Comment by EDPR: The repair will be carried out if certain components are damaged, but the arrangement will not be affected</p>	
	of the silent blocks of the gearbox feet block	in normal condition	No defect was found during the audit	

General Condition	cleanliness of the cooling radiator, leakage, condition of the hoses	of the hoses in a degraded state	with oil leakage.  Comment EDPR: The cleaning will be carried out by SGRE during the next maintenance.		
Level	visual check of the level of oil.	in a normal state	No defect was found during the audit		
of the Reniflard/filter	of the filter condition (without disassembly)	in normal condition	the oil filter housing does not leak		
and the silent bloc	of the silent bloc condition bloc (presence of dust)	Normal state	No defect was found during the audit		
Serrage	visual inspection of marking for the screw tightening.	in a normal state	No defect was found during the audit		

Severity level of states: Normal state - No action required.

Degraded state - Action required, low importance


Critical state - Action required, high importance




Critical state - Action required, high importance, critical condition ? Action to be taken, immediate importance

Generator:

	Description	Status	Observations	of Images
of the General Condition	of cleanliness, of the presence of hoods and screens, electrical and mechanical risks and mechanical	condition	No defect was found during of the audit	

of the roof:

	of the roof: Description	Condition	Observations	of Images
of the General Condition	of Access	of Deteriorated State	<p>a screw is damaged and the roof is slightly dented at the level of the access hatch</p> <p>Comment by EDPR: The repair will be carried out by SGRE during the next maintenance</p>	

General Condition	Anchor points	Normal state	No defect was found during the audit	
	weather mast	in a degraded state	<p>with a rust trace on the part connecting the 2 meteorological masts.</p> <p>Comment from EDPR: EDPR will verify how to manage this issue</p>	 




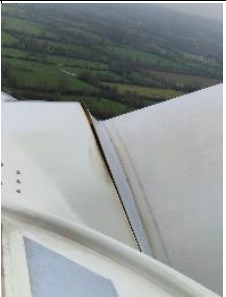
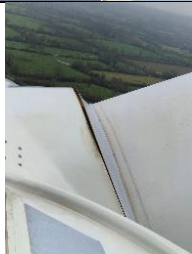

of the severity levels: Normal state ? No action required.



Degraded state ? Action required, low importance

Critical state ? Action required, high importance

Rotor:




Critical state ? Action required, high importance, critical ? Action required, immediate importance

	Description	Status	Observations	of Images			
of Pales	1 ? view from the roof	in a degraded state	with the joint open, the pale appears worn in places  Comment EDPR: The inspection ICPE has already been carried out without no issue found. SGRE will verify during the next maintenance				
	Panel 2 ? roof view	in a degraded state	with an open joint  Comment EDPR: The inspection ICPE has already been carried out without no issue found. SGRE will verify during the next maintenance				
	Panel 3 ? roof view	Normal condition	No defect was found during the audit				
of the State	of the State	in a degraded state	with dust traces  Comment EDPR: The cleaning will be carried out by SGRE during of the next maintenance				

HUB	Access	Degraded state	<p>A bit of grease present at the entrance</p> <p>Comment from EDPR: Cleaning will be carried out by SGRE during the next maintenance.</p>	
		in a degraded state	<p>with dust and oil presence that can accelerate the degradation of flexible materials</p> <p>EDPR Comment: The cleaning will be carried out by SGRE during the next maintenance.</p>	

Critical state ? Action required, high importance, critical ? Action required, immediate importance

	Description	Status	Observations	of Images
Access   to		in a normal state	No defect was found during of the audit	
	of the PDL structures	in a normal state	No defect was found during of the audit	
	Display	Degraded State	The display is damaged by the climatic conditions	
	access doors	in normal condition	No defect was found during the audit.	

Interior	Condition of the walls, cleanliness.	Normal condition	No defect was found during of the audit	
	of the condition of HT cells (obstacles, interlocks, ?)	(normal)	No defect was found during of the audit	 

Interior	Condition of the cabinets of the electrical cabinets (exterior/interior)	Normal condition	No defect was found during of the audit	
	of the state and presence of postings mandatory	Normal state	No defect was found during of the audit	
	of the state and presence of electrical PPE	in a normal state	No defect was found during of the audit	

Interior	Condition and presence of security lighting security	status normal	No defect was found during of the audit	
	of equipment (PC, lighting, heating, equipment)	in normal condition	No defect was found during of the audit	
	of the auxiliary transformer (if present)	Normal state	No defect was found during the audit.	
	State and presence of spare fuses spares	Normal state	Presence of spare fuses in the PDL	

## 6. Conclusion following the results:

of the tower base:

"Sampling allowed to determine a correct set of the "tower base" part of the" wind turbines at the wind farm.

Actions to be taken after sampling:

- Clean the foundation
- and a review of the stickers displaying important information
- replace the grounding cables in the foundation

Tower:

- Clean the last section

the gear box:

sampling allowed to determine a fairly correct set of the "gear box" of wind turbines of the wind farm.

Actions to be taken after sampling:

- Find a better layout for the arrangement of the electrical cables of the gear box, it is recommended to install ducts to optimize space.
- the leak

of the  
roof

the mast at the level of the corroded part

Delivery post:

The sampling allowed to determine a very correct set of the "PDL" part of the wind farm.

Actions to be taken following the sampling:

- Create a new display outside the PDL.