

12.0 Appendix. Single-Lap-Joint Mechanical Testing Check ListSample ID's: 20150493 , 20150494 , 20150495 , 20150496 , 20150497Test date: 7/14/15 Test temperature: 23.7 °C Test humidity 53 %Testing facility and operator: mssTest frame model and serial number: Instron 1123 SN=5054Test frame calibration date: 9/10/14Load cell model and serial number: SN# 028

Load cell calibration date: _____

Crosshead speed: 1.3 mm/min (0.05 in/min), list other 1.27 mm/min

Nature of failure and other comments:

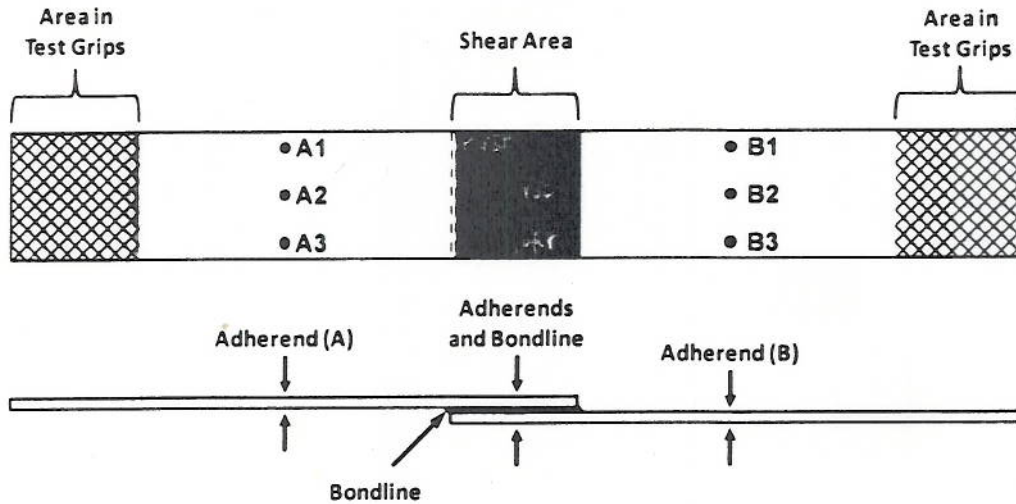
11.0 Appendix. Single-Lap-Joint Fabrication Check List

Sample ID's: 20150493, 20150494, 20150495, 20150496, 20150497Date: 6/25/15 @1630 Temperature: 74.1°F Humidity 52.9%Testing facility and operator: MUSAdhesive, type, and form: SciGrip SC9805Lot ID, manufacturer's code, expiration date: EX805A Lot: NC14H-007EX805B Block Lot: NC14H-008 Date of Mfg: 8/27/2014Method of cleaning and preparing bonding surface: acetone wipe, 3M Scotchbrite
(048011-05530, A/FN, Lot #: MEND 0205-43047), grit blast (60 grit Al₂O₃), N₂ blow off4200SR: 14-JLS-035 B (filled 11-13-14)dip 2 mins, 30 sec DI rinse, N₂ blow off

Adhesive preparation, application, and bonding conditions:

Two-component, 490 mL cartridge 10:1 mix ratio dispensed using
MixPac type DP 400-100 No. 2008-07153Tooling fixture and bonding pressure notes: aluminum fixture w/ 3 steel weightsAdhesive mixing to applied pressure time: < 5 minsCure cycle: 91.5 hrs @ RTOven used (model and serial number): Thelco S/N: 699020978 Model: 130DConditioning procedure: placed in test tube of DI water in oven @ 63°C for 14 daysComments: 1010 mild steelZIRCOBOND 4200SRhot/wet

13.0 Appendix. Bondline Thickness Measurements



Aluminum grade: _____ Mfg. nominal thickness: _____ (mm - in)

Micrometer model, serial number, calibration date _____

Measurement units (circle) – mm or in

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150493	.0013	.0010	.0010	.0011
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0021	.0018	.0017	.00187
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1574	.1507	.1502	.1511
				C - (A + B)
Average bondline thickness			.02813	

.06148

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150494	.0609	.0609	.0610	.06093
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0618	.0618	.0616	.06173
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1507	.1510	.1525	.1514
				C - (A + B)
	Average bondline thickness			.02874

.06133

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150495	.0608	.0611	.0612	.06103
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0616	.0616	.0616	.0616
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1520	.1513	.1505	.15127
				C - (A + B)
	Average bondline thickness			.028634

.06131

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150496	.0614	.0614	.0611	.0613
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0616	.0616	.0615	.06157
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1574	.1573	.1575	.1574
				C - (A + B)
	Average bondline thickness			.02853

.06144

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150497	.0610	.0609	.0607	.06087
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0618	.0618	.0615	.0617
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1520	.1521	.1528	.1523
				C - (A + B)
	Average bondline thickness			.02973

.06129