



LAMPIRAN A

HASIL UJI KOMPOSISI SPESIMEN

A.1 Gambar hasil uji komposisi kimia baja *Mild Steel* ASTM A36



PT. ITOKOH CEPERINDO
Stainless Steel & Alloy Casting



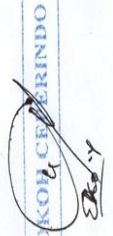
COMPANY :		PT. ITOKOH CEPERINDO									
SAMPLE NAME :		SAMPLE PLATE									
CUSTOMER :		UNIV WAHID HASYIM									
FURNACE :		VD0301A01/307									
OPERATOR :		WENDY									
DATE / TIME :		03-MAY-2017 09:44:22									
TASK :		Cenc_Fei METHOD : FESLFE									

Fe#	S	Al	C	Ni	Nb	Si	Cr	V
1	99.6111	0.0128	0.0389	0.0320	0.0025	0.0075	0.0169	0.0000
2	99.6168	0.0126	0.0375	0.0327	0.0028	0.0073	0.0153	0.0000
AVG	99.6139	0.0127	0.0382	0.0324	0.0031	0.0074	0.0161	0.0000
SD	0.0080#	0.00011	0.00096	0.00045	0.000#	0.00020	0.0015	0.0000
SD#	0.00	0.90	2.52	1.47	61.99	2.05	6.92	8.10

Mr	Mo	W	P	Cu	Ti	N	B	Bb
1	0.2217	-0.0018	-0.0014	0.0136	0.0110	0.0008	0.0170	0.0002
2	0.2212	-0.0021	-0.0013	0.0134	0.0106	0.0008	0.0166	0.0002
AVG	0.2214	-0.0019	-0.0014	0.0135	0.0108	0.0008	0.0168	0.0002
SD	0.00035	0.00020	0.00011	0.00011	0.00026	0.00001	0.0002#	0.0000
SD#	0.16	10.60	8.01	0.79	2.38	1.12	1.8#	17.81

Sb	Ca	Mg	Zn	Co
1	0.0043	0.0001	-0.0003	0.0011
2	0.0040	0.0000	-0.0003	0.0011
AVG	0.0041	0.0000	-0.0003	0.0011
SD	0.00021	0.00003	0.00002	0.00001
SD#	5.21	63.01	7.9#	0.58

PT. ITOKOH CEPERINDO



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JAPAN OFFICE

LAMPIRAN B

PERHITUNGAN LAJU KOROSI BAJA ASTM A36 YANG DICELUP PADA LARUTAN ASAM KLOORIDA HCL 10%

B.1 Rumus-rumus perhitungan korosi

1. Cara menentukan kehilangan berat spesimen (W)

$$W = W_o - W_i$$

2. Menentukan luas penampang spesimen uji

$$2 \times p \times l \times t$$

3. Rumus menentukan laju korosi: $CR = \frac{K \times W}{A \times T \times D}$

Dimana:

W : Berat yang hilang (g)

W_o : Berat awal (g)

W_i : Berat Akhir (g)

CR : Laju korosi (mm/ tahun)

K : Konstanta baja $8,76 \times 10^4$ mm/tahun

A : Luas (cm²)

T : Waktu (jam)

D : *Density* untuk baja 7,86 (g/cm³)

P : Panjang (cm)

L : Lebar (cm)

T : Tinggi (cm)

B.2 Perhitungan laju korosi

Diketahui:

$$K : 8,76 \times 10^4$$

$$W : (W_o - W_i) 127,07 - 126,76 = 0,31 \text{ g}$$

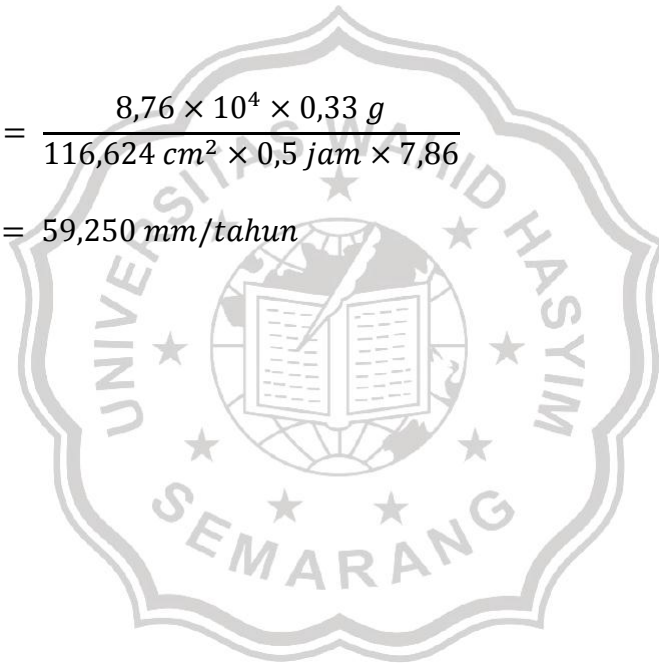
$$A : 116,624 \text{ cm}^2$$

$$T : 30 \text{ menit} = 0,5 \text{ jam}$$

$$D : 7,86 \text{ g/cm}^3$$

Jawaban:

$$\begin{aligned} CR &= \frac{8,76 \times 10^4 \times 0,33 \text{ g}}{116,624 \text{ cm}^2 \times 0,5 \text{ jam} \times 7,86} \\ &= 59,250 \text{ mm/tahun} \end{aligned}$$

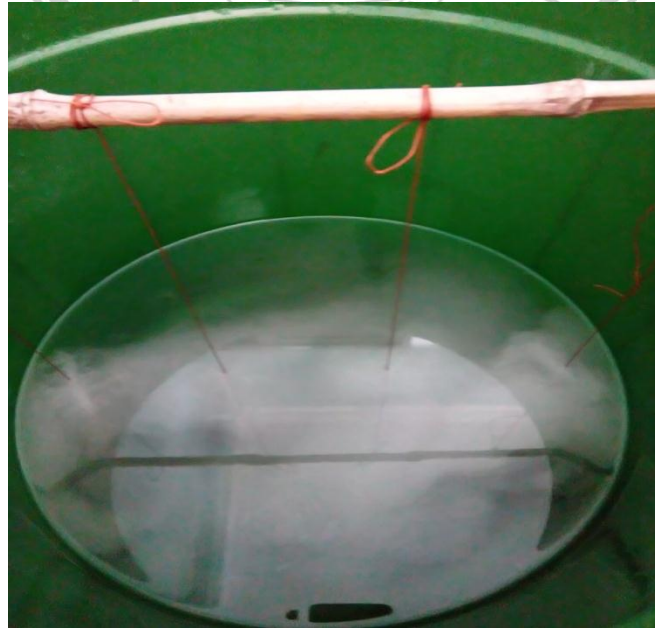


LAMPIRAN C

PROSES PENGUJIAN



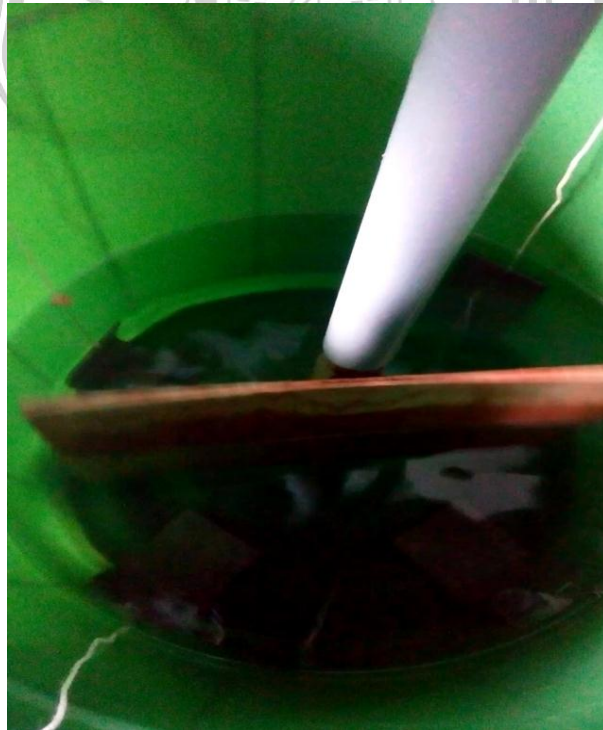
Gambar C.1 Pengujian laju korosi metode celup diam



Gambar C.2 Reaksi asam klorida terhadap baja ASTM A36 pada pengujian laju korosi metode celup diam



Gambar C.3 Mesin untuk pengujian laju korosi metode putar



Gambar C.3 Proses pengujian laju korosi metode celup putar