

APPENDIX C

TASK 3 WELD DATA – STATIC AIR

BEAD ON PLATE														Weld Data										Back Surface Data									
Weld	Thickness	Process	Dia	Electrode	Position	Gas	WFS	Amps	Volts	TRIM	Arc Control	ESO	TS ipm	HI kJ/mm	Max. T deg C	Time to Max T Sec	Time to 1000C	Time to 800C Sec	Time to 500C Sec	Time to 100C Sec	ΔT 800-500C Sec	ΔT 1000-100 C Sec	ΔT Peak- 100C Sec	Slope at 540C degC/sec	Max. T deg C	Time to Max T Sec	Time to 800C Sec	Time to 500C Sec	Time to 100C Sec	ΔT 8/5 Sec	ΔT Peak- 100C Sec	Slope at 540C degC/sec	
A1	3.2	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	13.00	0.35	1254.1	26.33	28.95	30.83	36.89	135.33	6.06	106.38	109	-38.0	938.5	24.56	26.79	33.71	134.36	6.92	109.8	-58	
A2	3.2	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	8.50	0.53	1258.1	41.21	45.71	48.71	57.91	217.27	9.2	171.56	176.06	-20.0	1227.1	40.9	46.4	55.22	210.84	8.82	169.94	-22.5	
A3	3.2	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	6.03	0.74	1255.3	34.27	41.22	46.67	61.26	258.48	14.59	217.26	224.21	-18.0	1255.3	34.27	42.61	55.91	250.03	13.3	215.76	-9.5	
A4	6.4	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	12.50	0.35	1259.9	51.76	52.61	53.01	55.57	154.04	2.56	101.43	102.28	-59.5	486.6	52.88	0	0	147.79	0	94.91	0	
A5	6.4	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	8.50	0.53	1259.2	47.74	48.66	50.26	56.82	198.71	6.56	150.05	150.97	-29.5	587.1	49.54	0	53.97	191.69	0	142.15	-61	
A6	6.4	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	6.03	0.74	1259.5	52.56	53.36	56.56	68.86	249.28	12.3	195.92	196.72	-22.5	655.7	54.57	0	64.83	241.93	64.83	187.36	-14.5	
A7	6.4	SMAW	2.4	718MC	FLAT	NA	NA	90	21	NA	10	NA	3.46	1.29	1237.3	67.95	74	81.69	104.05	279.22	22.36	205.22	211.27	-19.5	908	67.94	75.33	101.15	275.06	25.82	207.12	-12	
A8	6.4	SMAW	3.2	718MC	FLAT	NA	NA	120	20.5	NA	10	NA	10.96	0.53	1256.5	22.71	24	25.48	32.05	163.05	6.57	139.05	140.34	-17.5	579.6	23.95	23.94	28.2	157.41	4.26	133.46	-23	
A9	6.4	SMAW	3.2	718MC	FLAT	NA	NA	120	20.5	NA	10	NA	4.50	1.29	1253.1	38.75	43.85	50.28	308.41	25.54	264.56	269.66	-12.0	898.1	39.67	44.47	68.98	302.56	24.51	262.89	-5.5		
A10	8	SMAW	3.2	718MC	FLAT	NA	NA	120	20.5	NA	10	NA	10.96	0.53	1256.7	29.85	30.6	31.01	36.03	154.06	5.02	123.46	124.21	-52.5	446.7	33.15	0	0	147.96	0	114.81	0	
A11	8	SMAW	3.2	718MC	FLAT	NA	NA	120	20.5	NA	10	NA	4.50	1.29	1113.6	47.64	50.5	52.47	75.76	291.02	23.29	240.52	243.38	-14.5	671.5	51.61	0	68.51	284.42	0	232.81	-14.5	
A12	6.4	P-GMAW	0.9	K-NOVA	FLAT	C10	200	100	20.5	51	45	13	14.00	0.35	1258.1	23.19	23.93	24.53	29.16	136.96	4.63	113.03	113.77	-46.0	568.6	25.06	0	27.85	130.56	0	105.5	-69.5	
A14	11	SMAW	3.2	AtomArc 10018-M1	FLAT	NA	NA	120	20	NA	10	NA	10.50	0.53	1177	26.6	27.05	28	31.34	133.26	3.34	106.21	106.66	-63.0	315	31.24	0	0	125.33	0	94.09	0	
A15	11	SMAW	3.2	AtomArc 10018-M1	FLAT	NA	NA	120	20	NA	10	NA	4.5	1.29	1254.3	1.04	57.98	60.76	71.64	274.55	10.88	216.57	273.51	-6.0	486.1	56.63	0	0	284.06	0	227.43	0	
A16	16.1	SMAW	3.2	AtomArc 10018-M1	FLAT	NA	NA	120	20	NA	10	NA	10.50	0.53	1258.1	25.58	26.43	27.14	29.8	103.06	2.66	76.63	77.48	-92.0	195.7	35.08	0	0	96.25	0	61.17	0	
A17	16.1	SMAW	3.2	AtomArc 10018-M1	FLAT	NA	NA	120	20	NA	10	NA	4.50	1.29	1198.4	47.41	47.83	48.27	58.31	243.81	10.04	195.98	196.4	-23.0	304	57.83	0	0	228.07	0	170.24	0	
A18	19.1	SMAW	3.2	AtomArc 10018-M1	FLAT	NA	NA	120	20	NA	10	NA	10.50	0.53	1255.1	27.4	28.43	29.86	32.36	69.07	2.5	40.64	41.67	-88.5	139.4	38.03	0	0	60.96	0	22.93	0	
A19	19.1	SMAW	3.2	AtomArc 10018-M1	FLAT	NA	NA	120	20	NA	10	NA	4.50	1.29	1255.1	44.37	46.82	51.16	60.51	182.03	9.35	135.21	137.66	-29.5	257.8	57.98	0	0	172.11	0	114.13	0	
A20	3.2	GMAW - RMD	1.2	K-NOVA	FLAT	C10	100	130	17	85	5	13	27.48	0.19	1256.5	12.15	12.89	13.5	16.05	58.84	2.55	45.95	46.69	-80.5	589.4	12.12	0	0	14.23	48.79	0	36.67	-225.5
A21	3.2	GMAW - RMD	1.2	K-NOVA	FLAT	C10	100	130	17	85	5	13	15.00	0.35	1257.7	18.16	20.95	22.74	28.7	133.19	5.96	112.24	115.03	-43.0	915	19.09	21.04	27.42	127.09	6.38	108	-48.5	
A22	3.2	GMAW - RMD	1.2	K-NOVA	FLAT	C10	100	130	17	85	5	13	10.00	0.53	1258.4	30.85	33.26	35.71	44.2	208.28	8.49	175.02	177.43	-20.0	1232.2	28.1	34.31	43.34	203.91	9.03	175.81	-28	
A23	6.4	GMAW - RMD	1.2	K-NOVA	FLAT	C10	160	170	17	85	5	13	13.00	0.53	1231	22.44	23.32	24.81	30.7	177.95	5.89	154.63	155.51	-28.5	601.3	23.89	0	0	164.65	0	140.76	-60.5	
A24	6.4	GMAW - RMD	1.2	K-NOVA	FLAT	C10	160	170	17	85	5	13	5.50	1.29	1248.1	48.13	52.28	60.59	91.18	395.14	30.59	342.86	347.01	-0.5	864.7	48.97	53.03	81.31	378.99	28.28	330.02	-5.5	
A25	3.2	P-GMAW	0.9	K-NOVA	FLAT	C10	150	70	18	42	45	13	15.50	0.19	1258.9	14.64	15.82	16.53	19.43	81.39	2.9	65.57	66.75	-68.0	694.1	14.56	0	0	18.13	74.83	0	60.27	-109.5
A26	3.2	P-GMAW	0.9	K-NOVA	FLAT	C10	150	70	18	42	45	13	8.50	0.35	1259.4	26.86	29.88	32.15	39.29	177.36	7.14	147.48	150.5	-36.5	997.2	25.24	28.41	36.36	163.32	7.95	138.08	-43.5	
A27	3.2	P-GMAW	0.9	K-NOVA	FLAT	C10	200	100	20.5	51	45	13	9.00	0.53	1259.7	40.79	47.35	51.38	65.51	289.07	14.13	241.72	248.28	-20.0	1136.4	38.34	46.24	59.8	280.84	13.56	242.5	-17.5	
A28	6.4	P-GMAW	0.9	K-NOVA	FLAT	C10	200	100	20.5	51	45	13	9.00	0.53	1256.5	36.63	38.88	41.49	49.5	225.98	8.01	187.1	189.35	-23.5	597.3	38.75	0	44.91	214.07	0	175.32	-67.5	
A29	6.4	P-GMAW	0.9	K-NOVA	FLAT	C10	200	100	20.5	51	45	13	3.75	1.29	1196.3	74.73	79	86.89	111.35	391.76	24.46	312.76	317.03	-8.9	747.3	74.77	0	99.99	380.26	0	305.49	-6	
A30	8	P-GMAW	0.9	K-NOVA	FLAT	C10	200	100	20.5	51	45	13	9.00	0.53	1029.2	34.2	34.29	35.17	42.8	190.76	7.63	156.47	156.56	-37.0	486.1	36.63	0	0	178.38	0	141.75	0	
A31	8	P-GMAW	0.9	K-NOVA	FLAT	C10	200	100	20.5	51	45	13	3.75	1.29	1070.4	71.14	75	86.55	114.04	408.8	27.49	333.8	337.66	-8.0	746.7	73.92	0	101.65	395.8	0	321.88	-2.5	
A32	11	P-GMAW	0.9	ER70XTi	FLAT	C10	200	100	20.5	51	45	13	9.00	0.53	1085.9	33.98	34.48	35	37.83	159.19	2.83	124.71	125.21	-37.0	341.5	36.07	0	0	145.93	0	109.86	0	
A33	11	P-GMAW	0.9	ER70XTi	FLAT	C10	200	100	20.5	51	45	13	3.75	1.29	1086	66.13	68	75.28	98.3	416.49	23.02	348.49	350.36	-8.3	564.6	71.01	0	0	84.33	398.21	0	327.2	-14.5
A34	16.1	P-GMAW	0.9	ER70XTi	FLAT	C10	200	100	20.5	51	45	13	9.00	0.53	1259.6	37.75	39.1	40.43	44.57	126.98	4.14	87.88	89.23	-66.5	214.5	47.38	0	0	117.11	0	69.73	0	
A35	16.1	P-GMAW	0.9	ER70XTi	FLAT	C10	200	100	20.5	51	45	13	3.75	1.29	1259.8	61.6	66	70.04	82.66	336.63	12.62	270.63	275.03	-25.0	359.6	76.92	0	0	321	0	244.08	0	
A36	19.1	P-GMAW	0.9	ER70XTi	FLAT	C10	200	100	20.5	51	45	13	9.00	0.53	1137.2	20.54	21.18	22.74	25.85	70.44	3.11	49.26	49.9	-86.0	158.4	29.63	0	0	60.81	0	31.18	0	
A37	19.1	P-GMAW	0.9	ER70XTi	FLAT	C10	200	100	20.5	51	45	13	3.75	1.29	1253.1	7.79	85.63	88.39	95.61	242.94	7.22	157.31	235.15	-32.0	286.8	90.01	0	0	281.41	0	191.4	0	
A38	6.4	SS-FCAW	2.0	FABSHIELD 71K6	FLAT	NA	75	200	18	NA	NA	28	8.02	1.06	1259.9	36.46	46.8	52.8	84.24	391.62	31.44	344.82	355.16	-8.5	1049.1	39.37	48.61	78.31	373.98	29.7	334.61	-6.5	
A39	6.4	SS-FCAW	2.0	FABSHIELD 71K6	FLAT	NA	75	200	18	NA	NA	28	6.50	1.29	1258	48.35	59.78	67.2	104.29	412.95	37.09	353.07	364.5	-9.5	1143.3	50.8	63.57	98.44	403.41	35.87	352.61	-8.5	
A40	8	SS-FCAW	2.0	FABSHIELD 71K6	FLAT	NA	125	280	19	NA	NA	32	12.00	1.06	1257.5	22.88	27	30.9	287.97	18.9	260.97	265.09	-13.5	808	27.34	28.29	47.71	276.18	19.42	248.84	-14.5		
A41	8	SS-FCAW	2.0	FABSHIELD 71K6	FLAT	NA	125	280	19	NA	NA	32	9.50	1.29	1258.1	29.51	33.5	41.66	69.39	327.28	27.73	293.78	297.77	-6.0	891.8	33.4	38.36	65.48	319.9	27.12	286.5	-8.5	
A44	11	SS-FCAW	2.0																														