

ADDITIONAL DATA USED OR CALCULATED IN THE PAPER

Material	Process	ε	f	K (MPa)	d meas
Al-Zr-Fe-Si	ECAP - 4 pass	4.2	0.006	238	1626
Al-Zr-Fe-Si	ECAP - 8 pass	8.4	0.006	238	1164
Al-Zr	ECAP - 4 pass	4.2	0.001	230	1890
Al-Zr	ECAP - 8 pass	8.4	0.001	230	1178
Al-7Si	ECAP - 10 pass	5.5	0.010	327	500
Al-7Si	ECAP - 10 pass	7	0.010	327	450
Al7034	ECAP - 4 pass	4	0.015	366	700
Al7034	ECAP - 6 pass	6	0.015	366	300
Al-5wt%TiB ₂	ECAP	4	0.030	252	500
Al-5Fe	ECAP - 8 pass	8.8	0.060	312	400
Al-5Fe	ECAP - 16 pass	17.6	0.060	312	200
Al-5.9Mg-0.3Sc	HPT	7.4	0.004	821	60
Al-4Mg-0.3Sc	HPT	6.3	0.004	711	100
Al-4Cu	ECAP - 4 pass	2.68	0.052	662	400
Al-3Mg-0.3Mn	HPT 1 turn	4.1	0.004	624	280
Al-3Mg	ECAP - 8 pass	8.4	0.001	643	161
Al-3Mg	ECAP - 4 pass	4.2	0.001	643	146
Al-3Mg	HPT	8	0.001	643	90
Al-3004	ECAP	8	0.030	483	220
Al-3.6Mg	ECAP - 8 pass	6.7	0.001	685	224
Al-3%Mg-0.2% Zr	ECAP - 8 pass	8.05	0.007	643	137
Al-3%Mg-0.2%Sc-0.12%Zr	ECAP - 8 pass	8	0.007	643	133
Al-1Mg	ECAP - 6 pass	6	0.000	457	346
Al1050	ECAP - 4 pass	4	0.008	258	1467
Al1050	HPT - 2 turns	4.9	0.010	266	960
Al1050	HPT - 5 turns	5.3	0.010	266	620
Al1050	ECAP - 8 pass	8.4	0.008	258	556
Al1050	HPT - 5 turns	5.9	0.010	266	550
Al1050	ECAP - 12 pass	12.6	0.008	258	538
Al-0.5Si	ECAP - 10 pass	7	0.005	291	750
Al-0.2Zr	ECAP - 8 pass	8.4	0.001	230	700
Al 96%	ECAP	3	0.064	364	670
Al 96%	ECAP	4	0.064	364	640
Al 96%	ECAP	8	0.064	364	380
Al 1100	ECAP	6	0.012	272	800
2024	HPT - 5 pass	5.8	0.008	407	550
2024	ECAP - 4 pass	4.2	0.008	407	464
2024	ECAP - 8 pass	8.4	0.008	407	313

Table A: Equivalent strain, volume fraction of intermetallic phases, predicted K_A and measured grain size for SPD Al alloys.