

APPENDIX K

TASK 7 – SLEEVE FILLET WELDS – STATIC AIR (NO FLOW)

SLEEVE FILLET WELDS															Weld Data										Back Surface Data									
Weld	Thickness	Process	Dia	Electrode	Position	Gas	WFS	Amps	Volts	TRIM	Arc Control	ESO	TS	HI							Cooling Rate										Cooling Rate			
															Max. T	Time to Max T	Time to 1000C	Time to 800C	Time to 500C	Time to 100C	ΔT 800-500C	ΔT 1000-100 C	ΔT Peak- 100C	Slope at 540C	Max. T	Time to Max T	Time to 800C	Time to 500C	Time to 100C	ΔT 8/5	ΔT Peak- 100C	Slope at 540C		
															deg C	Sec	Sec	Sec	Sec	Sec	degC/sec	deg C/sec	deg C	Sec	Sec	Sec	Sec	Sec	Sec	Sec	degC/sec			
SA1	6.4	SMAW	2.4	718MC	2F	NA	NA	90	21	NA	NA	NA	8.50	0.53	1221.7	31.55	32.45	34.45	40	153.1	5.55	120.65	121.55	-36.6	558.0	38.55	0	41.85	155.25	41.85	116.7	-33.3		
SA2	6.4	SMAW	2.4	718MC	3F-UP	NA	NA	90	21	NA	NA	NA	3.50	1.29	1260.2	33.15	34.05	36.95	50.2	194.7	13.25	160.65	161.55	-17.3	678.3	44.0	0	56.95	197.75	56.95	153.75	-10.5		
SA3	6.4	SMAW	3.2	718MC	2F	NA	NA	110	20.5	NA	NA	NA	6.00	0.90	1205.2	35.4	36.85	40.1	49.45	198.85	9.35	162	163.45	-19.5	634	44.8	0	52.9	201.75	52.9	156.95	-20.1		
SA4	6.4	SMAW	3.2	718MC	3F-UP	NA	NA	105	20.5	NA	NA	NA	4.00	1.29	1252.7	52.15	55.3	58.85	72.7	266.35	13.85	211.05	214.2	-17.6	668.9	61.7	0	75.55	271.15	75.55	209.45	-13.6		
SA5	8	SMAW	3.2	718MC	2F	NA	NA	120	22	NA	NA	NA	7.00	0.90	1239.8	23.5	24.7	26.55	31.6	136.3	5.05	111.6	112.8	-44.3	500.3	30.2	0	0	140.85	0	110.7	0		
SA6	8	SMAW	3.2	718MC	3F-UP	NA	NA	120	22	NA	NA	NA	4.00	1.56	1259.8	31.7	34.1	37.55	50.15	233.1	12.6	199	201.4	-15.7	669.6	42.2	0	55.45	237	55.45	194.8	0		
SA7	11	SMAW	3.2	Filarc 108MP	3F-DWN	NA	NA	160	23.5	NA	NA	NA	10.00	0.90	1257.4	22.55	24.45	25	29	110	4.00	85.55	87.45	-88.3	326.7	31.6	0	0	112	0	80.45	0		
SA8	11	SMAW	3.2	Filarc 108MP	2F	NA	NA	160	23.5	NA	NA	NA	7.00	1.29	1257.8	22.4	25.25	26.25	30.9	125.8	4.65	100.55	103.4	-45.2	384.4	32.7	0	0	129.25	0	96.55	0		
SA9	16.1	SMAW	3.2	Filarc 108MP	3F-DWN	NA	NA	160	23.5	NA	NA	NA	10.00	0.90	1255	45.5	46.35	46	48	100	2.0	53.65	54.5	-71.4	171.1	56.6	0	0	88.55	0	31.95	0		
SA10	16.1	SMAW	3.2	Filarc 108MP	2F	NA	NA	160	23.5	NA	NA	NA	7.00	1.29	1254.4	116.55	117.4	120.2	124.15	185.75	3.95	68.35	69.2	-67.1	215.7	130.5	0	0	189.55	0	59.1	0		
SA11	19.1	SMAW	3.2	Filarc 108MP	3F-DWN	NA	NA	160	23.5	NA	NA	NA	10.00	0.90	1258.7	26.35	27.85	29.1	31.45	65.05	2.35	37.2	38.7	-99.0	150.1	39.5	0	0	66.65	0	27.15	0		
SA12	19.1	SMAW	3.2	Filarc 108MP	2F	NA	NA	160	23.5	NA	NA	NA	7.00	1.29	1258.5	40.6	41.7	43.8	47.7	97.65	3.9	55.95	57.05	-60.8	180.4	56.4	0	0	101.4	0	45	0		
SA13	6.4	P-GMAW	0.9	K-NOVA	3F-UP	C10	200	100	20.5	51	45	13	9.00	0.53	1256.5	36.45	37.1	37.6	45.8	182.55	8.2	145.45	146.1	-30.9	565.0	43.8	0	48.6	187.9	48.6	144.1	-24.1		
SA14	6.4	P-GMAW	0.9	K-NOVA	2F	C10	200	100	20.5	51	45	13	3.75	1.29	1094.3	44.5	45.05	46.95	57.6	232.25	10.65	187.2	187.75	-18.9	611.2	52.8	0	60.9	237.5	60.9	184.7	-15.9		
SA15	8	P-GMAW	0.9	K-NOVA	3F-UP	C10	200	100	20.5	51	45	13	9.00	0.53	1254.5	76.8	78.45	79.65	83.05	157.75	3.4	79.3	80.95	-65.2	372.1	87.5	0	0	160.7	0	73.2	0		
SA16	8	P-GMAW	0.9	K-NOVA	2F	C10	200	100	20.5	51	45	13	3.75	1.29	1254.3	61	63.85	65.35	68.7	171.7	3.35	107.85	110.7	-60.8	438.6	71.45	0	0	175.3	0	103.85	0		
SA17	11	P-GMAW	0.9	ER70XTi	3F-UP	C10	200	100	20.5	51	45	13	9.00	0.53	1071.1	32.6	33.05	34.15	37.05	94.05	2.9	61	61.45	-72.8	274.5	41.9	0	0	98.1	0	56.2	0		
SA18	11	P-GMAW	0.9	ER70XTi	2F	C10	200	100	20.5	51	45	13	3.75	1.29	1233.9	42.95	43.75	45.25	50.5	146.7	5.25	103	103.75	-46.4	317.8	55.5	0	0	150.9	0	95.4	0		
SA19	16.1	P-GMAW	0.9	ER70XTi	3F-UP	C10	200	100	20.5	51	45	13	9.00	0.53	1252.3	61.35	61.95	62.25	64	108.35	1.75	46.4	47	-80.6	160.8	74.8	0	0	87.8	0	13	0		
SA20	16.1	P-GMAW	0.9	ER70XTi	2F	C10	200	100	20.5	51	45	13	3.75	1.29	1251.8	169.7	170.75	175.6	245	485	4.85	75.3	76.8	-47.5	192.7	186.05	0	0	215.35	0	29.3	0		
SA21	19.1	P-GMAW	0.9	ER70XTi	3F-UP	C10	200	100	20.5	51	45	13	9.00	0.53	1257.4	31.85	33.35	34.45	36.5	67.1	2.05	33.75	35.25	-118.7	138.1	45.95	0	0	69.1	0	23.15	0		
SA22	19.1	P-GMAW	0.9	ER70XTi	2F	C10	200	100	20.5	51	45	13	3.75	1.29	1145.5	39.75	41.1	43	46.8	69.3	3.8	28.2	29.55	-73.3	136.3	53.15	0	0	66.3	0	13.15	0		
SA23	6.4	SS-FCAW	2.0	FABSHIELD 71K6	3F-DWN	NA	75	200	17.5	NA	NA	NA	19	6.50	1.29	1220.9	29.5	31.2	37.25	50.05	282	12.8	250.8	252.5	-18.4	825.7	37	0	52.45	289.55	52.45	252.55	0	
SA24	6.4	SS-FCAW	2.0	FABSHIELD 71K6	2F	NA	125	270	19	NA	NA	NA	19	6.00	1.99	1260.9	27.6	31.4	38.65	60.45	354	21.8	322.6	326.4	-9.7	952.5	34.95	0	62.95	349.4	62.95	314.45	-9.2	
SA25	8	SS-FCAW	2.0	FABSHIELD 71K6	3F-DWN	NA	75	200	17.5	NA	NA	NA	19	6.50	1.29	1112.8	26.6	27	30.25	44.35	237.45	14.1	210.45	210.85	-17.7	670.5	36.05	0	46.25	236.75	46.25	200.7	-15	
SA26	8	SS-FCAW	2.0	FABSHIELD 71K6	2F	NA	125	270	19	NA	NA	NA	19	6.00	1.99	1225.1	32.45	33.85	40	70.4	320	30.4	286.15	287.55	-30.6	828.8	45.85	49.2	0	0	-49.2	0	0	
SA27	11	SS-FCAW	2.0	FABSHIELD 81N2	3F-DWN	NA	75	200	17.5	NA	NA	NA	19	6.50	1.29	1152.6	25.25	27	27.85	32.85	153.9	5	126.9	128.65	-38.8	418.6	33.85	0	0	155.35	0	121.5	0	
SA28	11	SS-FCAW	2.0	FABSHIELD 81N2	2F	NA	125	270	19	NA	NA	NA	19	6.00	1.99	1255.9	25.3	26.85	27.5	39.2	218.2	11.7	191.35	192.9	-17.2	502.4	36.8	0	36.9	224.1	36.9	187.3	0	
SA29	16.1	SS-FCAW	2.0	FABSHIELD 81N2	3F-DWN	NA	75	200	17.5	NA	NA	NA	19	6.50	1.29	1252.5	59.05	60.2	65.35	70.35	189.35	5	129.15	130.3	-47.6	277.9	75.9	0	0	194.6	0	118.7	0	
SA30	16.1	SS-FCAW	2.0	FABSHIELD 81N2	2F	NA	125	270	19	NA	NA	NA	19	6.00	1.99	1250.3	32.3	32.95	33.25	38.7	171.15	5.45	138.2	138.85	-21.9	322.5	47.6	0	0	171.25	0	123.65	0	
SA31	19.1	SS-FCAW	2.0	FABSHIELD 81N2	3F-DWN	NA	75	200	17.5	NA	NA	NA	19	6.50	1.29	1255.7	52.95	56.4	58.7	62.75	159.5	4.05	103.1	106.55	-56.7	226.1	72.15	0	0	162.05	0	89.9	0	
SA32	19.1	SS-FCAW	2.0	FABSHIELD 81N2	2F	NA	125	270	19	NA	NA	NA	19	6.00	1.99	1258.3	25.3	26.05	28.55	34.9	141.45	6.35	115.4	116.15	-40.7	269.6	42.3	0	0	140.9	0	98.6	0	
SA33	6.4	GS-FCAW	1.2	DS II 71T-12	3F-UP	C25	325	200	25.5	NA	NA	NA	19	6.00	1.99	1259.1	27.35	28.05	33.5	54.9	300.55	21.4	272.5	273.2	-9.6	820.4	35.3	0	56.95	314.85	56.95	279.55	-10.4	
SA34	6.4	GS-FCAW	1.2	DS II 71T-12	2F	C25	360	220	26.5	NA	NA	NA	19	10.75	1.29	1120.5	22.3	22.6	25	33.3	213.65	8.3	191.05	191.35	-22.3	613.1	27.7	0	35.25	216	35.25	188.3	-20	
SA35	8	GS-FCAW	1.2	DS II 71T-12	3F-UP	C25	325	200	25.5	NA	NA	NA	19	6.00	1.99	1262.3	55.76	63.4	69.36	87.8	410	18.44	346.6	354.24	-18.5	725.3	58.92	0	78.2	343.16	78.2	284.24	0	