

## LAMPIRAN

### Lampiran 1 Surat Keterangan Hasil Furnace

	<b>Laboratorium Pengujian Bahan &amp; Pelapisan Logam</b> <b>Jurusan Teknik Mesin – Fakultas Teknik</b> <b>Universitas Negeri Surabaya</b>
	Perlakuan Panas (Heat Treatment) Nabertherm Furnace

Dibawah ini menerangkan bahwa:

Nama : Moh. Arif Faridho  
NBI : 1421800084  
Jurusan : Teknik Mesin – Universitas 17 Agustus 1945 Surabaya  
Topik penelitian : Analisis Pengaruh Variasi Tekanan Kompaksi dan Suhu Sintering Paduan Al-SiC Terhadap Densitas dan Kekerasan Menggunakan Metode Metalurgi Serbuk

Telah menggunakan Furnace di Laboratorium Pelapisan Logam Jurusan Teknik Mesin Universitas Negeri Surabaya pada tanggal 30-31 Maret 2022.


Demikian surat keterangan ini dibuat untuk digunakan sebagaimana mestinya.

Surabaya, 31 Maret 2022

KaSubLab.

Pengujian Bahan & Pelapisan Logam

  
(Tri Hartutuk Ningsih, S.T., M.T.)

	<b>Laboratorium Pengujian Bahan &amp; Pelapisan Logam</b> <b>Jurusan Teknik Mesin – Fakultas Teknik</b> <b>Universitas Negeri Surabaya</b>
	Perlakuan Panas (Heat Treatment) Nabertherm Furnace

**Tabel Perlakuan Panas**

NO	Bahan		Kompaksi	Suhu	Waktu Tahan	Jumlah
	Al	SiC				
1	91%	9%	5000	525	120	3
2	91%	9%	5000	550	120	3
3	91%	9%	5000	575	120	3
4	91%	9%	5500	525	120	3
5	91%	9%	5500	550	120	3
6	91%	9%	5500	575	120	3
7	91%	9%	6000	525	120	3
8	91%	9%	6000	550	120	3
9	91%	9%	6000	575	120	3

NO	Al	Kompaksi	Suhu	Waktu Tahan	Jumlah
1	100%	5000	525	120	1
2	100%	5000	550	120	1
3	100%	5000	575	120	1
4	100%	5500	525	120	1
5	100%	5500	550	120	1
6	100%	5500	575	120	1
7	100%	6000	525	120	1
8	100%	6000	550	120	1
9	100%	6000	575	120	1

Surabaya, 31 Maret 2022

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Pengujian Bahan & Pelapisan Logam



  
 (Tri Hartutuk Ningsih, S.F.M.T.)

## Lampiran 2 Data Hasil Uji Kekerasan Rockwell B

### Data Hasil Uji Kekerasan Rockwell B Al-SiC

	<b>LABORATORIUM MATERIAL TEKNIK</b> <b>TEKNIK MESIN UNTAG'45-SURABAYA</b> <b>LEMBAR DATA UJI KEKERASAN / METODE</b> <b>ROCKWELL</b>	
Nama : <i>Moh Anif Fariqo</i> NBI : <i>14218000891</i> Tanggal Pengujian : <i>27 April 2022</i>		

#### DATA HASIL PENGUJIAN KEKERASAN



No	Spesimen	Sampel	Keterangan	Indentor	Nilai Kekerasan			Rata-Rata
1	A1 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	41,5	44,5	52	49,44
		(b)			46	52,5	43	
		(c)			54	55	56,5	
2	A2 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	47,5	46	49,5	48,83
		(b)			50	53	50	
		(c)			46,5	53	46	
3	A3 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	50,5	57	45,5	48,67
		(b)			52,5	60,5	59,5	
		(c)			44	53	68	
4	B1 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	44,5	48,5	52	52,72
		(b)			54,5	61	62	
		(c)			54,5	54	55	
5	B2 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	48,5	52,5	56	52,44
		(b)			55,5	56	58	
		(c)			47,5	51,5	49,5	
6	B3 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	65,5	60	58,5	52,11
		(b)			45	42	59,5	
		(c)			44	51,5	46	
7	C1 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	48,5	58	62	59,33
		(b)			59,5	69	61,5	
		(c)			58,5	52	65	
8	C2 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	57	52	46	57,44
		(b)			55	57,5	58	
		(c)			50,5	54	60	
9	C3 Al-SiC	(a)	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	50,5	57,5	58	53,88
		(b)			53	48	48,5	
		(c)			46	53	66	

Surabaya, 27 April 2022




LAB. LOGAM  
UNTAG 45  
SURABAYA  
LAB MATERIAL TEKNIK

## Data Hasil Uji Kekerasan Rockwell B Al Murni

	<b>LABORATORIUM MATERIAL TEKNIK</b> <b>TEKNIK MESIN UNTAG'45-SURABAYA</b> <b>LEMBAR DATA UJI KEKERASAN / METODE</b> <b>ROCKWELL</b>	
Nama : <i>Moh. Arif Fariqho</i> NBI : <i>1921800084</i> Tanggal Pengujian : <i>27 April 2022</i>		

### DATA HASIL PENGUJIAN KEKERASAN

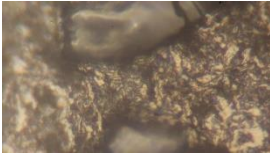
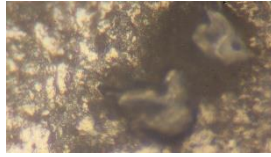
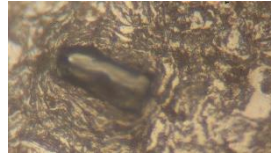
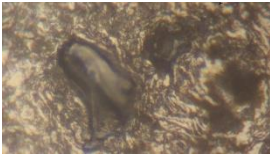
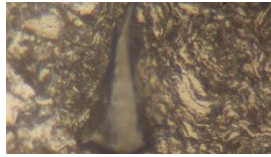
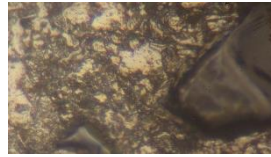
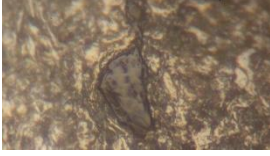
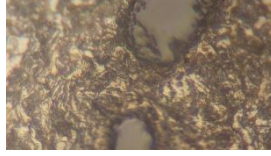
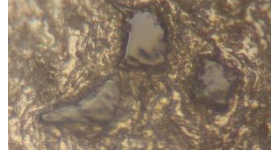

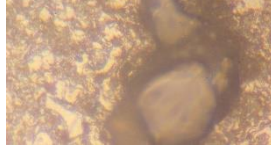
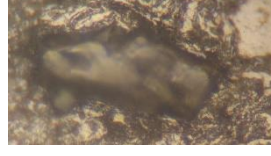

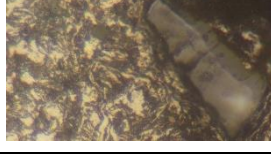
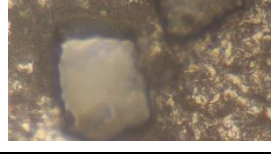

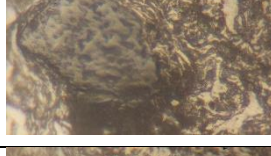
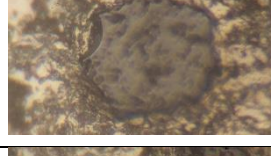
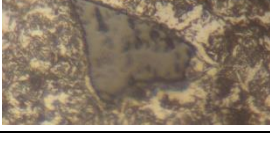
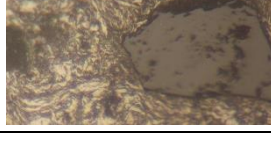
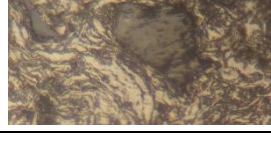
No	Spesimen	Keterangan	Indentor	Nilai Kekerasan			Rata-Rata
				H1	H2	H3	
1	A1 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	49,5	48	50	49,33
2	A2 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	48,5	48	49,5	48,66
3	A3 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	51	47	47	48,33
4	B1 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	52	49,5	53	50,83
5	B2 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	51,5	49	48,5	49,66
6	B3 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	49	48	51,5	49,5
7	C1 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	52	53,5	52,5	52,66
8	C2 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	49,5	56	47,5	51
9	C3 Al Murni	P = 100 Kgf t = 5 detik	Bola Baja 1/16" (Skala Merah)	49,5	51	51,5	50,93

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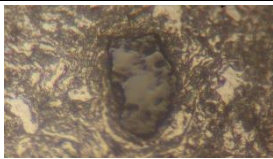
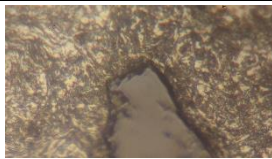
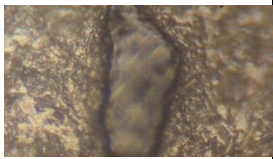
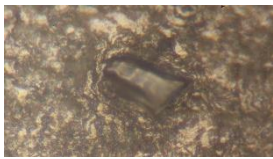
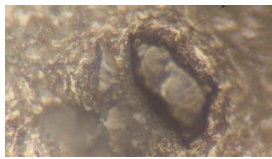
  
  
**LAB. LOGAM**  
**UNTAG 45**  
**SURABAYA**  
**AS. LAB MATERIAL TEKNIK**

### Lampiran 3 Data Hasil Uji Struktur Mikro

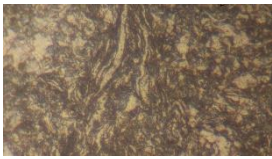
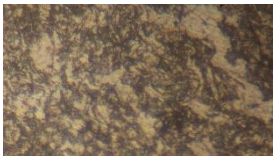
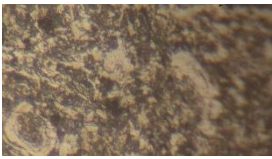
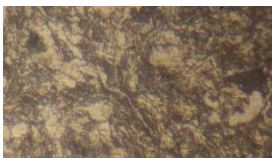
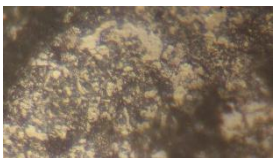
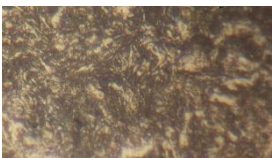
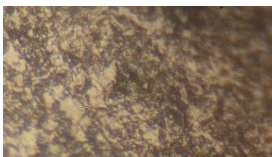
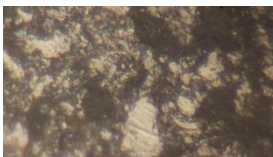
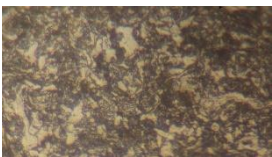
#### Data Hasil Uji Struktur Mikro Al-SiC

Kode vikasi	(a)	(b)	(c)
A1			
A2			
A3			
B1			
B2			
B3			
C1			



C2			
C3			

Data Hasil Uji Struktur Mikro Al Murni

A1	A2	A3
		
B1	B2	B3
		
C1	C2	C3
		

## Lampiran 4 Persiapan Alat Dan Bahan



## Lampiran 5 Proses Pembuatan Sampel

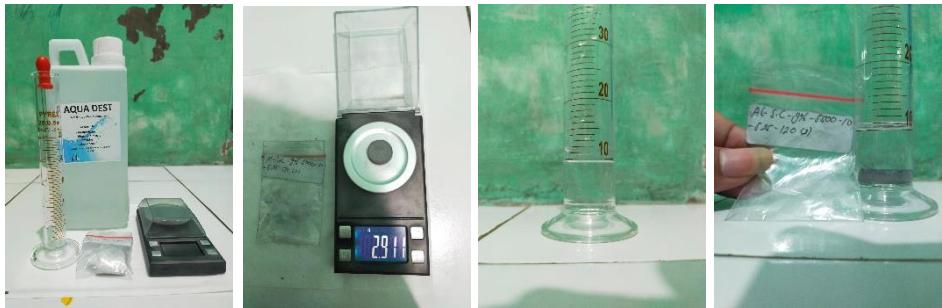


## Lampiran 6 Proses Sintering





Lampiran 7 Proses Uji Densitas



Lampiran 8 Proses Uji Struktur Mikro



Lampiran 9 Proses Uji Kekerasan Rockwell

