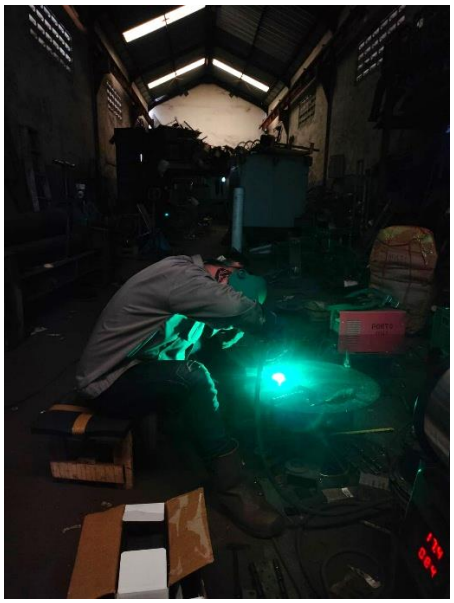
LAMPIRAN

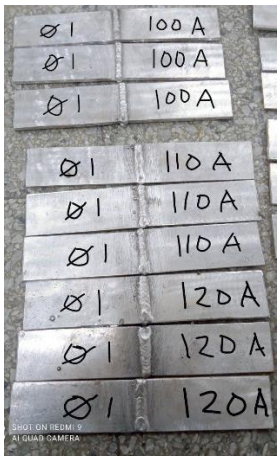
Persiapan alat pengelasan

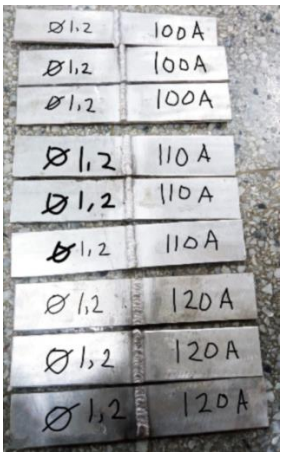
Persiapan material aluminium 6061

Proses pengelasan



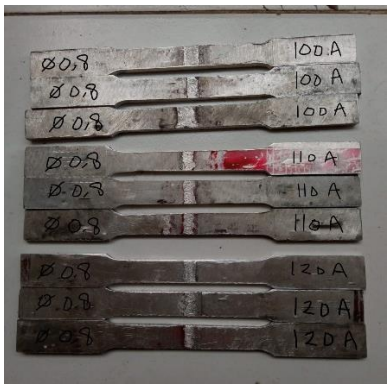
Hasil pengelasan





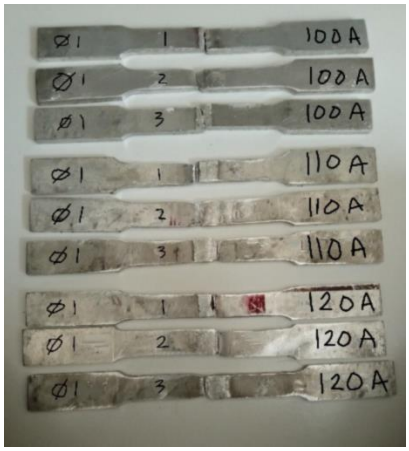
Pengujian penetran

Pembentukan spesimen uji tarik



Pengujian tarik

Hasil pengujian tarik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
RISET, DAN TEKNOLOGI
POLITEKNIK NEGERI MALANG
JURUSAN TEKNIK MESIN
Jl. Soekarno Hatta No.9 Jatimulyo, Lowokwaru, Malang, 65141
Telp. (0341) 404424 – 404425, Fax (0341) 404420,
http://www.polinema.ac.id

SURAT KETERANGAN
NOMOR : 18/LAB.TM/2023

Yang bertanda tangan dibawah ini :

Nama	:	Rafik Djoenaidi,ST
N I P	:	19780125 200112 1 002
Jabatan	:	Pranata Laboratorium Pendidikan Politeknik Negeri Malang

Menerangkan dengan sesungguhnya bahwa mahasiswa :

Nama	:	Dhoni Waloyo
Nim/NPM	:	1421900057
Prodi	:	S-1 Teknik Mesin
Instansi	:	Universitas 17 Agustus 1945 Surabaya

Benar benar telah melaksanakan pengambilan data di Jurusan Teknik Mesin Politeknik Negeri Malang, guna keperluan penyusunan skripsi.

Demikian surat keterangan ini dibuat untuk dipergunakan sebagaimana mestinya.

Malang, 19 Mei 2023
Pranata Laboratorium Pendidikan
Politeknik Negeri Malang

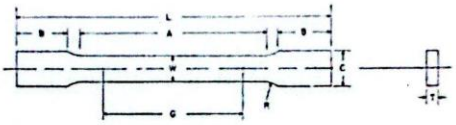
Rafik Djoenaidi,ST
19780125 200112 1 002

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1.42.1900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : RAW Material

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



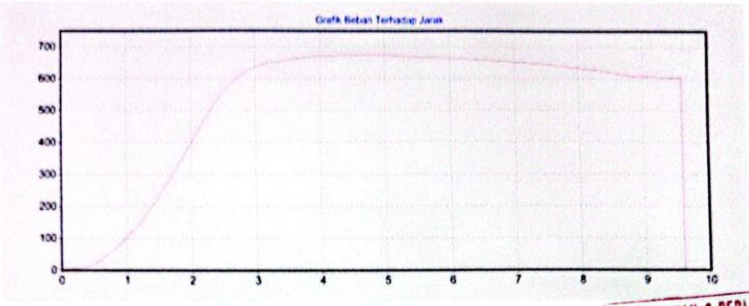
Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

No.	Spesimen RAW	Keterangan
1	Lebar Beban *i* (mm)	12,5
2	Tebal Beban *t* (mm)	5
3	Panjang Awal L_0 (mm)	200
4	Panjang Akhir L_f (mm)	209,60
5	Pertambahan Panjang ΔL (mm)	9,60
6	Beban Luluh (*Yield Point*) (Kg)	515
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	674,6
8	Beban Putus (*Fracture*) (Kg)	603,6

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

Grafik Uji Tarik



PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

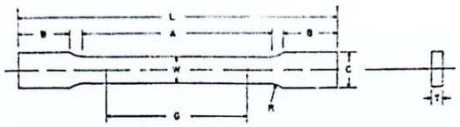
Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1421900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : Elektroda 0,8-100A

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_f (mm)	205,85	200,37	200,23
5	Pertambahan Panjang ΔL (mm)	5,85	0,37	0,23
6	Beban Luluh (*Yield Point*) (Kg)	123,8	43,2	86,2
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	290,3,6	88,6	119,4
8	Beban Putus (*Fracture*) (Kg)	139,6	85, 1	93,8

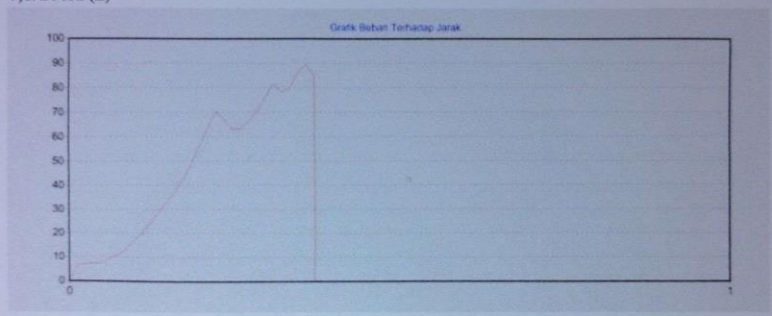
PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

Grafik Uji Tarik

0,8/100A

0,8/100A (2)



0,8/100A (3)

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

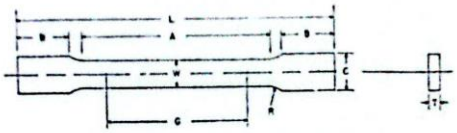
Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta	: Dhoni Waloyo	(1.42.1900057)
Material	: Aluminium 6061	
Tanggal Pengujian	: 19 Mei 2023	
Perlakuan	: Elektroda 0,8-110A	

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

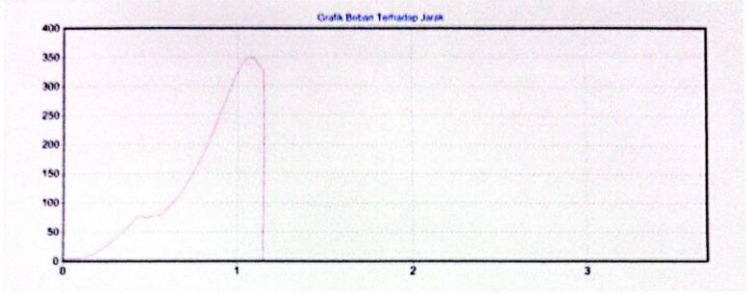
No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	4
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_f (mm)	201,15	206,37	201
5	Pertambahan Panjang ΔL (mm)	1,15	5	1
6	Beban Luluh (*Yield Point*) (Kg)	98,6	106,5	220,2
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	349,6	365,6	251,8
8	Beban Putus (*Fracture*) (Kg)	325,6	254,8	215

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

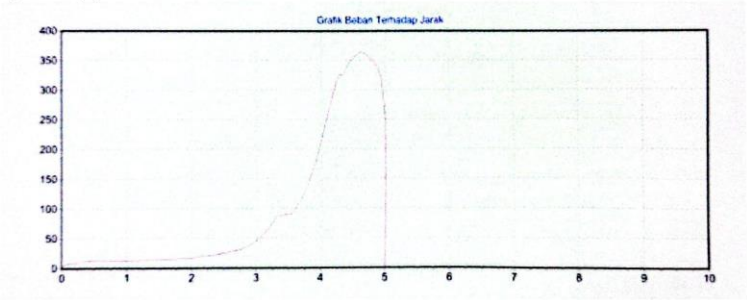
Dipindai dengan CamScanner

Grafik Uji Tarik

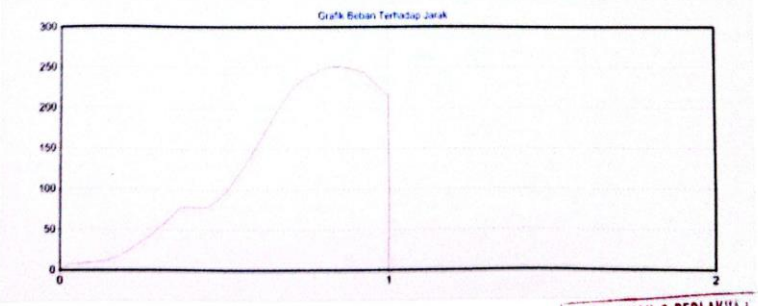
0,8/110A (1)



0,8/110A (2)



0,8/110A (3)



PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1.42.1900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : Elektroda 0,8-120A

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09

Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

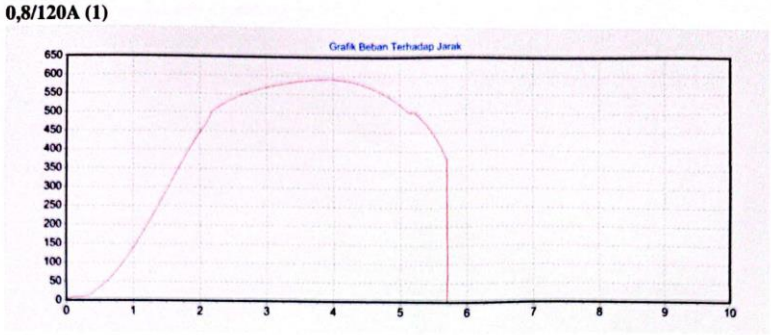
No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	4
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_f (mm)	205,7	204,4	206,5
5	Pertambahan Panjang ΔL (mm)	5,7	4,4	6,5
6	Beban Luluh (*Yield Point*) (Kg)	501,6	562	452,2
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	592,4	674,4	658
8	Beban Putus (*Fracture*) (Kg)	377,8	325,8	453,4

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

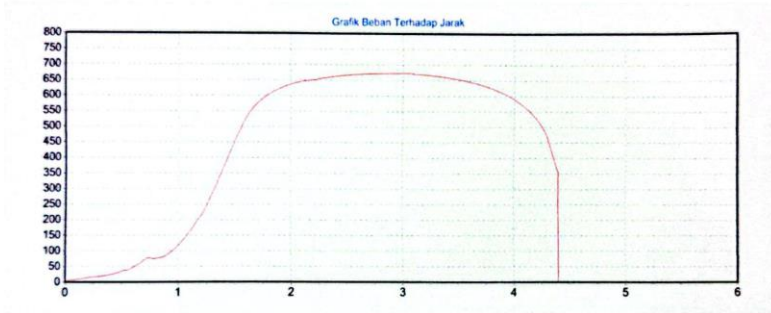
Dipindai dengan CamScanner

Grafik Uji Tarik

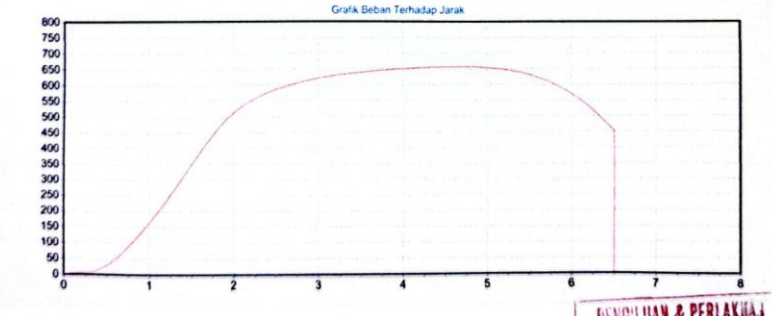
0,8/120A (1)



0,8/120A(2)



0,8/120A (3)



PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

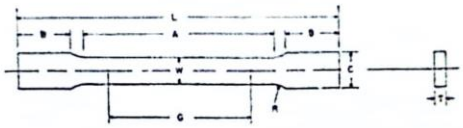
Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta	: Dhoni Waloyo	(1.42.1900057)
Material	: Aluminium 6061	
Tanggal Pengujian	: 19 Mei 2023	
Perlakuan	: Elektroda 1-100A	

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

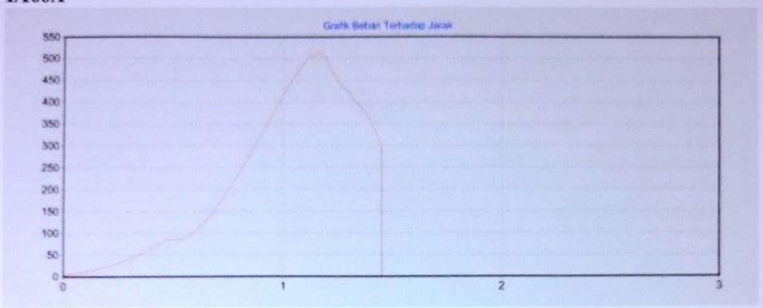
No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_1 (mm)	201,45	205,8	208,4
5	Pertambahan Panjang ΔL (mm)	1,45	5,8	8,4
6	Beban Luluh (*Yield Point*) (Kg)	264,2	420	122,8
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	514,2	637,2	424,6
8	Beban Putus (*Fracture*) (Kg)	297,6	486,4	286,8

PENGUJIAN & PERLAKUAN BAHAN
Lab. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

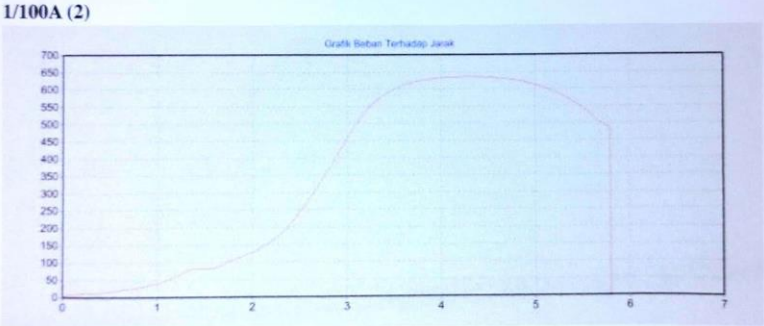
Dipindai dengan CamScanner

Grafik Uji Tarik

1/100A



1/100A (2)



1/100A (3)

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

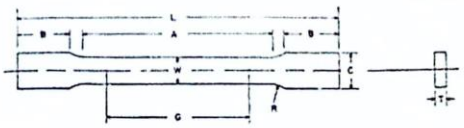
Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1.42.1900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : Elektroda 1-110A

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
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T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
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B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

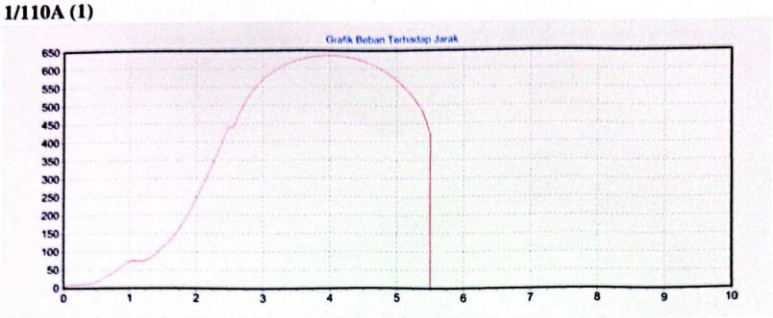
No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_f (mm)	205,5	207,1	206,7
5	Pertambahan Panjang ΔL (mm)	5,5	7,1	6,7
6	Beban Luluh (*Yield Point*) (Kg)	493,4	502,4	332,6
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	637,8	632,4	526
8	Beban Putus (*Fracture*) (Kg)	418,8	451,4	381,4

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

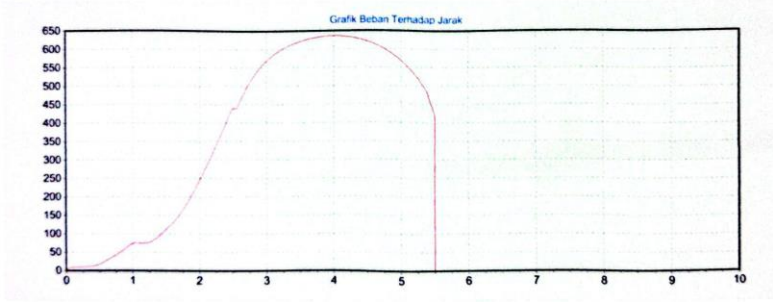
Dipindai dengan CamScanner

Grafik Uji Tarik

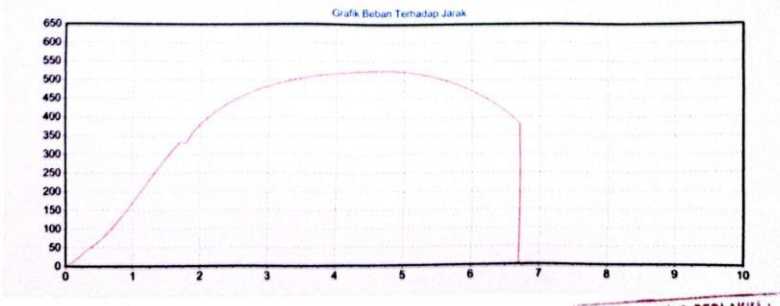
1/110A (1)



1/110A(2)



1/110A(3)



PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

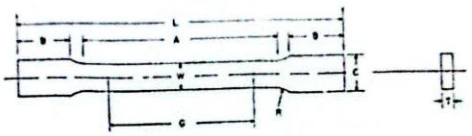
Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta	: Dhoni Waloyo	(1.42.1900057)
Material	: Aluminium 6061	
Tanggal Pengujian	: 19 Mei 2023	
Perlakuan	: Elektroda 1-120A	

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_o (mm)	200	200	200
4	Panjang Akhir L_f (mm)	202,7	206	207
5	Pertambahan Panjang ΔL (mm)	2,7	6	5,7
6	Beban Luluh (*Yield Point*) (Kg)	281,4	556	375
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	562,4	679,2	631
8	Beban Putus (*Fracture*) (Kg)	462,2	644,8	602,4

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

Grafik Uji Tarik

1/120A (1)

1/120A (2)

1/120A (1)

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1.42.1900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : Elektroda 1,2-100A

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09

Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 + 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_f (mm)	201,35	201,5	208,4
5	Pertambahan Panjang ΔL (mm)	1,35	1,5	8,4
6	Beban Luluh (*Yield Point*) (Kg)	408,6	397,6	733
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	997,8	995,4	1320,4
8	Beban Putus (*Fracture*) (Kg)	935,2	976,2	910,4

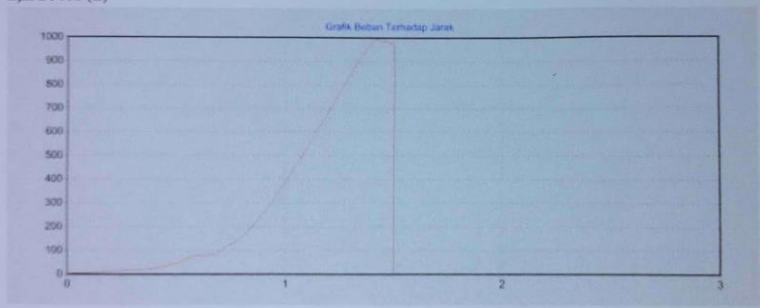
PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

Grafik Uji Tarik

1,2/100A

1,2/100A (2)



1,2/100A (3)

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1.42.1900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : Elektroda 1,2-110A

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09

Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_o (mm)	200	200	200
4	Panjang Akhir L_f (mm)	202,95	206,37	206,9
5	Pertambahan Panjang ΔL (mm)	2,95	6,37	6,9
6	Beban Luluh (*Yield Point*) (Kg)	450,4	560,2	552,4
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	533,2	683,8	654,8
8	Beban Putus (*Fracture*) (Kg)	447,6	638,6	572,6

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner

Grafik Uji Tarik

1,2/110A (1)

1,2/110A (2)

1,2/110A (3)

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

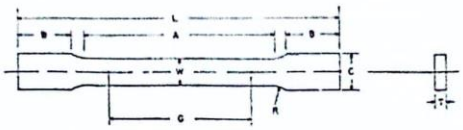
CS Dipindai dengan CamScanner

DATA HASIL PENGUJIAN TARIK

Nama Peserta : Dhoni Waloyo (1.42.1900057)
Material : Aluminium 6061
Tanggal Pengujian : 19 Mei 2023
Perlakuan : Elektroda 1,2-120A

Dimensi Ukuran Spesimen ASTM-E8

E8/E8M – 09



Dimensions	Standard Specimens		Subsize Specimen
	Plate-Type, 40 mm [1.500 in.] Wide	Sheet-Type, 12.5 mm [0.500 in.] Wide	6 mm [0.250 in.] Wide
	mm [in.]	mm [in.]	mm [in.]
G—Gage length (Note 1 and Note 2)	200.0 ± 0.2 [8.00 ± 0.01]	50.0 ± 0.1 [2.000 ± 0.005]	25.0 ± 0.1 [1.000 ± 0.003]
W—Width (Note 3 and Note 4)	40.0 ± 2.0 [1.500 ± 0.125, -0.250]	12.5 ± 0.2 [0.500 ± 0.010]	6.0 ± 0.1 [0.250 ± 0.005]
T—Thickness (Note 5)		thickness of material	
R—Radius of fillet, min (Note 6)	25 [1]	12.5 [0.500]	6 [0.250]
L—Overall length, min (Note 2, Note 7, and Note 8)	450 [18]	200 [8]	100 [4]
A—Length of reduced section, min	225 [9]	57 [2.25]	32 [1.25]
B—Length of grip section, min (Note 9)	75 [3]	50 [2]	30 [1.25]
C—Width of grip section, approximate (Note 4 and Note 9)	50 [2]	20 [0.750]	10 [0.375]

No.	Keterangan	Spesimen 1	Spesimen 2	Spesimen 3
1	Lebar Beban *i* (mm)	12,5	12,5	12,5
2	Tebal Beban *t* (mm)	5	5	5
3	Panjang Awal L_0 (mm)	200	200	200
4	Panjang Akhir L_f (mm)	202,95	205,5	205,94
5	Pertambahan Panjang ΔL (mm)	2,95	5,5	5,94
6	Beban Luluh (*Yield Point*) (Kg)	668,6	658,8	480,2
7	Beban Maksimum (*Ultimate Stenght*) (Kg)	689,2	687,2	634,4
8	Beban Putus (*Fracture*) (Kg)	649,2	655,8	356,8

PENGUJIAN & PERLAKUAN BAHAN
LAB. BAHAN TEKNIK MESIN
POLITEKNIK NEGERI MALANG

Dipindai dengan CamScanner