

12.0 Appendix. Single-Lap-Joint Mechanical Testing Check List

Sample ID's: 20150473, 20150474, 20150475, 20150476, 20150477Test date: 7/14/15 Test temperature: 23.5°C Test humidity 55%Testing facility and operator: MJSTest 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 2.27 mm/min

Nature of failure and other comments:

11.0 Appendix. Single-Lap-Joint Fabrication Check List

Sample ID's: 20150473, 20150474, 20150475, 20150476, 20150477Date: 6/25/15 @1630 Temperature: 74.1°F Humidity 52.9%

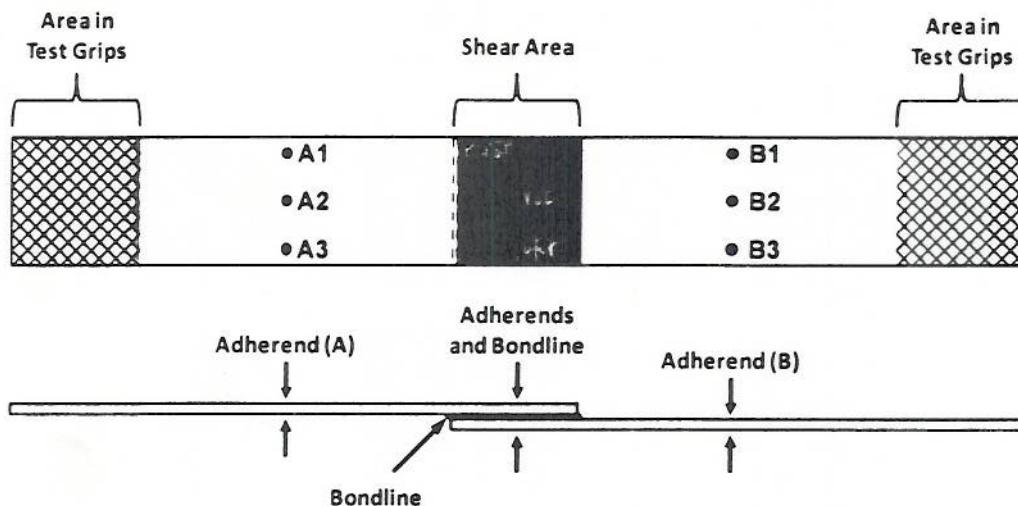
Testing facility and operator: _____

Adhesive, type, and form: SciGrip SC7805Lot 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
(48011-05530, A VFN, lot#: MDMD0205-4304), grit blast (60 grit + Al₂O₃), N₂ blow off7400:1DH:599060 Lot: PB444 75371 Use before 8-14-155%, dip 2 min, 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): Thru16 S/N: 699020978 Model: 130DConditioning procedure: placed in test tube of DI water in oven @ 63°C for 14 daysComments: 1010 mild steelBonderite 7400not/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)
20150473	.0610	.0613	.0609	.06107
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0618	.0616	.0615	.06163
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1532	.1572	.1502	.15753
				C – (A + B)
Average bondline thickness			.02883	

.06135

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150474	.0610	.0607	.0609	.06087
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)
	.1514	.1515	.1517	.15153
				C - (A + B)
	Average bondline thickness			.02909

.06122

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150475	.0615	.0616	.0610	.06137
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0616	.0615	.0615	.06153
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1515	.1513	.1511	.1513
				C - (A + B)
	Average bondline thickness			.02840

.06145

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150476	.0612	.0673	.0610	.0617
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0615	.0617	.0619	.0617
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1576	.1508	.1497	.1507
				C – (A + B)
	Average bondline thickness			.02783

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150477	.0612	.0610	.0608	.0610
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0616	.0618	.0619	.06177
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1518	.1517	.1516	.1517
				C - (A + B)
	Average bondline thickness			.02893