

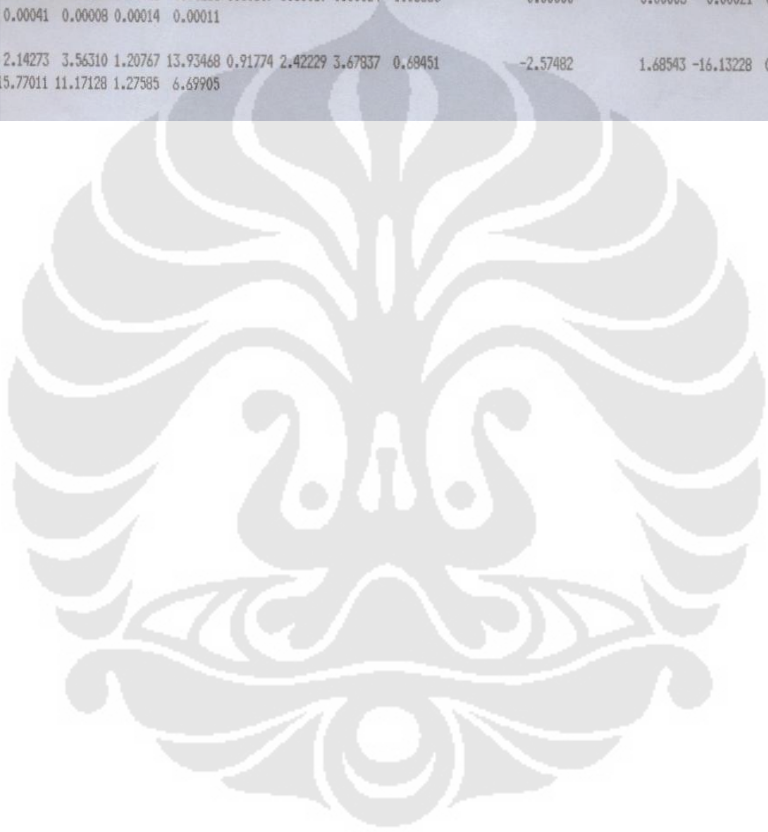
LAMPIRAN



Lampiran 1

Hasil Uji Spektrometer 0 wt% Sr

Run	Fe7 P1	Cu Sb5	Mn Sr	Hg V3	Zn Zr3	Ti4	Cr1	Mi6	Si	Al3	Be3	Bp1	Ca3	Co1	AL%	Li2	Na1
1>	0.28884 0.00401	2.86584 -0.00233	0.03286 0.00077	0.78202 0.01081	0.01840 0.00165	0.17250	0.00802	0.01780	12.27981	115.44800	(-0.00005	32.09600	0.00162	(-0.00113	83.5184	(-0.00032	0.00042
2>	0.28733 0.00391	2.78030 -0.00292	0.03125 0.00066	0.76878 0.01062	0.01510 0.00150	0.17027	0.00775	0.01690	12.16151	119.09400	(-0.00005	35.66600	0.00158	(-0.00142	83.7470	(-0.00040	0.00037
Avg	0.28809 0.00396	2.82307 -0.00263	0.03206 0.00072	0.77540 0.01072	0.01675 0.00157	0.17138	0.00788	0.01735	12.22066	117.27100	(-0.00005	33.88100	0.00160	(-0.00127	83.6327	(-0.00036	0.00039
Sd	0.00107 0.00007	0.06049 0.00041	0.00114 0.00008	0.00936 0.00014	0.00233 0.00011	0.00157	0.00019	0.00064	0.08365		0.00000		0.00003	0.00021	0.1616	0.00006	0.00003
Sd%	0.37275 1.70857	2.14273 -15.77011	3.56310 11.17128	1.20767 1.27585	13.93468 6.69905	0.91774	2.42229	3.67837	0.69451		-2.57482		1.68543	-16.13228	0.1932	-17.05991	8.70648



Lampiran 2

Hasil Uji Spektrometer 0,0075 wt% Sr

Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bq1	Ca3	Co1	AL%	Li2	Na1
1)	0.27369 0.00423	2.74638 -0.00135	0.03285 0.00666	0.83010 0.01143	0.01532 0.00154	0.17737	0.00672	0.01595	12.89893	124.23000	(-0.00005	41.51400	0.00104	0.00027	82.9792	(-0.00037	0.00009
2)	0.29629 0.00444	2.94220 0.00021	0.03611 0.00705	0.88224 0.01152	0.01786 0.00168	0.17665	0.00727	0.01772	12.60226	122.74400	(-0.00004	40.84100	0.00114	0.00045	82.9952	(-0.00035	0.00011
Avg	0.28499 0.00433	2.84429 -0.00057	0.03448 0.00685	0.85617 0.01148	0.01659 0.00161	0.17701	0.00699	0.01684	12.75060	123.48700	(-0.00005	41.17750	0.00109	0.00036	82.9872	(-0.00036	0.00010
Sd	0.01598 0.00015	0.13847 0.00110	0.00231 0.00027	0.03686 0.00006	0.00180 0.00010	0.00051	0.00039	0.00125	0.20978		0.00000		0.00007	0.00012	0.0113	0.00001	0.00001
Sd%	5.60797 3.41552	4.84824 -193.64601	6.68904 3.98225	4.30556 0.54826	10.84399 6.30697	0.28887	5.51438	7.44165	1.64523		-1.64588		6.41480	34.72549	0.0137	-2.28567	11.56002

Run	Fe7 Sb5	Cu Sr	Mn V3	Mg Zr3	Zn	Ti4	Cr1	Ni6	Si	Al3	Be3	Bq1	Ca3	Co1	AL%	Li2	Na1	P1
1)	0.27411 -0.00136	2.81906 0.00670	0.03263 0.01127	0.83584 0.00156	0.02117	0.17497	0.00675	0.01645	12.60919	123.38600	(-0.00005	40.03800	0.00104	0.00005	83.1868	(-0.00036	0.00012	0.00410
2)	0.29157 -0.00144	2.86755 0.00692	0.03501 0.01133	0.86178 0.00162	0.01966	0.17491	0.00693	0.01713	12.79602	123.91500	(-0.00005	40.63200	0.00109	0.00012	82.9059	(-0.00033	0.00013	0.00411
Avg	0.28284 -0.00140	2.84330 0.00681	0.03382 0.01130	0.84881 0.00159	0.02042	0.17494	0.00684	0.01679	12.70260	123.65050	(-0.00005	40.33500	0.00106	0.00008	83.0463	(-0.00034	0.00012	0.00411
Sd	0.01234 0.00006	0.03429 0.00016	0.00169 0.00004	0.01834 0.00004	0.00107	0.00004	0.00013	0.00048	0.13211		0.00000		0.00004	0.00005	0.1986	0.00002	0.00001	0.00001
Sd%	4.34452 -4.00857	1.20596 2.36683	4.98377 0.39009	2.16108 2.65717	5.25401	0.02330	1.91793	2.85607	1.03999		-0.87075		3.56894	60.47259	0.2391	-5.77229	6.26629	0.19602

Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bq1	Ca3	Co1	AL%	Li2	Na1
1)	0.27461 0.00444	2.72712 -0.00000	0.03155 0.00613	0.81229 0.01129	0.01885 0.00158	0.17357	0.00680	0.01630	12.66251	127.38900	(-0.00005	39.13200	0.00110	(-0.00023	83.2488	(-0.00033	0.00016
2)	0.27373 0.00440	2.73058 -0.00102	0.03201 0.00609	0.81070 0.01122	0.01902 0.00154	0.17659	0.00669	0.01612	12.83055	130.09600	(-0.00005	38.47900	0.00110	(-0.00024	83.0808	(-0.00029	0.00021
Avg	0.27517 0.00434	2.72885 -0.00091	0.03178 0.00611	0.81149 0.01123	0.01895 0.00157	0.17608	0.00674	0.01621	12.74668	131.33749	(-0.00005	38.80350	0.00110	(-0.00024	83.1648	(-0.00031	0.00019
Sd	0.00201 0.00001	0.00245 0.00015	0.00032 0.00003	0.00113 0.00002	0.00010 0.00002	0.00072	0.00000	0.00013	0.11861		0.00000		0.00000	0.00001	0.1188	0.00003	0.00003
Sd%	0.73866 1.77521	0.08949 -16.88251	1.01285 0.43281	0.13865 0.19292	0.51641 1.07100	0.41007	1.14041	0.78701	0.93053		-0.39019		0.08420	-3.32432	0.1428	-8.25803	18.01490

Lampiran 3

Hasil Uji Spektrometer 0,015 wt% Sr

Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bg1	Ca3	Co1	AL%	Li2	Na1
1>	0.27007 0.00449	2.74672 -0.00503	0.03005 0.01318	0.78639 0.00988	0.01887 0.00144	0.16271	0.00603	0.01599	12.28813	108.99700	(-0.00005	31.22000	0.00097	(-0.00249	83.6528	(-0.00029	0.00017
2>	0.28721 0.00473	2.82863 -0.00827	0.03130 0.01329	0.77130 0.00918	0.02676 0.00158	0.15688	0.00554	0.01697	12.29363	98.16700	(-0.00005	24.70500	0.00086	(-0.00411	83.5644	(-0.00000	0.00022
Avg	0.27864 0.00461	2.78767 -0.00665	0.03068 0.01323	0.77885 0.00953	0.02282 0.00151	0.15980	0.00578	0.01648	12.29088	103.58200	(-0.00005	27.96250	0.00091	(-0.00330	83.6086	(-0.00015	0.00019
Sd	0.01212 0.00017	0.05792 0.00229	0.00088 0.00067	0.01067 0.00094	0.00558 0.00009	0.00412	0.00034	0.00070	0.00389		0.00000		0.00008	0.00114	0.0625	0.00020	0.00004
Sd%	4.34851 3.69552	2.07768 -34.46943	2.87137 0.56146	1.37011 5.18557	24.44227 6.28269	2.57558	5.92519	4.22811	0.03165		-1.94689		8.43032	-34.60870	0.0748	-138.31641	19.39824

Run	Fe7 Sb5	Cu Sr	Mn V3	Mg Zr3	Zn	Ti4	Cr1	Ni6	Si	Al3	Be3	Bg1	Ca3	Co1	AL%	Li2	Na1	P1
1>	0.25967 -0.00429	2.66682 0.01730	0.02900 0.01009	0.77051 0.00131	0.01487	0.16707	0.00577	0.01496	12.44246	116.17400	(-0.00005	34.03400	0.00106	(-0.00207	83.6009	(-0.00047	0.00017	0.00494
2>	0.26670 -0.00426	2.70004 0.01709	0.03021 0.01037	0.78441 0.00135	0.01850	0.16916	0.00592	0.01522	12.62127	116.29000	(-0.00005	34.86000	0.00107	(-0.00173	83.3604	(-0.00043	0.00016	0.00460
Avg	0.26319 -0.00428	2.68343 0.01720	0.02960 0.01023	0.77746 0.00133	0.01669	0.16812	0.00584	0.01509	12.53187	116.23200	(-0.00005	34.44700	0.00106	(-0.00190	83.4806	(-0.00045	0.00017	0.00477
Sd	0.00497 0.00003	0.02349 0.00015	0.00086 0.00020	0.00983 0.00003	0.00256	0.00148	0.00010	0.00018	0.12643		0.00000		0.00001	0.00024	0.1701	0.00003	0.00000	0.00025
Sd%	1.88923 -0.58762	0.87541 0.85069	2.90158 1.94829	1.26465 2.40135	15.36389	0.88027	1.71566	1.21160	1.00889		-1.05121		1.12224	-12.87048	0.2037	-6.68358	2.42360	5.14443

Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bg1	Ca3	Co1	AL%	Li2	Na1
1>	0.28884 0.00401	2.86584 -0.00233	0.03286 0.00077	0.78202 0.01081	0.01840 0.00165	0.17250	0.00802	0.01780	12.27981	115.44800	(-0.00005	32.09600	0.00162	(-0.00113	83.5184	(-0.00032	0.00042
2>	0.28733 0.00391	2.78030 -0.00292	0.03125 0.00066	0.76878 0.01062	0.01510 0.00150	0.17027	0.00775	0.01690	12.16151	119.09400	(-0.00005	35.66600	0.00158	(-0.00142	83.7470	(-0.00040	0.00037
Avg	0.28809 0.00396	2.82307 -0.00263	0.03206 0.00072	0.77540 0.01072	0.01675 0.00157	0.17138	0.00788	0.01735	12.22066	117.27100	(-0.00005	33.88100	0.00160	(-0.00127	83.6327	(-0.00036	0.00039
Sd	0.00107 0.00007	0.06049 0.00041	0.00114 0.00008	0.00936 0.00014	0.00233 0.00011	0.00157	0.00019	0.00064	0.08365		0.00000		0.00003	0.00021	0.1616	0.00006	0.00003
Sd%	0.37275 1.70857	2.14273 -15.77011	3.56310 11.17128	1.20767 1.27585	13.93468 6.69905	0.91774	2.42229	3.67837	0.68451		-2.57482		1.68543	-16.13228	0.1932	-17.05991	8.70648

Lampiran 4

Hasil Uji Spektrometer 0,03 wt% Sr

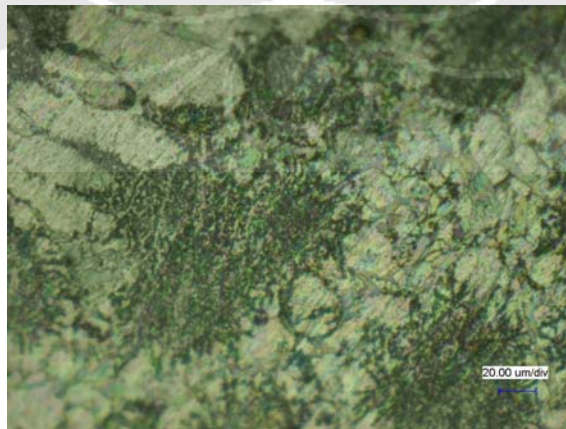
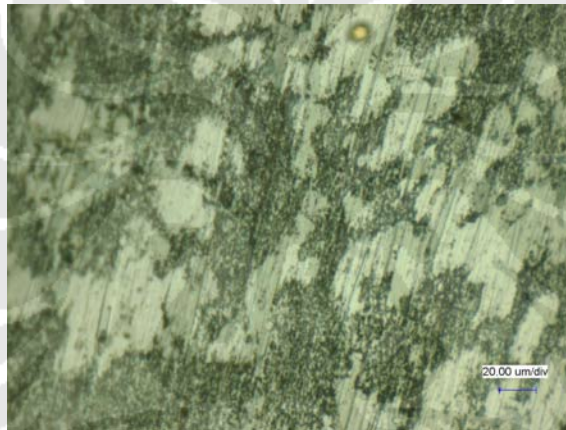
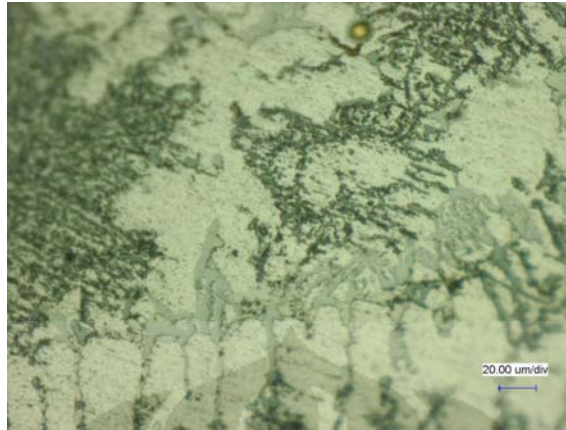
Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bg1	Ca3	Co1	AL%	Li2	Na1
1>	0.29336 0.00542	2.80686 -0.00678	0.03266 0.03579	0.78155 0.00995	0.01935 0.00154	0.16691	0.00655	0.01708	12.57487	99.67100	(-0.00005	16.18900	0.00143	(-0.00294	83.2562	(-0.00012	0.00036
2>	0.28146 0.00622	2.76680 -0.00418	0.03084 0.03689	0.79837 0.01051	0.01564 0.00150	0.16972	0.00696	0.01671	12.42193	114.27600	(-0.00005	32.13500	0.00171	(-0.00169	83.4405	(-0.00037	0.00057
Avg	0.28741 0.00582	2.78683 -0.00548	0.03175 0.03634	0.78996 0.01023	0.01749 0.00152	0.16831	0.00676	0.01689	12.49840	106.97350	(-0.00005	24.16200	0.00157	(-0.00232	83.3484	(-0.00024	0.00046
Sd	0.00841 0.00056	0.02833 0.00184	0.00128 0.00078	0.01190 0.00040	0.00262 0.00003	0.00199	0.00029	0.00026	0.10814		0.00000		0.00019	0.00088	0.1303	0.00017	0.00014
Sd%	2.92573 9.64250	1.01640 -33.53186	4.03773 2.13936	1.50597 3.88321	14.98665 2.22245	1.18168	4.31820	1.55197	0.86527		-2.53968		12.37564	-38.06030	0.1563	-71.88144	30.85469

Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bg1	Ca3	Co1	AL%	Li2	Na1
1>	0.28196 0.00471	2.84674 -0.00222	0.03174 0.03151	0.78967 0.01086	0.01813 0.00153	0.17353	0.00753	0.01701	12.23880	123.07000	(-0.00005	38.45800	0.00153	(-0.00068	83.5478	(-0.00045	0.00036
2>	0.28083 0.00465	2.75860 -0.00054	0.03277 0.03178	0.78197 0.01158	0.02231 0.00164	0.18168	0.00787	0.01684	12.75095	122.05500	(-0.00005	39.82900	0.00160	0.00022	83.1152	(-0.00028	0.00036
Avg	0.28140 0.00468	2.80267 -0.00138	0.03226 0.03164	0.78882 0.01122	0.02022 0.00158	0.17761	0.00770	0.01693	12.49487	122.56250	(-0.00005	39.14350	0.00156	(-0.00023	83.3315	(-0.00036	0.00036
Sd	0.00080 0.00004	0.06232 0.00119	0.00073 0.00051	0.00544 0.00008	0.00296 0.00008	0.00576	0.00024	0.00012	0.36215		0.00000		0.00005	0.00063	0.3059	0.00012	0.00000
Sd%	0.28467	2.22366	2.26451	0.69235	14.42859	7.24230	3.08740	0.69041	2.88937		-3.14800		2.97410	-274.84397	0.3471	-72.15724	1.21754

Run	Fe7 P1	Cu Sb5	Mn Sr	Mg V3	Zn Zr3	Ti4	Cr1	Ni6	Si	Al3	Be3	Bg1	Ca3	Co1	AL%	Li2	Na1
1>	0.26164 0.00475	2.58529 -0.00440	0.02800 0.03783	0.70993 0.01030	0.01756 0.00133	0.17130	0.00675	0.01514	12.45386	116.83500	(-0.00005	34.48800	0.00154	(-0.00205	83.7012	(-0.00046	0.00057
2>	0.26644 0.00572	2.67028 -0.00315	0.02887 0.03697	0.73542 0.01017	0.02013 0.00133	0.16804	0.00687	0.01573	12.25108	117.69400	(-0.00005	32.86400	0.00154	(-0.00199	83.7867	(-0.00045	0.00038
Avg	0.26404 0.00524	2.62778 -0.00378	0.02843 0.03740	0.72267 0.01023	0.01884 0.00133	0.16967	0.00681	0.01543	12.35247	117.26450	(-0.00005	33.67600	0.00154	(-0.00202	83.7439	(-0.00046	0.00047
Sd	0.00339 0.00068	0.06010 0.00089	0.00061 0.00061	0.01802 0.00010	0.00181 0.00000	0.00231	0.00009	0.00042	0.14339		0.00000		0.00000	0.00005	0.0605	0.00000	0.00013
Sd%	1.28431 12.98824	2.28699 -23.55326	2.14691 1.62778	2.49390 0.93703	9.62987 0.03259	1.35992	1.24913	2.70266	1.16082		-0.26271		0.21663	-2.29742	0.0722	-0.97939	28.36814

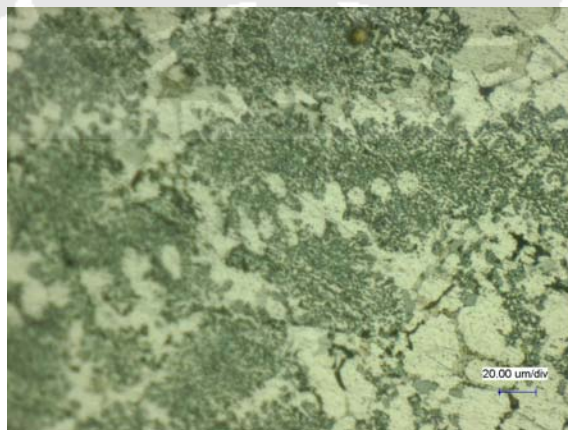
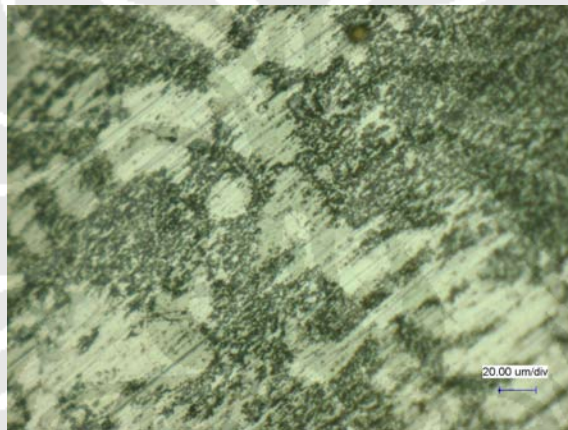
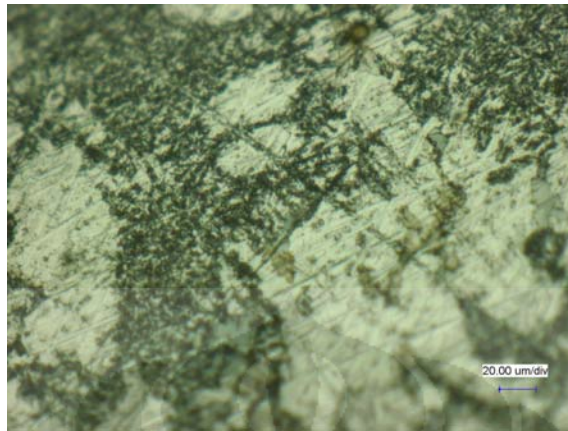
Lampiran 5

Hasil Uji Mikrostruktur 0,0075 wt% Sr (1000x)



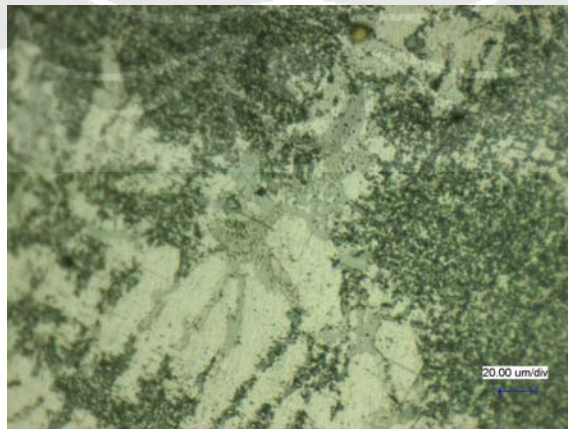
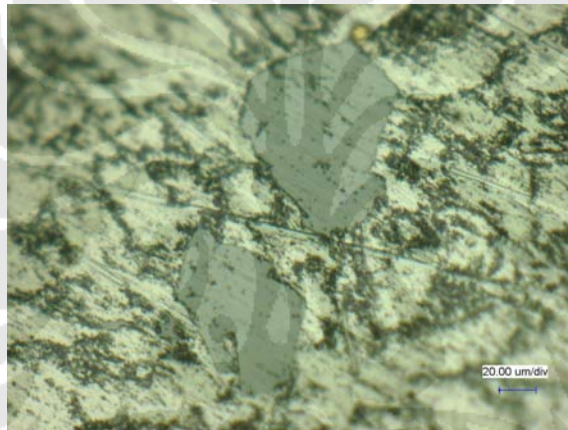
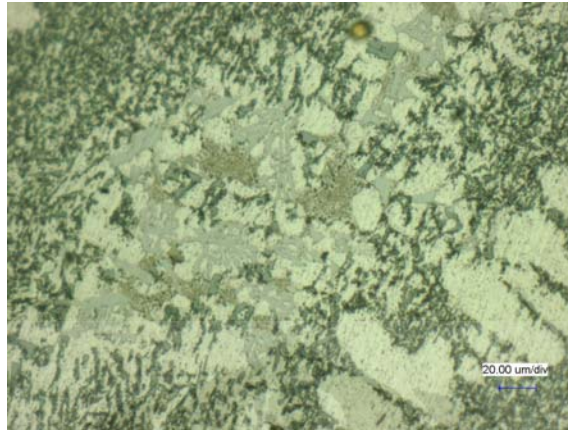
Lampiran 6

Hasil Uji Mikrostruktur 0,015 wt% Sr (1000x)



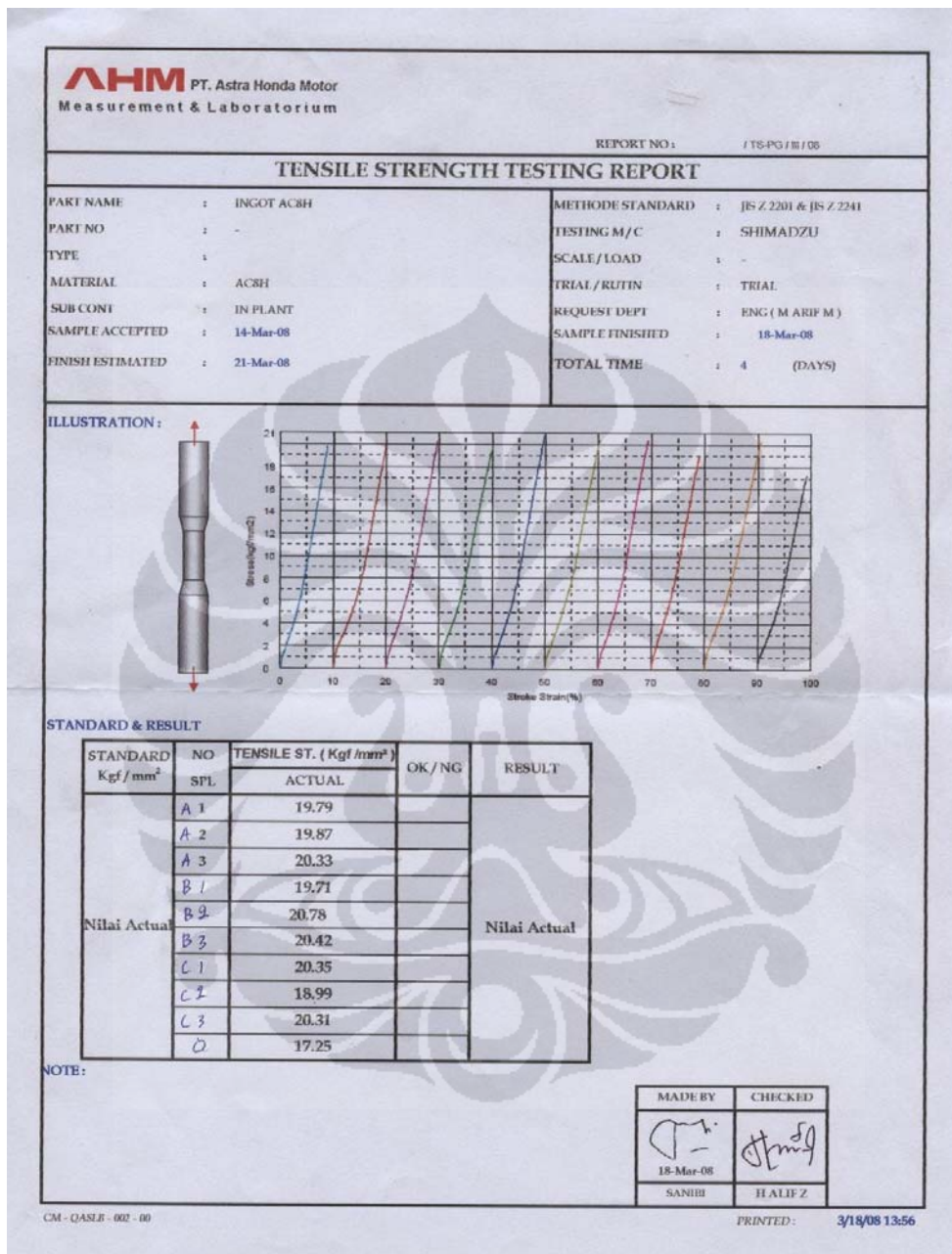
Lampiran 7

Hasil Uji Mikrostruktur 0,03 wt% Sr (1000x)



Lampiran 8

Hasil Uji Tarik semua Variabel



Lampiran 9

Hasil Uji Kekerasan

NO	SAMPEL	KADAR Sr	TITIK					AVERAGE
			1	2	3	4	5	
1	A1	0,01%	49,2	48,7	49,8	50,9	47,2	49,16
2	A2		50,3	48,2	50,3	47,6	49,1	49,1
3	A3		48,8	50,2	49,8	47,9	50,3	49,4
4	B1	0,02%	50,4	52,4	50,8	52,1	50,8	51,3
5	B2		50,2	48,9	51,3	47,9	53,4	50,34
6	B3		54,2	47,8	49,2	50,8	52,1	50,82
7	C1	0,03%	60,3	62,1	59,3	64,1	58,3	60,95
8	C2		57,6	64,9	61,2	62,3	63,2	61,84
9	C3		59,3	56,4	60,3	62,1	61,9	59,925
10	O	0%	44,2	41,4	42,3	40,9	44,7	42,7

Lampiran 10
Hasil Uji Keausan

Besar Celah Terabrasif

Variabel/Sampel	Sampel O	Sampel C
Variabel a	4,88	4,22
Variabel b	4,99	4,471

Besar Laju Keausan

Variabel/Sampel	Sampel O	Sampel C
Variabel a	0,0000097	0,00000615
Variabel b	0,00002071	0,0000149

Lampiran 11
Tabel Kondisi Proses Casting

PERCOBAAN	VARIABEL 1			VARIABEL 2			VARIABEL 3		
	1	2	3	1	2	3	1	2	3
Temperatur Penambahan	708	708	708	708	708	708	708	708	708
Waktu Tahan	1:30	1:30	1:30	1:30	7	2	2	1:30	1:30
Temperatur Tuang	796	706	706	706	706	709	710	711	711
Waktu Solidifikasi	1	1	1	1	1	1	1	1	1
Waktu Tuang	40	32	60	28	50	35	35	40	30

