

TEST PROJECT AIRCRAFT MAINTENANCE

WSC2017_TP14_M6_composite_
repair_actual

Submitted by: Strata

Member Country/Region: AE





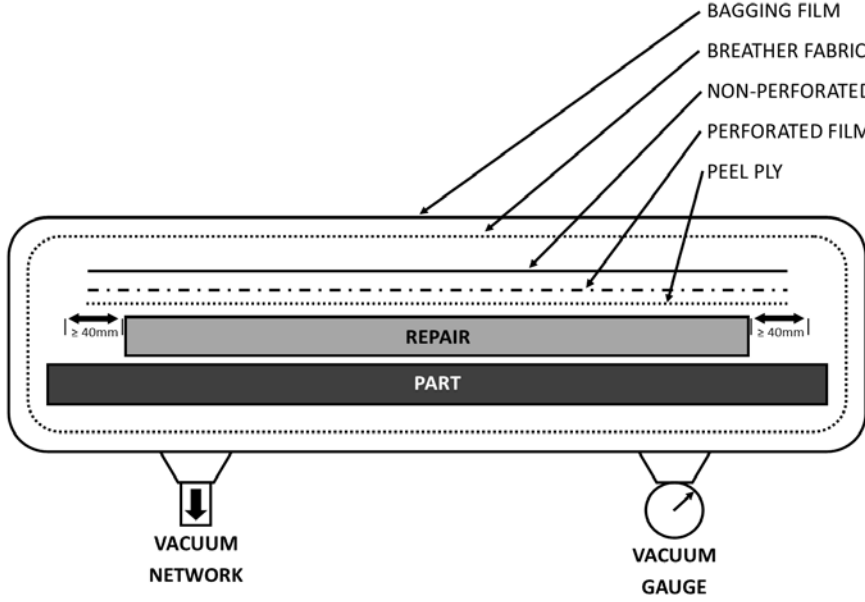
COMPETITOR'S WORKING DOCUMENT

STEP	INSTRUCTION / WORK STEP						
1.	<p>Abrade the plies of the affected area to remove the defect with abrasive paper 120 grit</p> <ul style="list-style-type: none">• Sand repair area acc. typical stagger: $h/l=1/50$ (15mm per ply).• Sand additional 5 mm of non-structural ply• If reinforcement plies are affected by the repair and their width is smaller than 30 mm enlarge the repair area respectively. <p><u>ATTENTION:</u> Do not use compressed air to remove the residue when sanding, use vacuum.</p>						
2.	<p>Inspect the area, measure number of removed layers, and size of affected area in terms of width and length.</p> <p>Record the information in the table below:</p> <table border="1"><thead><tr><th>No. of non-structured piles removed</th><th>No. of carbon piles removed</th><th>Size of the area (mm x mm)</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr></tbody></table> <p>Conformity Check: (Name) _____</p>	No. of non-structured piles removed	No. of carbon piles removed	Size of the area (mm x mm)			
No. of non-structured piles removed	No. of carbon piles removed	Size of the area (mm x mm)					
3.	<p>Clean the area with IPA and a cotton cloth. Do not use compressed air for cleaning.</p> <p><u>ATTENTION:</u> Wipe the cleaned surfaces immediately with a dry cotton cloth and vent for 10 minutes at 70°C.</p> <p>Record venting time: Start: __ : __ Finish: __ : __</p>						



4.	If core cells are damaged, fill up <u>only the damaged core cells</u> with Hysol EA9394.				
	Identification	Specification	Batch no	Expiry date	Quantity
	Hysol EA9394	IPS-08-06-001-01			
5.	<p>Cure the resin EA9394 Hysol for 30 minutes, at 100°C.</p> <p>Record cure details: Start: __ : __ Finish: __ : __ Temperature: __ °C</p>				
6.	Abrade the excess resin.				
7.	<p>Clean the area with IPA and a cotton cloth. Do not use compressed air for cleaning.</p> <p><u>ATTENTION:</u> Wipe the cleaned surfaces immediately with a dry cotton cloth and vent for 10 minutes at 70°C.</p> <p>Record venting time: Start: __ : __ Finish: __ : __</p>				
8.	<p>Lay-up the following plies impregnated with Hysol EA9396 resin:</p> <ul style="list-style-type: none">• 1 filler ply (orientation as per the last ply removed)• New plies with number and orientation as per the abraded plies. Take note to include any existing ply overlaps. Minimum overlap 15mm.• One additional cover ply (minimum overlap of 15mm) above the repair layup.• Either one of the materials below (minimum overlap of 15mm) depending on the side of defect: <p>NOTE: refer to WorldSkills Composite Repair Manual 1A</p>				
	Identification	Specification	Expiry Date	Quantity	Mixed Ratio
	Dry Carbon Fabric, 193 g/m2	AIMS 08-04-001	N/A		
	Hysol EA 9396 Resin	IPS 08-02-001-02			



9.	<p>Envelop bag the repair area according to the figure below:</p> 
10.	<p>Vacuum reading should not drop:</p> <ul style="list-style-type: none"> • 150 millibar within 5 minutes • 15 kpa within 5 minutes
11.	<p>Cure the resin EA9396 Hysol for 45 minutes, at 100 °C.</p> <p>Record cure details: Start: __ : __ Finish: __ : __ Temperature: __ °C</p>