

LAMPIRAN

1. Tabel perhitungan kekuatan bending komposit

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	US	80	3,34	12,73	41,56	13,4	6,06	40,05	4,196	1,636
2		80	3,34	12,72	54,26	18,8	6,40	59,29	5,887	1,728
3		80	3,23	12,72	40,13	13,2	5,93	41,25	3,997	1,770
4		80	3,39	12,74	61,07	18,1	6,67	63,51	5,752	1,719
5		80	3,35	12,72	52,25	16,4	6,25	53,49	5,151	1,673
Min								40,05	3,997	1,636
Max								63,51	5,887	1,770
Rata-rata								51,52	4,997	1,705
Standar Deviasi								10,55	0,870	0,052

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	TS	80	3,42	12,73	57,31	18,4	6,67	59,03	5,900	1,676
2		80	3,34	12,72	58,22	14,6	6,88	57,57	4,572	1,857
3		80	3,43	12,73	64,9	22,4	6,67	73,96	7,203	1,661
4		80	3,41	12,73	53,63	16,5	7,27	53,04	5,275	1,844
5		80	3,41	12,72	57,26	18,7	7,06	59,83	5,978	1,791
Min								53,04	4,572	1,661
Max								73,96	7,203	1,857
Rata-rata								60,69	5,785	1,766
Standar Deviasi								7,87	0,974	0,092

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	US MAPP 3%	80	3,33	12,71	64,93	19,8	6,6667	73,32	6,181	1,818
2		80	3,27	12,71	53,2	18,1	6,4286	59,66	5,549	1,852
3		80	3,24	12,73	43,2	24,8	7,3684	59,21	7,533	2,178
4		80	3,31	12,72	58,62	20,2	7,3684	67,68	6,268	2,045
5		80	3,27	12,72	55,46	22,5	6,6667	69,90	6,898	1,919
Min								59,21	5,549	1,818
Max								73,32	7,533	2,178
Rata-rata								65,96	6,486	1,962
Standar Deviasi								6,28	0,756	0,149

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	US	80	3,25	12,72	66,31	21,7	7,69	82,76	6,612	2,255
2		80	3,26	12,72	56,08	20,4	7,27	67,13	6,235	2,112
3	MAPP	80	3,22	12,72	58,72	18,8	7,00	69,11	5,675	2,110
4	5%	80	3,34	12,73	67,17	26,5	7,69	90,99	8,298	2,076
5		80	3,24	12,71	54,63	19,3	6,9231	64,37	5,862	2,050
Min								64,37	5,675	2,050
Max								90,99	8,298	2,255
Rata-rata								74,87	6,536	2,121
Standar Deviasi								11,46	1,048	0,079

No. Sps	Var.	L (mm)	d (mm)	b (mm)	F (N)	D (mm)	m (N/mm)	σ (MPa)	ϵ (%)	E (GPa)
1	US	80	3,43	12,74	61,24	18,7	7,14	63,14	6,013	1,778
2		80	3,36	12,73	64,81	21,2	7,06	74,51	6,678	1,871
3	MAPP	80	3,39	12,74	62,36	24,5	6,84	77,22	7,786	1,765
4	10%	80	3,45	12,73	65,31	22,6	7,41	73,97	7,310	1,814
5		80	3,41	12,74	48,1	19,5	7,2727	51,23	6,234	1,843
Min								51,23	6,013	1,765
Max								77,22	7,786	1,871
Rata-rata								68,01	6,804	1,814
Standar Deviasi								10,81	0,739	0,044

Keterangan

Sisal mentah : *untreatment sisal* : US

Sisal alkalisasi : *treatment sisal alkali* : TS alkali

Sisal mentah MAPP 3% : *untreatment sisal MAPP 3%* : US MAPP 3%

Sisal mentah MAPP 5% : *untreatment sisal MAPP 5%* : US MAPP 5%

Sisal mentah MAPP 10% : *untreatment sisal MAPP 10%* : US MAPP 10%

2. Tabel perhitungan kekuatan tarik komposit

No. Sps	Var.	d (mm)	b (mm)	F (N)	ΔL (mm)	$\Delta\sigma$ (MPa)	$\frac{\Delta\varepsilon}{\left(\frac{\text{mm}}{\text{mm}}\right)}$	σ (MPa)	ε (%)	E (GPa)
1	US	3,42	13,08	1327,83	1,57	5,59	0,0044	29,68	3,140	1,270
2		3,33	13,07	1313,89	1,67	6,89	0,006	30,19	3,340	1,149
3		3,41	13,07	1248,94	1,77	5,61	0,006	28,02	3,540	0,935
4		3,28	13,09	1254,36	1,69	6,99	0,0072	29,22	3,380	0,970
5		3,29	13,11	1452,32	1,74	5,80	0,005	33,67	3,480	1,159
Min								28,02	3,140	0,935
Max								33,67	3,540	1,270
Rata-rata								30,16	3,376	1,097
Standar Deviasi								2,12	0,154	0,140

No. Sps	Var.	d (mm)	b (mm)	F (N)	ΔL (mm)	$\Delta\sigma$ (MPa)	$\frac{\Delta\varepsilon}{\left(\frac{\text{mm}}{\text{mm}}\right)}$	σ (MPa)	ε (%)	E (GPa)
1	TS	3,31	13,02	1531,72	1,87	5,80	0,005	35,54	3,740	1,160
2		3,32	13,04	1489,98	2,1	6,93	0,0062	34,42	4,200	1,118
3		3,34	13,06	1367,83	1,62	4,59	0,004	31,36	3,240	1,146
4		3,27	13,09	1482,92	2	7,01	0,0044	34,64	4,000	1,593
5		3,28	13,05	1378,94	2,09	5,84	0,0056	32,22	4,180	1,043
Min								31,36	3,240	1,043
Max								35,54	4,200	1,593
Rata-rata								33,64	3,872	1,212
Standar Deviasi								1,77	0,399	0,218

No. Sps	Var.	d (mm)	b (mm)	F (N)	ΔL (mm)	$\Delta\sigma$ (MPa)	$\frac{\Delta\varepsilon}{\left(\frac{\text{mm}}{\text{mm}}\right)}$	σ (MPa)	ε (%)	E (GPa)
1	US MAPP 3%	3,43	13,07	1695,61	2,02	7,81	0,0062	37,82	4,040	1,259
2		3,35	13,08	1678,88	2,01	7,99	0,0058	38,31	4,020	1,377
3		3,24	13,06	1750,32	2,16	5,91	0,0044	41,36	4,320	1,343
4		3,26	13,08	1576,49	2	5,86	0,0044	36,97	4,000	1,332
5		3,32	13,09	1572,37	2,21	5,75	0,0052	36,18	4,420	1,106
Min								36,18	4,000	1,106
Max								41,36	4,420	1,377
Rata-rata								38,13	4,160	1,284
Standar Deviasi								1,98	0,195	0,108

No. Sps	Var.	d (mm)	b (mm)	F (N)	ΔL (mm)	$\Delta\sigma$ (MPa)	$\frac{\Delta\varepsilon}{\left(\frac{\text{mm}}{\text{mm}}\right)}$	σ (MPa)	ε (%)	E (GPa)
1	US MAPP 5%	3,29	13,08	1940,71	2,16	6,97	0,0046	45,10	4,320	1,516
2		3,34	13,09	1987,93	2,12	8,01	0,005	45,47	4,240	1,601
3		3,27	13,08	2018,75	2,12	7,01	0,0046	47,20	4,240	1,525
4		3,28	13,07	1839,86	2,14	8,16	0,0058	42,92	4,280	1,408
5		3,25	13,09	1878,97	2,45	4,70	0,0034	44,17	4,900	1,383
Min								42,92	4,240	1,383
Max								47,20	4,900	1,601
Rata-rata								44,97	4,396	1,486
Standar Deviasi								1,59	0,284	0,090

No. Sps	Var.	d (mm)	b (mm)	F (N)	ΔL (mm)	$\Delta\sigma$ (MPa)	$\frac{\Delta\varepsilon}{\left(\frac{\text{mm}}{\text{mm}}\right)}$	σ (MPa)	ε (%)	E (GPa)
1	US MAPP 10%	3,32	13,09	1531,72	2,49	5,75	0,0052	35,25	4,980	1,106
2		3,33	13,08	1489,98	2,11	6,89	0,0064	34,21	4,220	1,076
3		3,24	13,07	1487,83	2,46	5,90	0,0058	35,13	4,920	1,018
4		3,26	13,09	1632,92	2,22	8,20	0,0068	38,27	4,440	1,206
5		3,31	13,09	1508,94	1,98	5,77	0,0048	34,83	3,960	1,202
Min								34,21	3,960	1,018
Max								38,27	4,980	1,206
Rata-rata								35,54	4,504	1,122
Standar Deviasi								1,58	0,442	0,082

Keterangan

Sisal mentah : *untreatment sisal* : US

Sisal alkalisasi : *treatment sisal alkali* : TS alkali

Sisal mentah MAPP 3% : *untreatment sisal MAPP 3%* : US MAPP 3%

Sisal mentah MAPP 5% : *untreatment sisal MAPP 5%* : US MAPP 5%

Sisal mentah MAPP 10% : *untreatment sisal MAPP 10%* : US MAPP 10%

3. Grafik pengujian bending komposit

Grafik yang dilampirkan adalah sebagai berikut:

- A. Grafik Uji Bending Komposit PMMA/sisal/mentah
- B. Grafik Uji Bending Komposit PMMA/sisal/alkalisasi
- C. Grafik Uji Bending Komposit PMMA/sisal/MAPP 3%
- D. Grafik Uji Bending Komposit PMMA/sisal/MAPP 5%
- E. Grafik Uji Bending Komposit PMMA/sisal/MAPP 10%

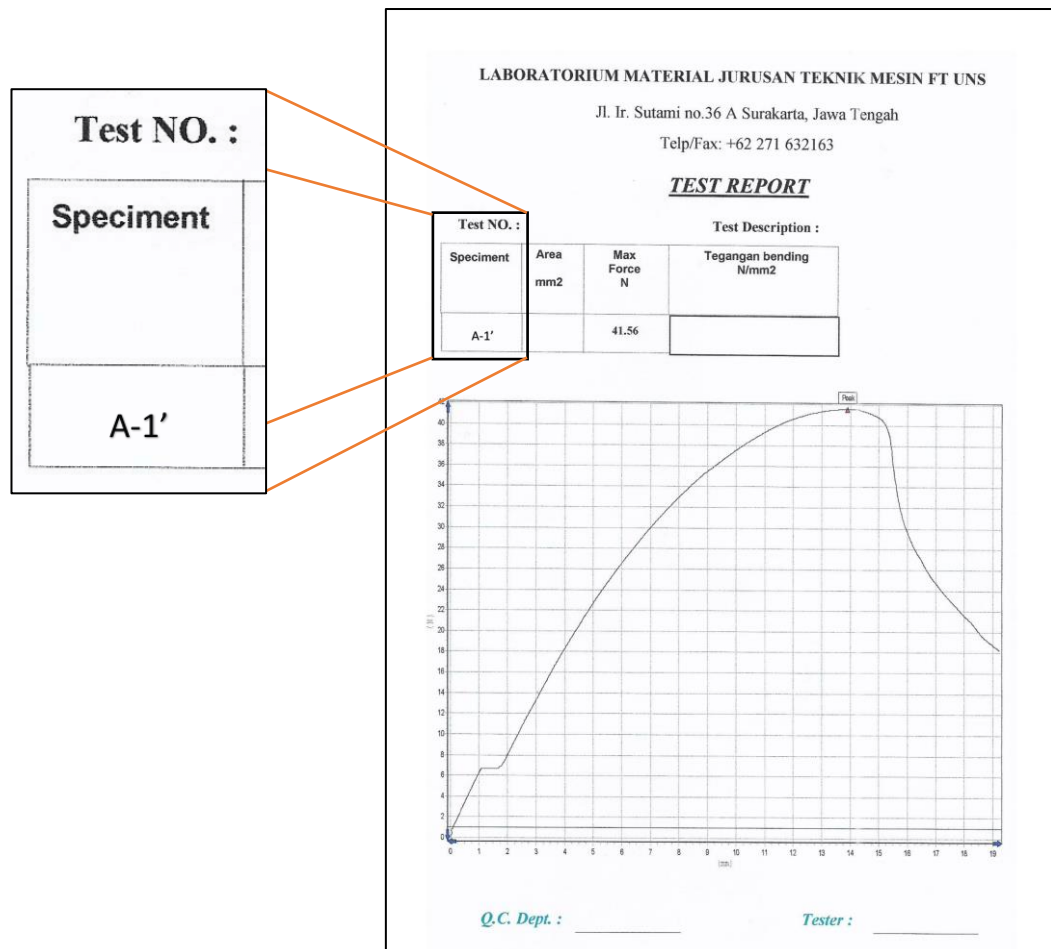
Keterangan :

Penamaan spesimen pada grafik menggunakan kode sebagai berikut:

- Huruf : Menunjukkan jenis variasi komposit
- Angka' : Menunjukkan nomor spesimen

Contoh : A-1' adalah Grafik Uji Bending dari Komposit

PMMA/sisal/mentah dengan nomor spesimen ke 1 dari variasi tersebut.



LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no.36 A Surakarta, Jawa Tengah
 Telp/Fax: +62 271 632163

TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm ²	Max Force N	Tegangan bending N/mm ²
A-2'		54,26	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm ²	Max Force N	Tegangan bending N/mm ²
A'-3		40,13	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm ²	Max Force N	Tegangan bending N/mm ²
A-4'		61,07	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm ²	Max Force N	Tegangan bending N/mm ²
A-5'		52,25	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
B-1'		57.31	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
B-2'		58.22	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
B-3'		64.90	

Q.C. Dept. : _____ Tester : _____

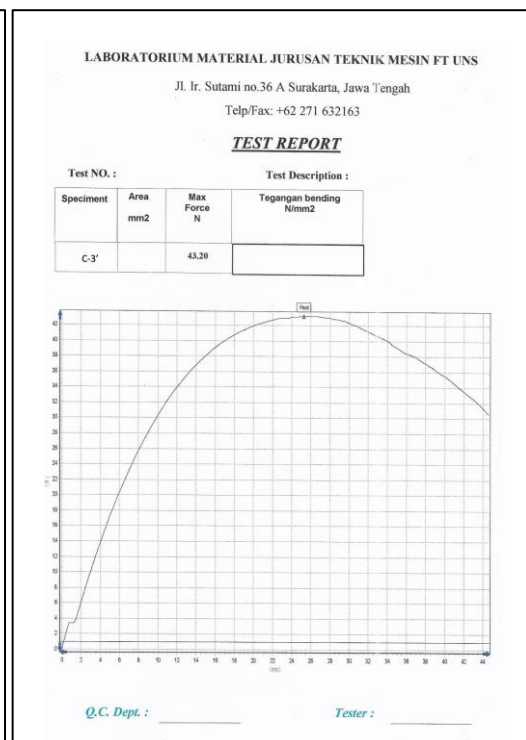
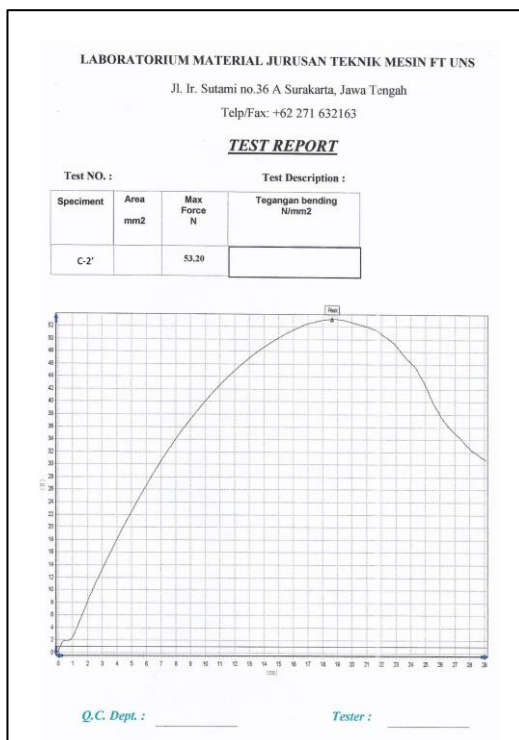
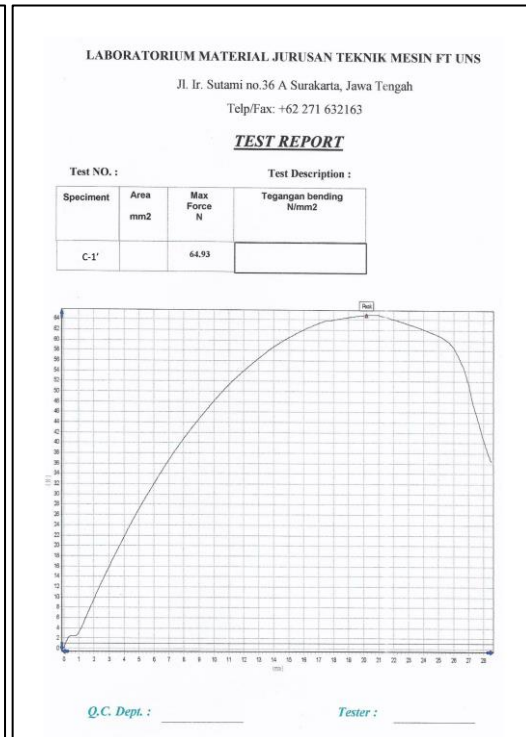
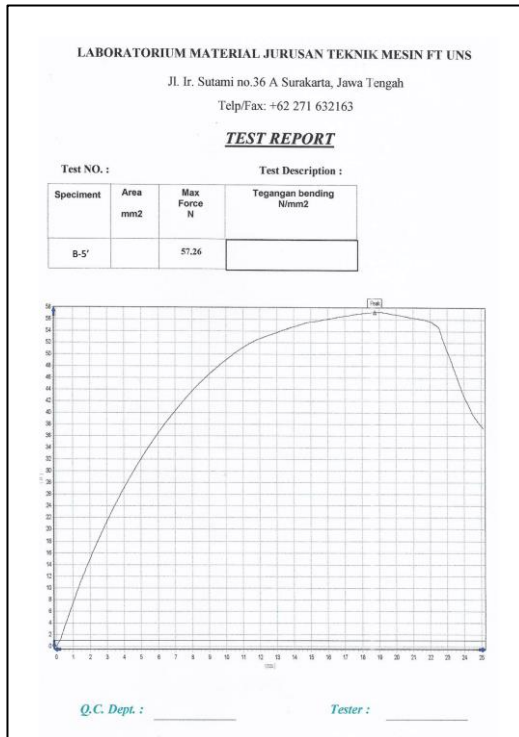
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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
B-4'		53.63	

Q.C. Dept. : _____ Tester : _____



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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
C-4'		58.62	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
C-5'		55.46	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
D-1'		66.31	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
D-2'		56.08	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
D-3'		58.72	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
D-4'		67.17	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
D-5'		54.63	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
E-1'		61.24	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
E-2'		64.81	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
E-3'		62.36	

Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
E-4'		65.31	

Q.C. Dept. : _____ Tester : _____

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Test NO. : _____ Test Description : _____

Speciment	Area mm2	Max Force N	Tegangan bending N/mm2
E-5'		48.10	

Q.C. Dept. : _____ Tester : _____

4. Grafik pengujian tarik komposit

Grafik yang dilampirkan adalah sebagai berikut:

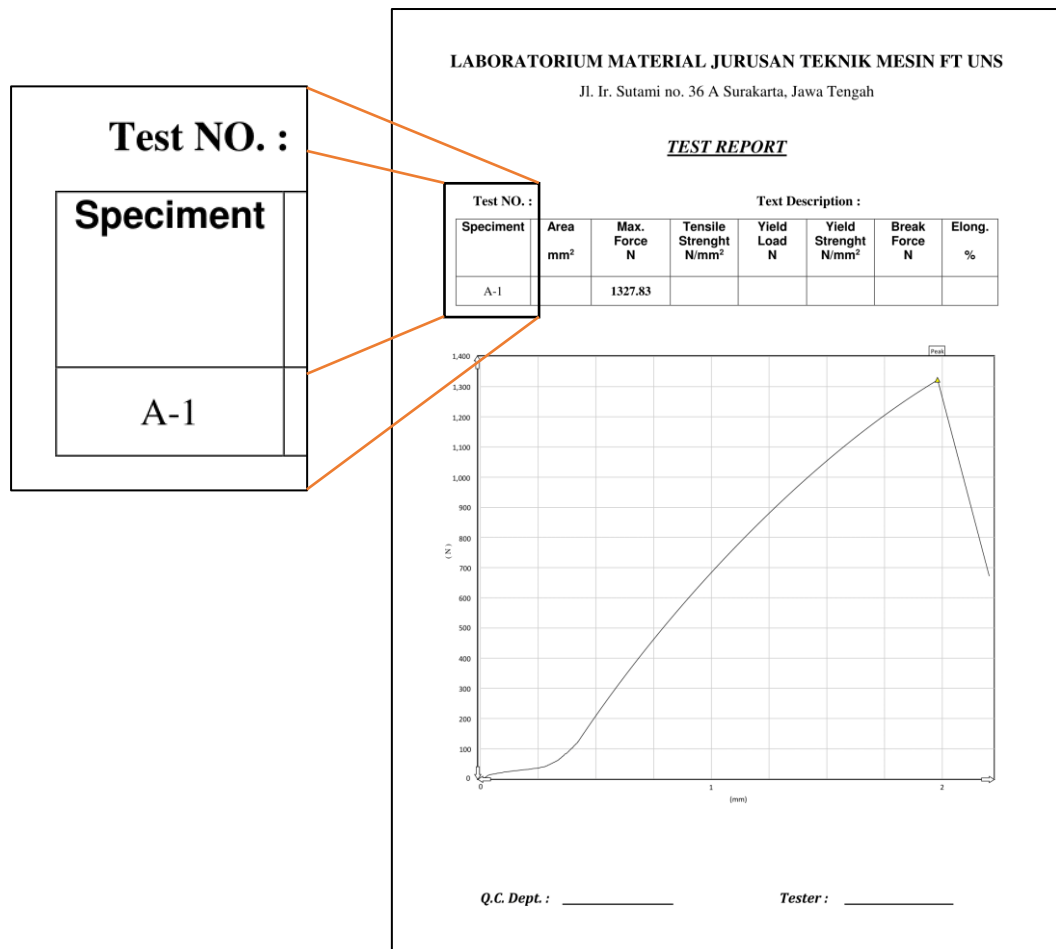
- A. Grafik Uji Tarik Komposit PMMA/sisal/mentah
- B. Grafik Uji Tarik Komposit PMMA/sisal/alkalisasi
- C. Grafik Uji Tarik Komposit PMMA/sisal/MAPP 3%
- D. Grafik Uji Tarik Komposit PMMA/sisal/MAPP 5%
- E. Grafik Uji Tarik Komposit PMMA/sisal/MAPP 10%

Keterangan :

Penamaan spesimen pada grafik menggunakan kode sebagai berikut:

- Huruf : Menunjukkan jenis variasi komposit
- Angka : Menunjukkan nomor spesimen

Contoh : A-1 adalah Grafik Uji Tarik dari Komposit PMMA/sisal/mentah dengan nomor spesimen ke 1 dari variasi tersebut.

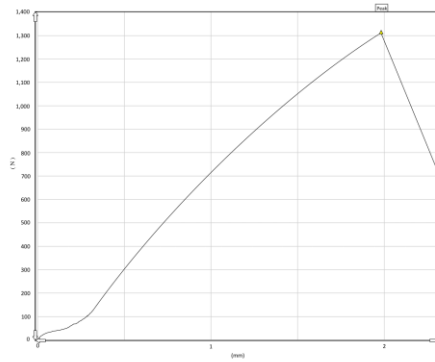


LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
A-2		1313.89					



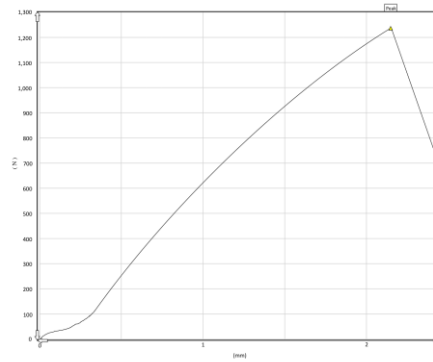
Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
A-3		1248.94					



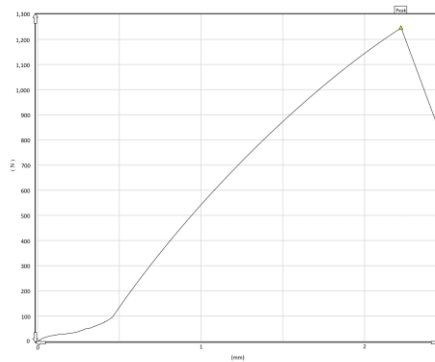
Q.C. Dept. : _____ Tester : _____

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TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
A-4		1254.36					



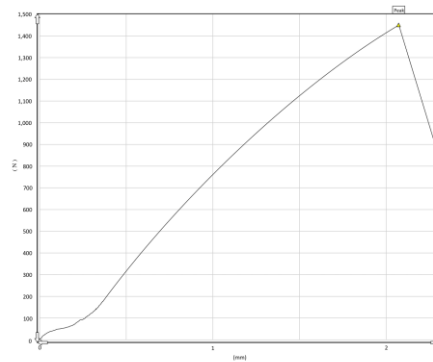
Q.C. Dept. : _____ Tester : _____

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 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
A-5		1452.32					



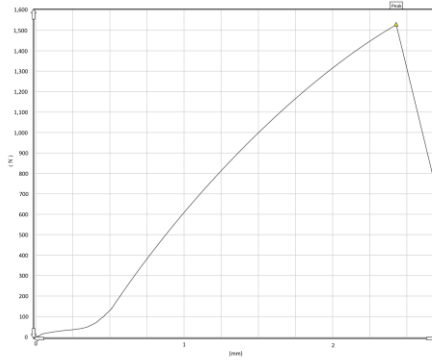
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
B-1		1531.72					



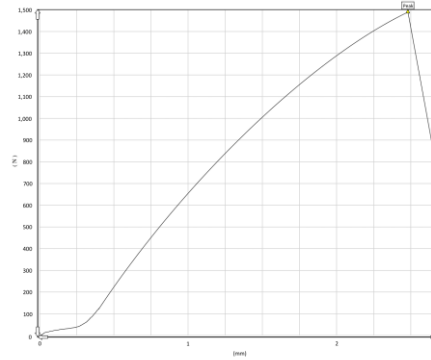
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
B-2		1489.98					



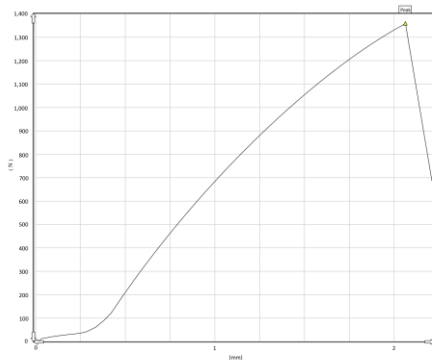
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
B-3		1367.83					



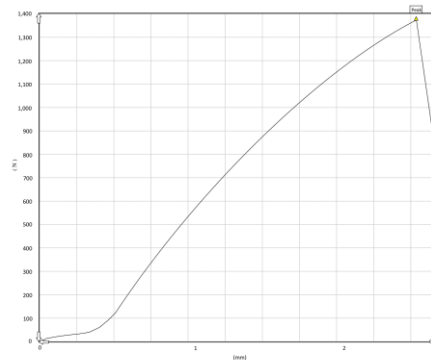
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
B-5		1378.94					



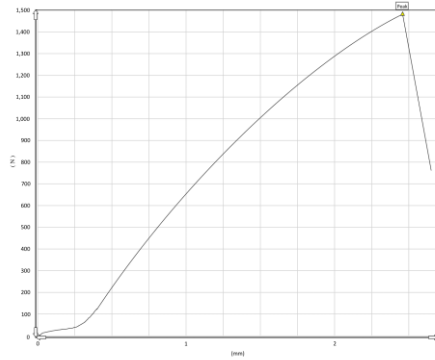
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
B-4		1482.92					



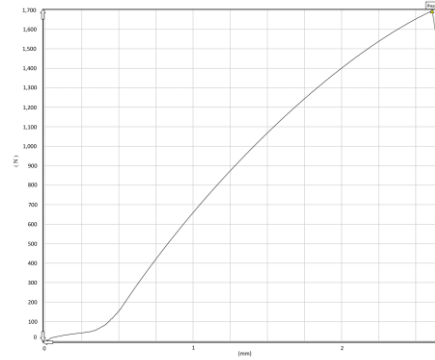
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
C-1		1695.61					



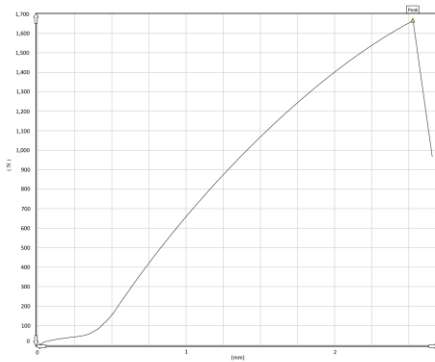
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
C-2		1678.88					



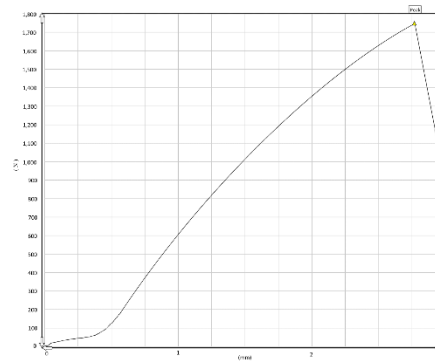
Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
C-3		1750.32					



Q.C. Dept. : _____ Tester : _____

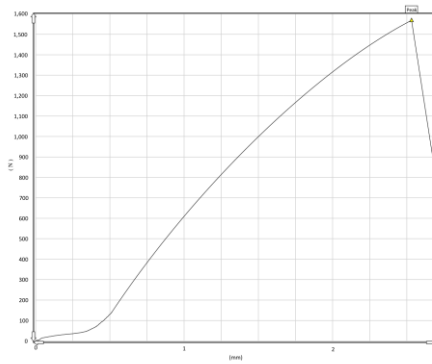
LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS

Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
C-4		1576.49					



Q.C. Dept. : _____ Tester : _____

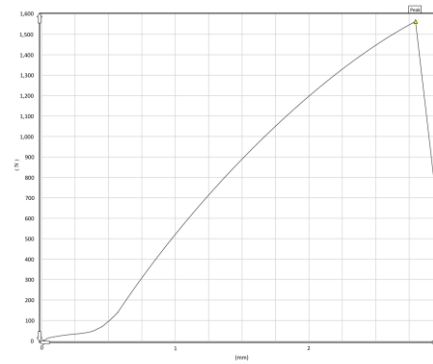
LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS

Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
C-5		1572.37					



Q.C. Dept. : _____ Tester : _____

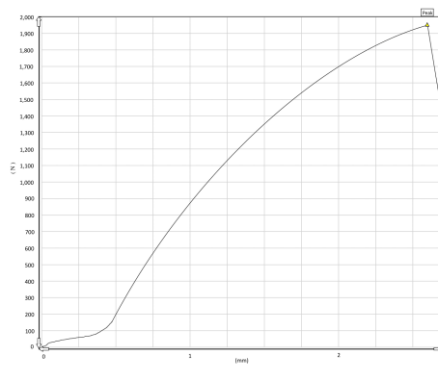
LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS

Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
D-1		1940.71					



Q.C. Dept. : _____ Tester : _____

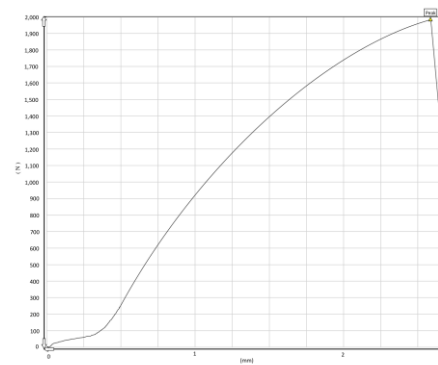
LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS

Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

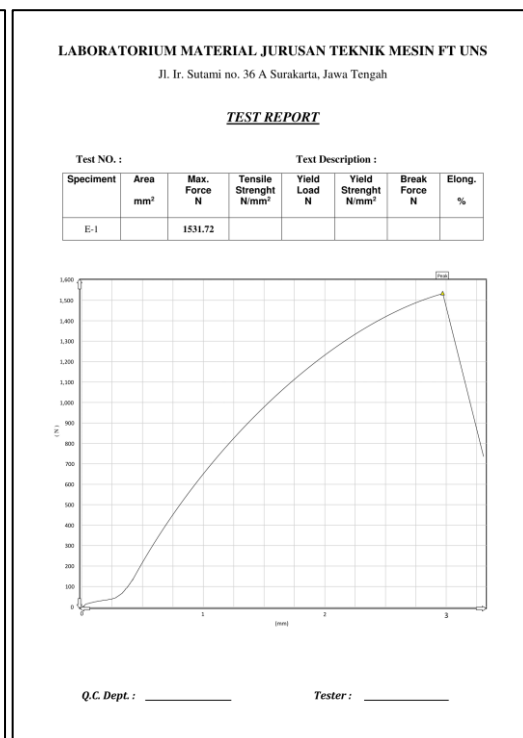
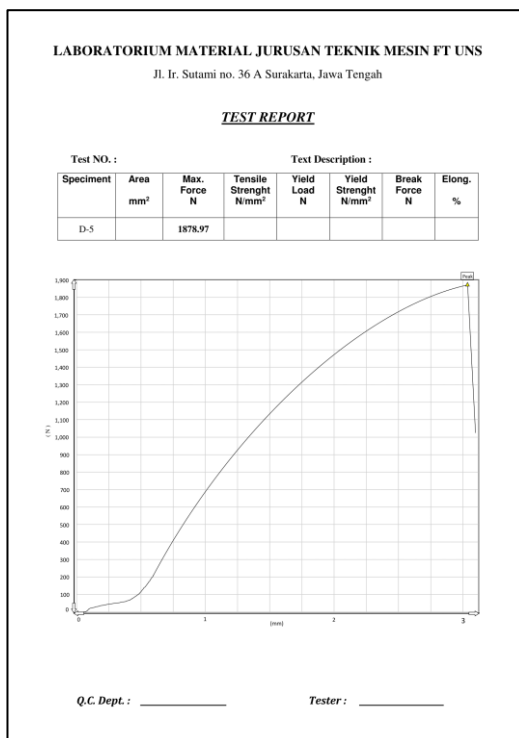
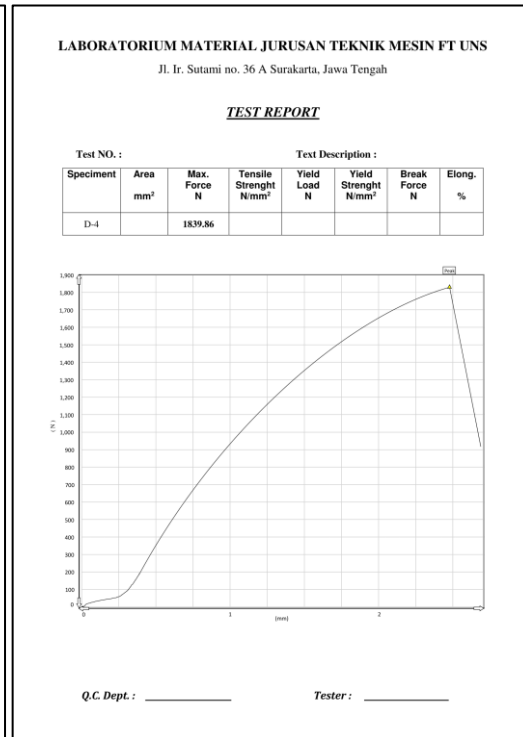
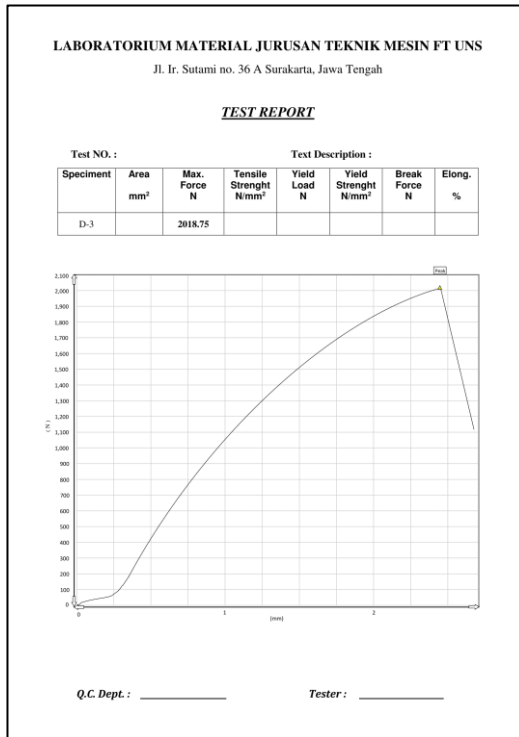
TEST REPORT

Test NO. : _____ Text Description : _____

Speciment	Area mm ²	Max. Force N	Tensile Strenght N/mm ²	Yield Load N	Yield Strenght N/mm ²	Break Force N	Elong. %
D-2		1987.93					



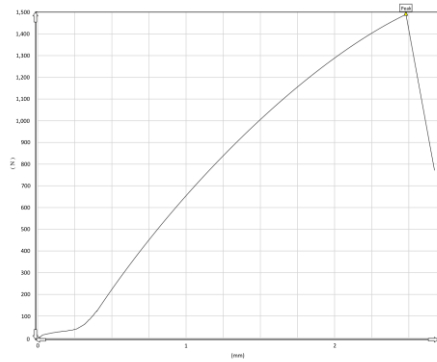
Q.C. Dept. : _____ Tester : _____



LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Specimen	Area mm ²	Max. Force N	Tensile Strength N/mm ²	Yield Load N	Yield Strength N/mm ²	Break Force N	Elong. %
E-2		1489,98					

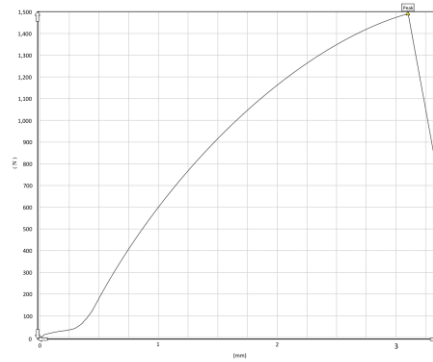


Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Specimen	Area mm ²	Max. Force N	Tensile Strength N/mm ²	Yield Load N	Yield Strength N/mm ²	Break Force N	Elong. %
E-3		1487,83					

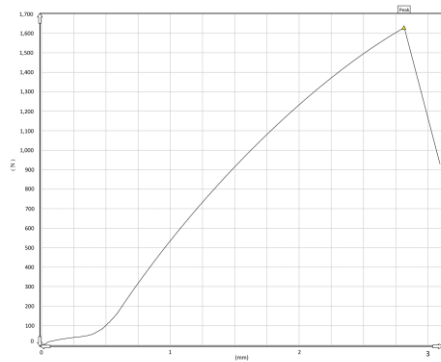


Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Specimen	Area mm ²	Max. Force N	Tensile Strength N/mm ²	Yield Load N	Yield Strength N/mm ²	Break Force N	Elong. %
E-4		1632,92					

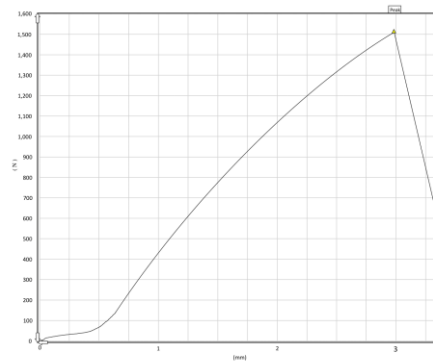


Q.C. Dept. : _____ Tester : _____

LABORATORIUM MATERIAL JURUSAN TEKNIK MESIN FT UNS
 Jl. Ir. Sutami no. 36 A Surakarta, Jawa Tengah

TEST REPORT

Specimen	Area mm ²	Max. Force N	Tensile Strength N/mm ²	Yield Load N	Yield Strength N/mm ²	Break Force N	Elong. %
E-		1508,94					



Q.C. Dept. : _____ Tester : _____