

Table 1: Experimental parameters

sample number	Analysis %					specimen mm thickness	pre-anneal hr 400°C	anneal		micrographs	SEMS	notes
	Si	Mn	P	S	Al			°C	hr			
2001						2.1	24	950	72	x		
2002	0.19	<0.03	0.016	0.017	0.002	2.2	"	"	144	x		
2011						--	"	"	72	x		
2012						--	"	"	144	x		
2101						2.6	"	"	72	x		
2102	"	"	"	"	"	2.6	"	"	144	x		
2111						--	"	"	72			
2112						--	"	"	144			
2201						2.8	"	"	72	x		
2202	"	"	"	"	"	3.1	"	"	144			
2211						--	"	"	72			
2212						--	"	"	144			
2301						4.0	"	"	72	x		
2302	"	"	"	"	"	3.9	"	"	144			
2311						--	"	"	72			
2312						--	"	"	144			
2401						2.5	"	"	72	x		
2402	0.17	<0.03	"	"	"	2.7	"	"	144			
2411						--	"	"	72	x		
2412						--	"	"	144			
2501						2.7	"	"	72	x		
2502	"	0.11	"	"	"	2.7	"	"	144			
2511						--	"	"	72	x		
2512						--	"	"	144			
2601						3.1	"	"	72	x		
2602	"	0.22	"	"	"	3.0	"	"	144			
2611						--	"	"	72	x		
2612						--	"	"	144			
2701						2.8	"	"	72	x		
2702	"	0.32	"	"	"	2.8	"	"	144			
2711						--	"	"	72	x		
2712						--	"	"	144			
2801						2.5	"	"	72	x	x	
2802	0.10	<0.03	"	"	0.00	2.8	"	"	144			
2811						--	"	"	72	x	x	
2812						--	"	"	144			
2901						2.5	"	"	72	x		
2902	0.20	"	"	"	0.002	2.7	"	"	144			
2911						--	"	"	72	x		
2912						--	"	"	144			
3001						2.6	"	"	72	x		
3002	0.47	"	"	"	0.009	3.0	"	"	144			
3011						--	"	"	72	x		
3012						--	"	"	144			
3101						2.8	"	"	72	x		
3102	1.0	"	"	"	0.02	2.7	"	"	144			
3111						--	"	"	72			grey-cast
3112						--	"	"	144			grey-cast

	Si	Mn	P	S	Al	mm	hr	°C	hr			notes
3601						2.0	24	1000	72	x		
3602	0.20	<0.03	0.016	0.017	0.002	2.2	0	950	144	x		
3611						--	24	1000	72	x		
3612						--	0	950	144	x		
3701						2.4	24	1000	72	x		
3702	"	"	"	"	"	2.6	0	950	144	x		
3711						--	24	1000	72			
3712						--	0	950	144	x		
3801						2.1	24	900	144	x		
3802	"	"	"	"	"	2.2	0	950	144			
3811						--	24	900	144	x		
3812						--	0	950	144			
3901						2.5	24	900	144	x		
3902	"	"	"	"	"	2.4	0	950	144			
3911						--	24	900	144			
3912						--	0	950	144			
4001						3.1	24	950	72	x		
4002	0.25	"	"	0.07	"	3.4	"	"	144			
4011						--	"	"	72	x		
4012						--	"	"	144			
4101						2.7	"	"	72	x		
4102	"	"	"	0.12	"	2.8	"	"	144			
4111						--	"	"	72	x		
4112						--	"	"	144			
4201						2.6	"	"	72	x		
4202	"	"	"	0.22	"	3.0	"	"	144			
4211						--	"	"	72	x		
4212						--	"	"	144			
4301						2.9	"	"	72	x	x	
4302	"	"	"	>0.3	"	2.8	"	"	144			
4311						--	"	"	72	x	x	
4312						--	"	"	144			
4401						2.0	"	"	72	x		
4402	0.22	0.08	"	0.017	"	2.4	"	"	144			
4411						--	"	"	72	x		
4412						--	"	"	144			
4501						2.0	"	"	72	x	x	
4502	"	0.17	"	"	"	--	"	"	144			
4511						--	"	"	72	x	x	
4512						--	"	"	144			
4601						2.2	"	"	72	x		
4602	"	0.27	"	"	"	2.6	"	"	144			
4611						--	"	"	72	x		
4612						--	"	"	144			
4701						2.2	"	"	72	x		
4702	"	0.34	"	"	"	2.3	"	"	144			
4711						--	"	"	72	x		
4712						--	"	"	144			

	Si	Mn	P	S	Al	mm	hr	°C	hr			notes
5201						2.1	24	950	71	x	x	
5203	0.32	<0.03	0.09	0.017	0.002		"	"	0			
5211						--	"	"	71	x	x	
5213						--	"	"	0			
5301						2.2	"	"	71	x		
5303	"	"	0.17	"	"		"	"	0			
5311						--	"	"	71	x		
5313						--	"	"	0			
5401						2.1	"	"	71	x		
5403	"	"	0.27	"	"		"	"	0			
5411						--	"	"	71	x		
5413						--	"	"	0			
5501						2.1	"	"	71	x	x	
5503	"	"	0.35	"	"		"	"	0			
5511						--	"	"	71	x	x	
5513						--	"	"	0			
5601						1.8	"	"	71	x	x	
5603	0.23	"	0.016	"	"		"	"	0			
5611						--	"	"	71	x	x	
5613						--	"	"	0			
5701	"	"	"	"	"	2.1	"	"	71	x	x	
5703							"	"	0			
5801	"	"	"	"	"	3.0	"	"	71	x	x	
5803							"	"	0			
5901	"	"	"	"	"		"	"	71	x	x	
5903							"	"	0			
6011	"	"	"	"	"	sand-	"	"	71	x	x	
6013						cast	"	"	0			