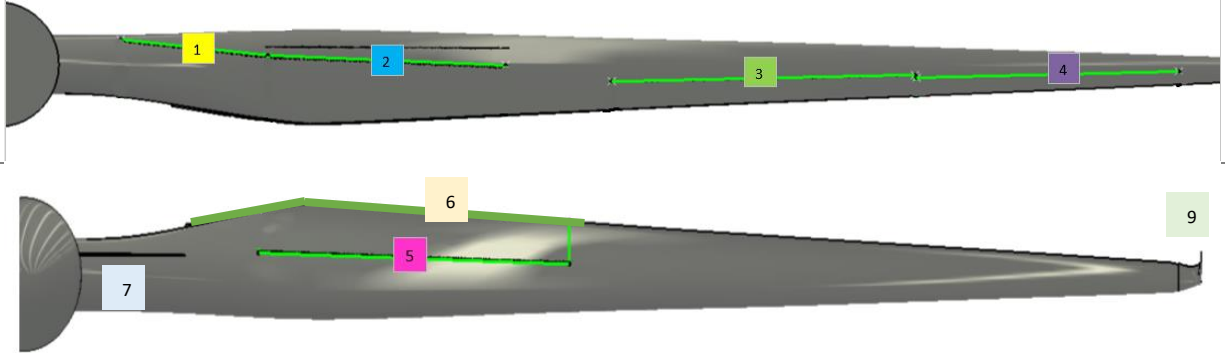



Report Number	xxx		
Windfarm	xxx		
Client	xxx		
Turbine Number	T22		
Turbine Type	Siemens 2.3mw		
Blade Type	Siemens B40		
Repair Technicians	xxx		
Installation Date(s)	From: xxx	To: xxx	
Report Date	09-10-2020		
Report Author	xxx		
Report Approver	Alex Mountain		

Turbine Serial Number	xxx
Turbine Serial Number Photo	



Installation Summary			
1 – 35mm Individual VGs – SS – 30 panels	<input type="checkbox"/>	6 – Gurney Flap - PS	<input checked="" type="checkbox"/>
2 – 35mm Panel VGs – SS – 14 panels	<input type="checkbox"/>	7 – Spoiler - PS	<input checked="" type="checkbox"/>
3 – 12mm Panel VG – SS – 28 panels	<input type="checkbox"/>	8 – Fence	<input checked="" type="checkbox"/>
4 – 5mm Panel VG – SS – 32 Panels	<input type="checkbox"/>	9 – Winglet	<input checked="" type="checkbox"/>
5 – 20mm Pressure side VGs – 19 panels	<input type="checkbox"/>		



Blade Number	xxx
Blade Designation	A
Blade Badge	

Installation Summary
<p>Package A of Aero Upgrades were fitted to all three blades of T22.</p> <p>This consisted of Winglets, Spoiler, Gurney Flaps & Fence.</p> <p>Work was carried out in accordance with:</p> <ul style="list-style-type: none"> - ATP-018 ANAKATA Gurney Flap Installation rev1 - ATP-019 ANAKATA Spoiler Installation rev1 - ATP-020 ANAKATA Winglet Installation rev1 - ATP-021 ANAKATA Fence Installation rev1 <p>Access method:</p> <ul style="list-style-type: none"> - MEWP for the Winglets - Rope Access for Spoiler, Gurney Flaps and Fence. <p>LPS readings were within the required range.</p>

Repair Product Information

Product:	Plexus	
Batch #:	31000	
Expiry Date:	07-02-2022	
Product:	Araldite 2015	
Batch #:	ADJ002380	
Expiry Date:	15-01-2021	
Product:	Sika 7800	
Batch #:	Batch...A 3004306259 Batch...B 3004429180	
Expiry Date:	01-05-2021	
Product:	Windmastic TopCoat	
Batch #:	SFC015540	
Expiry Date:	22-05-2021	





Environmental Conditions

Installation	Date	Surface Temperature (°C)	Ambient Temperature (°C)	Humidity (%)
Gurney Flaps	31-08-2020	14	13	83
Spoiler	31-08-2020	14	13	83
Winglet	05-10-2020	15	14	81
Fence	31-08-2020	14	13	83





Spoiler Installation

Intersect/Start Point	Example Adhesive Application
	
Example Sealing	Overview of Complete Installation
	







Fence Installation

Intersect/Start Point	Surface Prepared
	
Example Sealing	Overview of Complete Installation
	
Overview of Complete Installation	<p>Not used</p>

Gurney Flaps Installation



Intersect/Start Point	Example Sealing
	
Upper Section Installed (above max chord)	Overview of Complete Installation
	

Winglet Installation

Filler and Paint Removed	Hole Drilled Through the Block/Blade
	
Adhesive Applied to the Blade	Filler Applied Between the Winglet and the Blade
	
Winglet Installed PS	Winglet Installed SS
	

Winglet LPS Testing

Prior to Installation – This test is performed on the tip receptors as installed and the winglet system. The winglet is tested before fitting and ensures continuity between the end plate and the receptor bolt.

Blade PS	Blade SS	Winglet Tip
		
0.039Ω	0.039Ω	0.001Ω

Following Installation – This test is performed on the winglet receptor bolt and the winglet end plate. These tests prove the complete system from the blade tip to an earth point near the base of the turbine. An earth strap inside the WTG or a bolt outside the WTG may be selected.

Winglet PS	Winglet SS	Winglet Tip
		
0.065Ω	0.065Ω	0.065Ω

Adhesive Curing		
Adhesive Used	Temperature Post Cured At	Duration of Post cure (mins)
Araldite 2015	10	48hrs