



Lampiran 1 Data Pengujian Komposisi.



Department of Metallurgy and Materials Engineering
UNIVERSITY OF INDONESIA

CHEMICAL COMPOSITION TEST REPORT

Contract No. / No. Kontrak :

Standards / Standar : ASTM A751

Customer / Pemberi Kerja : Maro

Materials / Material : Cast Iron

	Fe	C	Si	Mn	P	S	Cr	Mo
1	94.6	3.25	1.23	0.337	0.0207	0.0396	0.0316	< 0.0050
2	94.4	3.14	1.46	0.392	0.0207	0.0580	0.0314	< 0.0050
3	94.4	3.14	1.49	0.404	0.0181	0.0609	0.0284	< 0.0050
Ave	94.4	3.18	1.40	0.377	0.0198	0.0529	0.0305	< 0.0050

	Ni	Al	Co	Cu	Mg	Nb	Ti	V
1	< 0.0050	0.0059	< 0.0050	0.328	0.0014	0.0043	0.0035	0.0051
2	< 0.0050	0.0048	< 0.0050	0.312	0.0012	0.0028	0.0039	0.0045
3	< 0.0050	0.0044	< 0.0050	0.315	0.0013	0.0044	0.0057	0.0044
Ave	< 0.0050	0.0050	< 0.0050	0.318	0.0013	0.0038	0.0044	0.0047

	Pb	Sn	B	Zr	As	Zn
1	< 0.0500	0.0561	0.0074	0.0037	0.0110	0.0189
2	< 0.0500	0.0583	0.0110	< 0.0030	0.0156	0.0234
3	< 0.0500	0.0540	0.0100	< 0.0030	0.0130	0.0192
Ave	< 0.0500	0.0562	0.0095	0.0030	0.0132	0.0205

Datum / date
3/6/2008

Tested by / Diuji oleh :
Deni

Approved by / Disetujui oleh :
Jaya

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Lampiran 2 Data pengujian kekerasan Sampel Awal

Penjejukan	Hardness Brinell (BHN)	Rata-rata (BHN)	Tensile Strength (Ksi)
1	355	352	171
2	327		
3	344		
4	365		
5	369		

Lampiran 3 Data pengujian Kekerasan Hasil Perlakuan Panas.

No. Jejak	x	y	d	BHN
100 10 menit	1.108	1.141	1.1245	282.7093
	1.093	1.094	1.0935	293.5828
	1.146	1.131	1.1385	278.0869
	1.072	1.108	1.09	294.8689
	Rata-rata			287.312
100 20 menit	1.142	1.171	1.1565	272.3883
	1.16	1.178	1.169	268.5845
	1.106	1.117	1.1115	287.1587
	1.094	1.109	1.1015	290.6888
	Rata-rata			278.0875
100 30 menit	1.221	1.174	1.1975	260.3522
	1.159	1.125	1.142	276.9577
	1.13	1.114	1.122	283.553
	1.226	1.168	1.197	260.4916
	Rata-rata			270.3386
100 60 menit	1.241	1.239	1.24	249.112
	1.18	1.19	1.185	263.8899
	1.156	1.141	1.1485	274.888
	1.168	1.21	1.189	262.7457
	Rata-rata			260.3522
200 10 menit	1.174	1.149	1.1615	270.852
	1.131	1.14	1.1355	279.0631
	1.142	1.133	1.1375	278.4114
	1.16	1.122	1.141	277.2793
	Rata-rata			282.5413
200 20 menit	1.127	1.123	1.125	282.5413
	1.189	1.173	1.181	265.0457
	1.137	1.125	1.131	280.5419
	1.145	1.153	1.149	274.7302
	Rata-rata			271.9253
200 30 menit	1.162	1.16	1.161	271.0048
	1.175	1.141	1.158	271.9253
	1.223	1.201	1.212	256.3845
	Rata-rata			265.0457

200 60menit	1.157	1.16	1.1585	271.7714
	1.217	1.207	1.212	256.3845
	1.198	1.189	1.1935	261.4722
	Rata-rata			253.2067
	1.259	1.24	1.2495	246.7546
800 10 menit	1.157	1.226	1.1915	262.0364
	1.242	1.204	1.223	253.468
	1.169	1.158	1.1635	270.2431
	Rata-rata			270.2435
	1.206	1.211	1.2085	257.3292
800 20 menit	1.148	1.153	1.1505	274.2582
	1.205	1.218	1.2115	256.5189
	1.154	1.145	1.1495	274.5727
	Rata-rata			263.6697
	1.214	1.185	1.1995	259.7964
800 30 menit	1.187	1.1196	1.1533	273.3819
	1.239	1.231	1.235	250.3745
	1.214	1.158	1.186	263.6028
	1.223	1.205	1.214	255.8483
	Rata-rata			257.3298
	1.178	1.161	1.1695	268.4349
800 60 menit	1.198	1.211	1.2045	258.4189
	1.197	1.22	1.2085	257.3292
	1.209	1.214	1.2115	256.5189
	1.204	1.244	1.224	253.2067
	Rata-rata			249.1127

Lampiran 4 Foto Posisi Patahan Gardan dan Pecahan



Lampiran 5 Foto SEM Patahan Getas Dibagian Depan Gardan





