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LAMPIRAN

Lampiran 1 Data Hasil Penelitian

LABORATORIUM METALURGI FISIK

TENSILE KOMPOSIT BAMBU

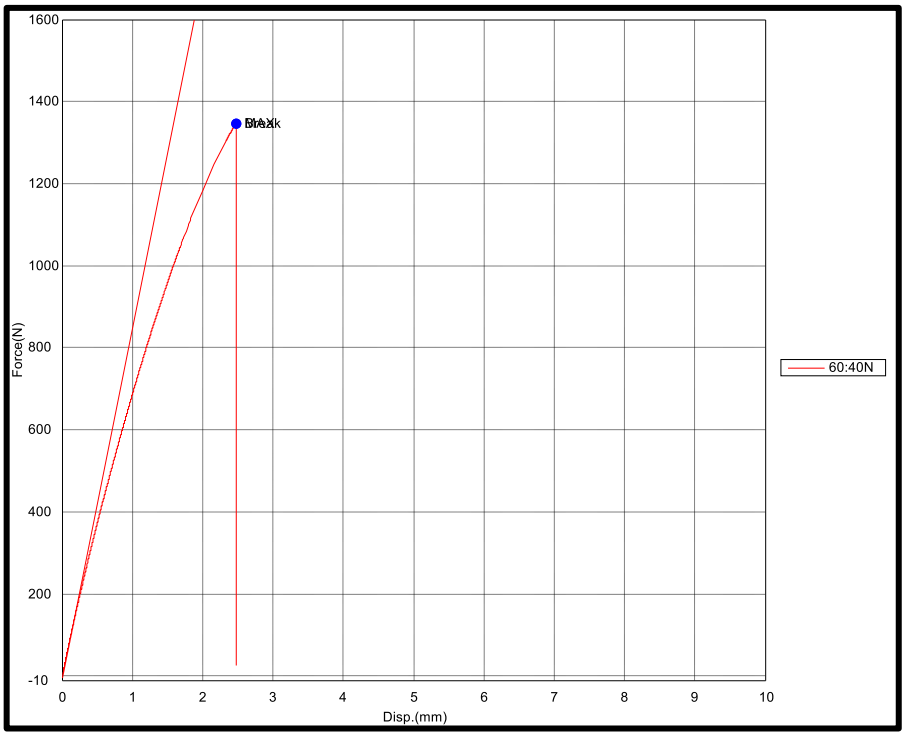
Key Word	KR-T	**Product Name**	Komposit Serbuk Bambu
Test File Name	diaz.ltax	**Method File Name**	TENSILE KOMPOSIT.lma
Operator	Edi Iskandar	**Report Date**	2213/01/08
Test Date	2213/01/07	**Temperature**	26
Test Type	Tensile	**Speed**	1mm/min
Shape	Plate	**No of Batches:**	1
Qty/Batch:	6		

Name	Thickness	Width	Gauge_Length
Unit	mm	mm	mm
60:40N1	3.0000	13.0000	150.0000
55:45N1	3.0000	13.0000	150.0000
50:50N1	3.0000	13.0000	150.0000
60:40T1	3.0000	13.0000	150.0000
55:45T1	3.0000	13.0000	150.0000
50:50T1	3.0000	13.0000	150.0000

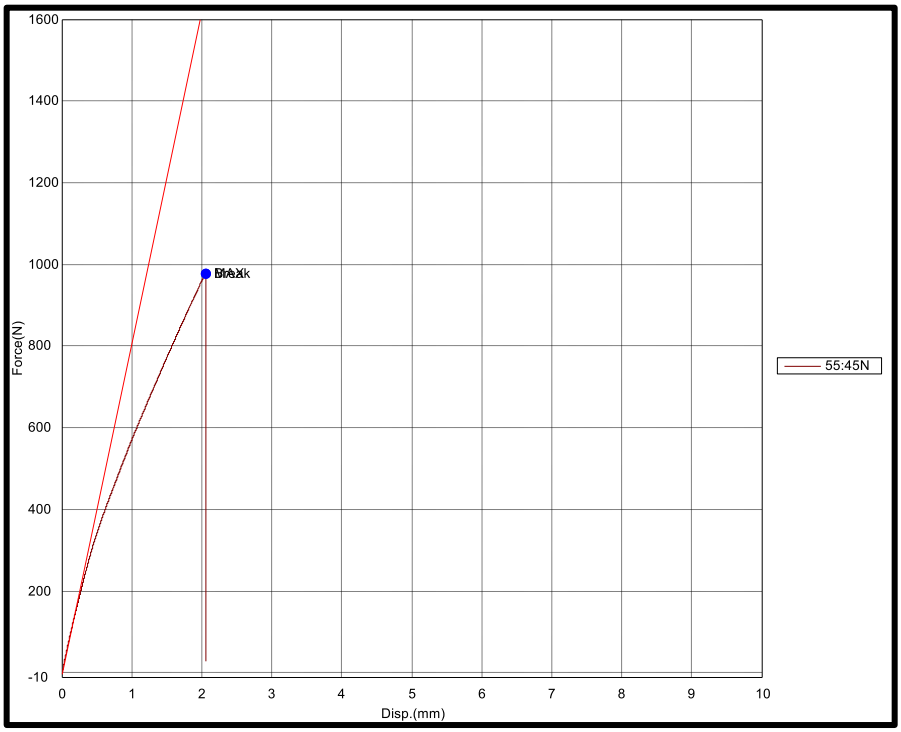
Name	Elastic	Max_Force	Max_Disp.	Break_Force
Parameters	Force 10 – 20 N	Calc. at Entire Area	Calc. at Entire Area	Sensitivity 10
Unit	N/mm2	N	mm	N
60:40N1	3290.62	1347.04	2.47153	1347.04
55:45N1	3126.51	978.192	2.05337	978.192
50:50N1	3558.29	1200.03	2.83957	1200.03
60:40T1	1077.15	919.602	3.82470	909.449
55:45T1	1930.39	837.245	3.98437	835.368
50:50T1	1065.61	749.999	3.54273	731.545

Name	Break_Disp.
Parameters	Sensitivity 10
Unit	mm
60:40N1	2.47153
55:45N1	2.05337
50:50N1	2.83957
60:40T1	4.09637
55:45T1	3.99303
50:50T1	3.69293

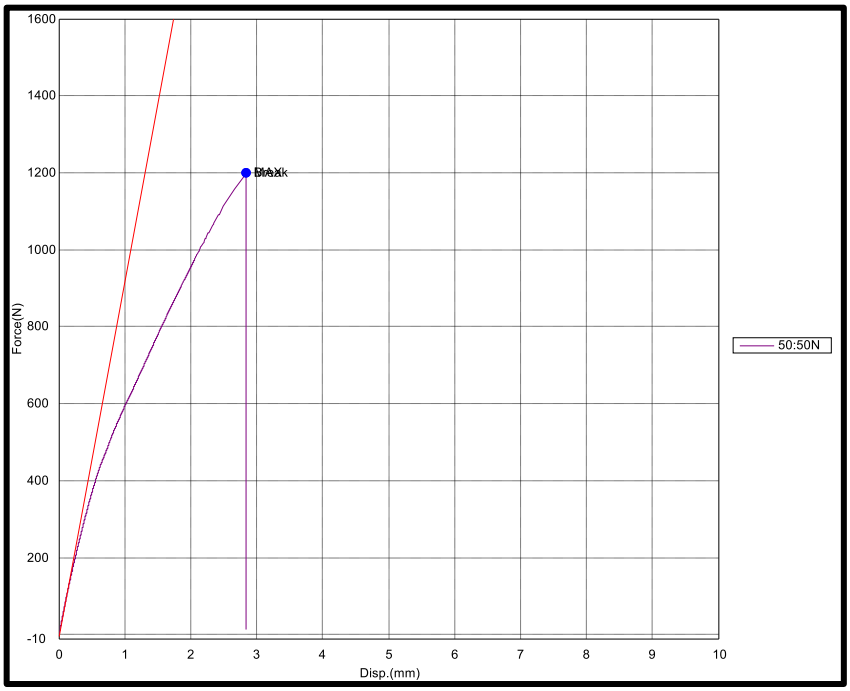
Gambar A. 1 Hasil Pengujian Tarik Bamboo Powder Composite Sampel 1



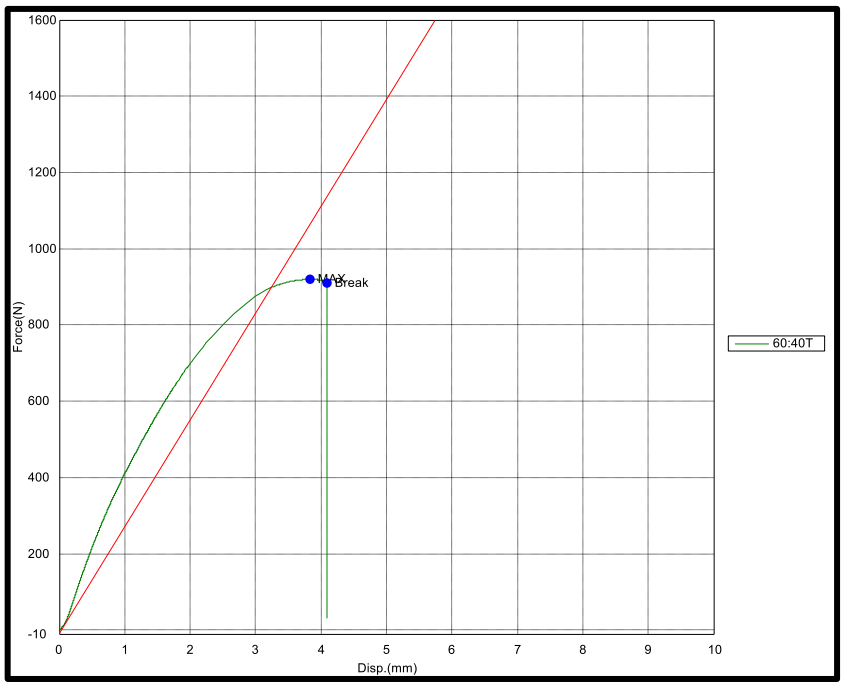
Gambar A. 2 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (60%:40%) Temperatur 28˚C



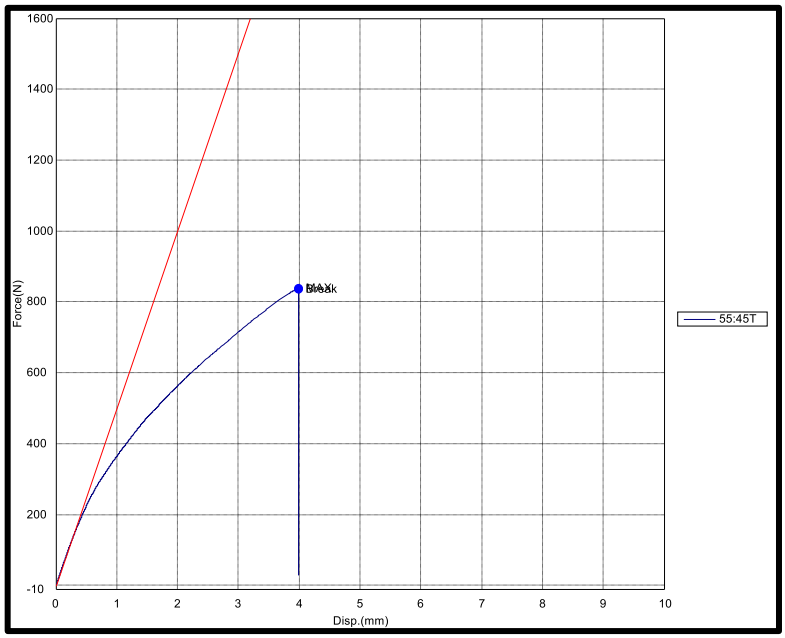
Gambar A. 3 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (55%:45%) Temperatur 28˚C



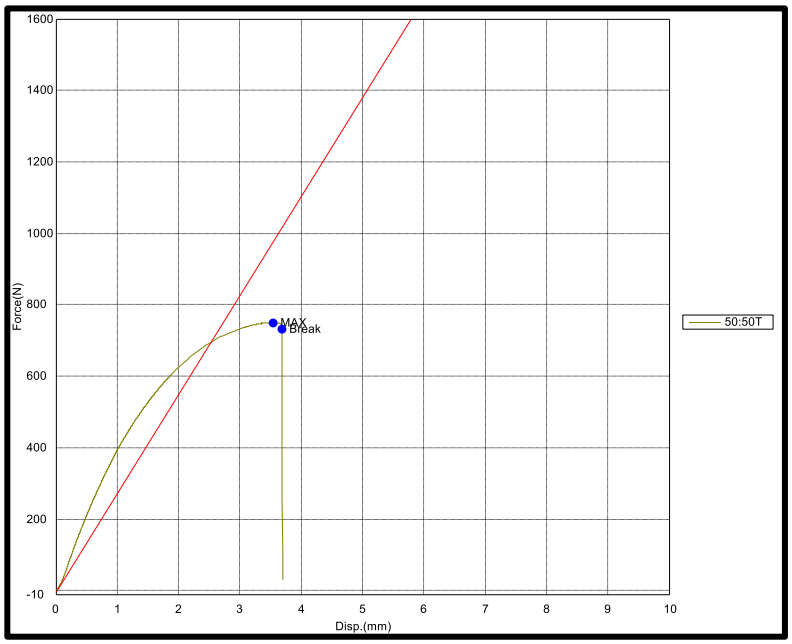
Gambar A. 4 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 28˚C



Gambar A. 5 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (60%:40%) Temperatur 40˚C



Gambar A. 6 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (55%:45%) Temperatur 40˚C



Gambar A. 7 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 40˚C

LABORATORIUM METALURGI FISIK

TENSILE KOMPOSIT BAMBU

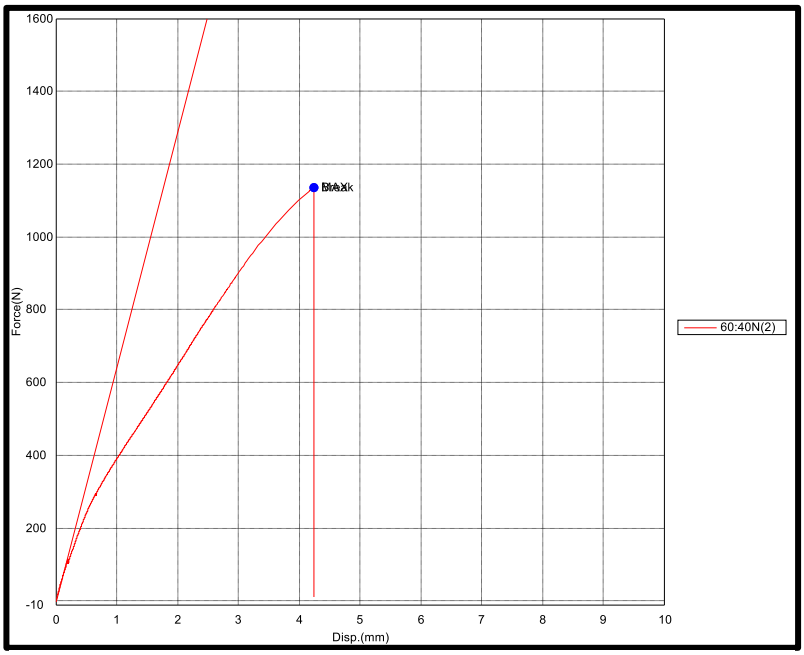
Key Word	KR-T	**Product Name**	komposit bambu
Test File Name	Diaz 2.ltax	**Method File Name**	TENSILE KOMPOSIT.lma
Operator	Edi Iskandar	**Report Date**	2213/01/08
Test Date	2213/01/07	**Temperature**	26
Test Type	Tensile	**Speed**	1mm/min
Shape	Plate	**No of Batches:**	1
Qty/Batch:	6		

Name	Thickness	Width	Gauge_Length
Unit	mm	mm	mm
60:40N(2)	3.0000	13.0000	150.0000
55:45N(2)	3.0000	13.0000	150.0000
50:50N(2)	3.0000	13.0000	150.0000
60:40N(3)	3.0000	13.0000	150.0000
55:45N(3)	3.0000	13.0000	150.0000
50:50N(3)	3.0000	13.0000	150.0000

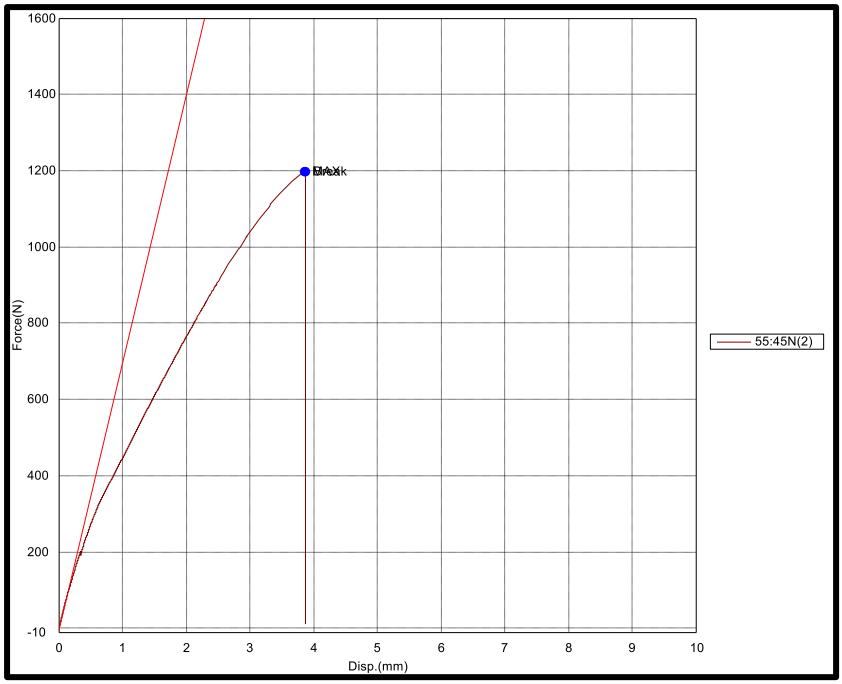
Name	Elastic	Max_Force	Max_Disp.	Break_Force
Parameters	Force 10 - 20 N	Calc. at Entire Area	Calc. at Entire Area	Sensitivity 10
Unit	N/mm2	N	mm	N
60:40N(2)	2483.13	1135.99	4.23900	1135.99
55:45N(2)	2698.37	1197.02	3.86487	1196.49
50:50N(2)	2582.91	1119.16	3.92623	1118.74
60:40N(3)	2453.43	1011.81	3.29177	1011.81
55:45N(3)	3044.26	1144.19	3.12123	1144.19
50:50N(3)	3101.65	1053.18	2.30367	1053.18

Name	Break_Disp.
Parameters	Sensitivity 10
Unit	mm
60:40N(2)	4.23900
55:45N(2)	3.87267
50:50N(2)	3.92990
60:40N(3)	3.29177
55:45N(3)	3.12123
50:50N(3)	2.30367

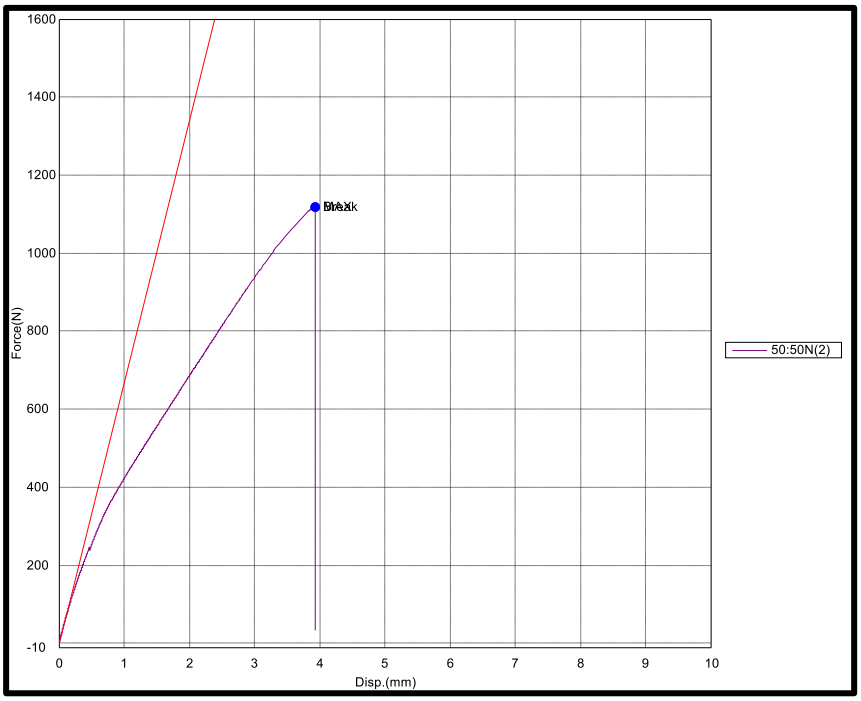
Gambar A. 8 Hasil Pengujian Tarik Sampel 2 dan 3 Pada Temperatur 28˚C



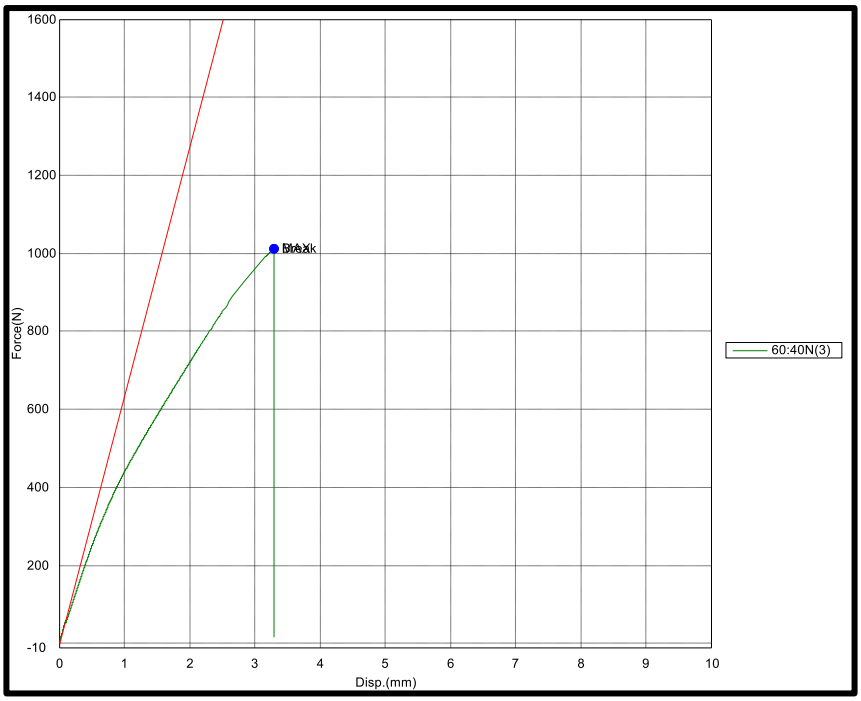
Gambar A. 9 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (60%:40%) Temperatur 28˚C



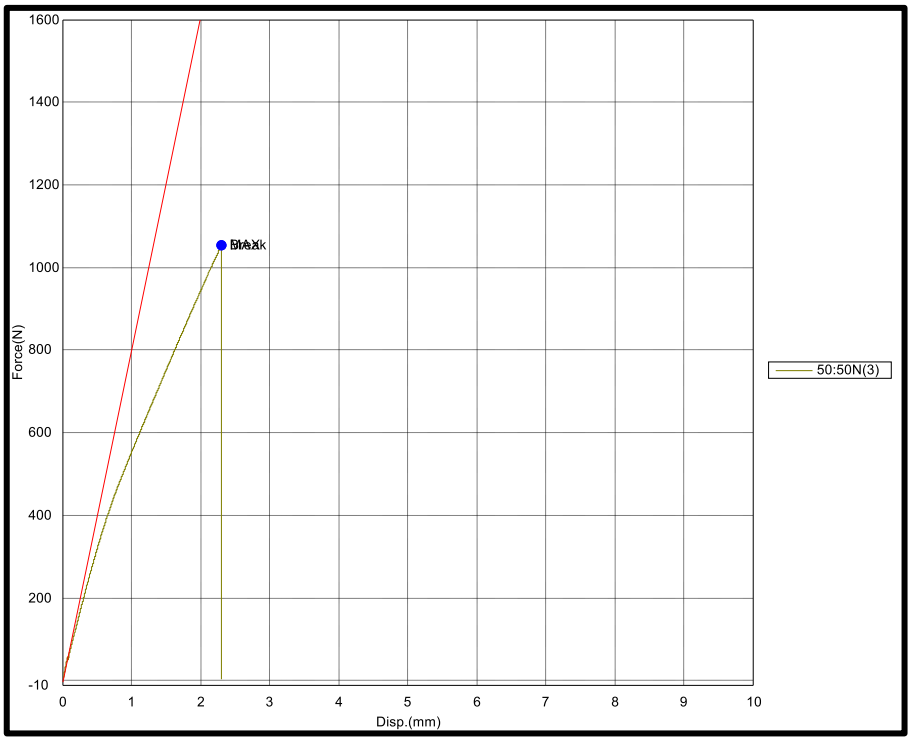
Gambar A. 10 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (55%:45%) Temperatur 28˚C



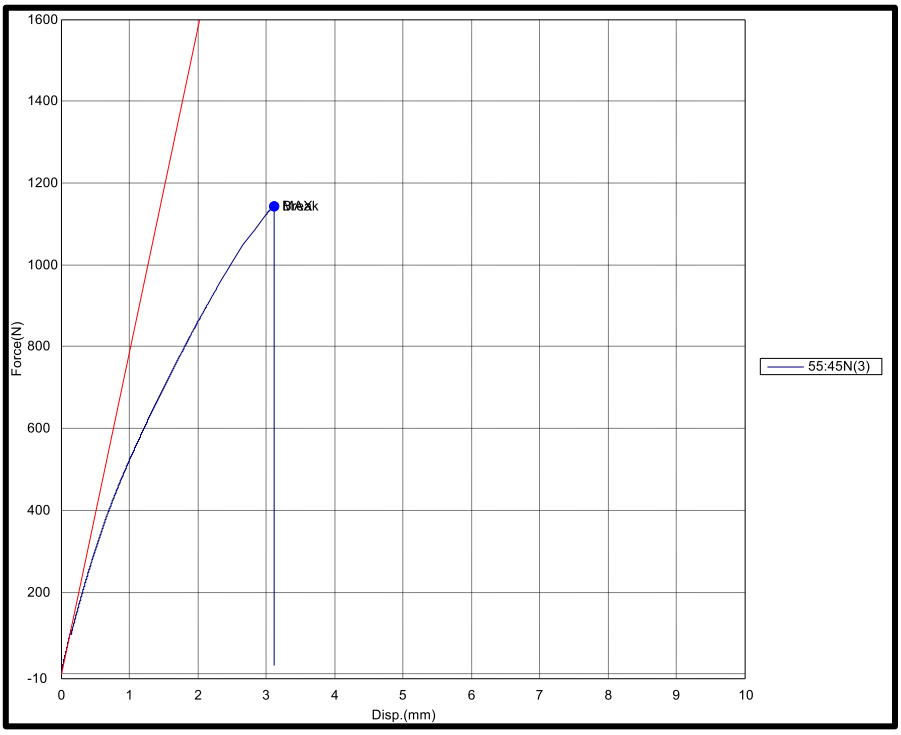
Gambar A. 11 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 28˚C



Gambar A. 12 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (60%:40%) Temperatur 28˚C



Gambar A. 13 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 28˚C



Gambar A. 14 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 28˚C

LABORATORIUM METALURGI FISIK

TENSILE KOMPOSIT BAMBU

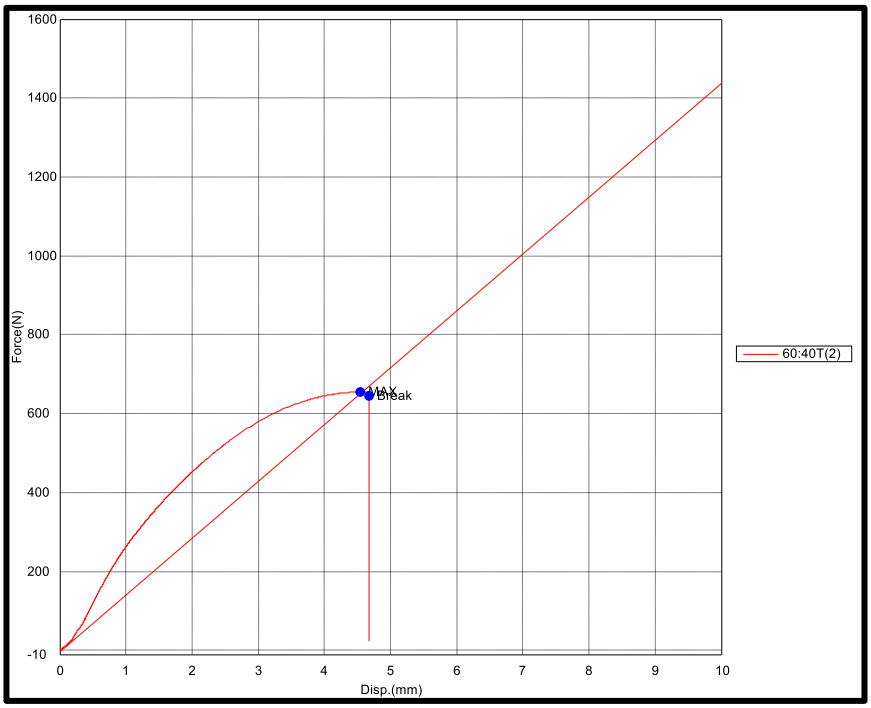
Key Word	KR-T	**Product Name**	Komposit Bambu
Test File Name	Diaz 3.ltax	**Method File Name**	TENSILE KOMPOSIT.lma
Operator	Edi Iskandar	**Report Date**	2213/01/08
Test Date	2213/01/07	**Temperature**	26
Test Type	Tensile	**Speed**	1mm/min
Shape	Plate	**No of Batches:**	1
Qty/Batch:	6		

Name	Thickness	Width	Gauge_Length
Unit	mm	mm	mm
60:40T(2)	3.0000	13.0000	150.0000
55:45T(2)	3.0000	13.0000	150.0000
50:50T(2)	3.0000	13.0000	150.0000
60:40T(3)	3.0000	13.0000	150.0000
55:45T(3)	3.0000	13.0000	150.0000
50:50T(3)	3.0000	13.0000	150.0000

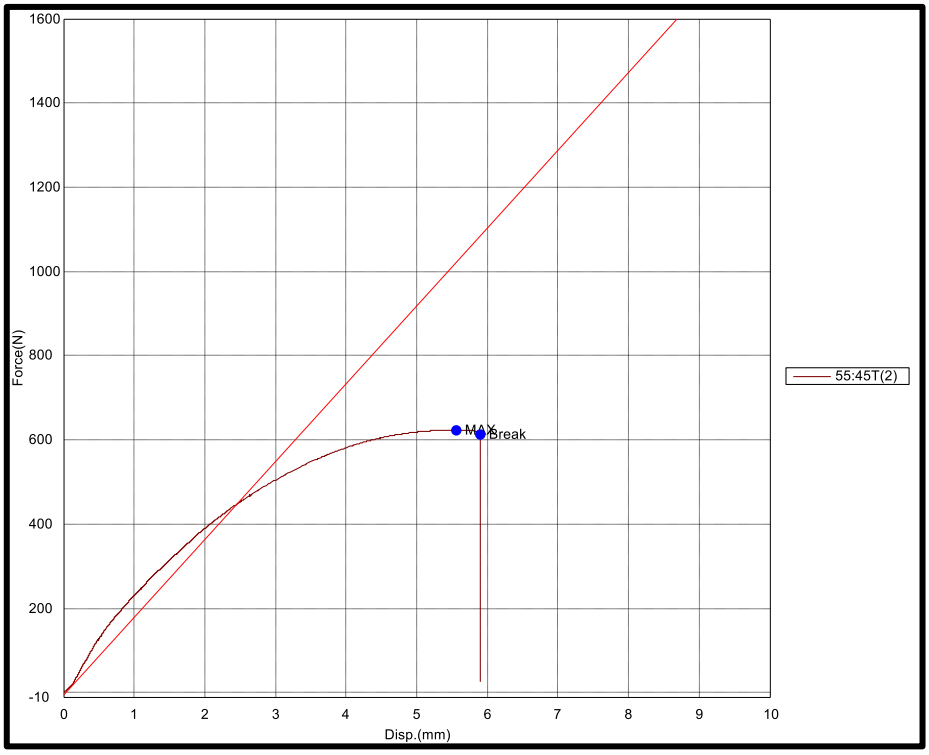
Name	Elastic	Max_Force	Max_Disp.	Break_Force
Parameters	Force 10 – 20 N	Calc. at Entire Area	Calc. at Entire Area	Sensitivity 10
Unit	N/mm2	N	mm	N
60:40T(2)	554.170	655.387	4.53890	646.009
55:45T(2)	710.845	624.091	5.56370	613.230
50:50T(2)	1100.76	728.461	4.05437	719.935
60:40T(3)	806.457	797.277	4.68070	778.781
55:45T(3)	797.736	658.157	4.05603	653.700
50:50T(3)	1304.77	678.653	3.45870	668.627

Name	Break_Disp.
Parameters	Sensitivity 10
Unit	mm
60:40T(2)	4.67523
55:45T(2)	5.89403
50:50T(2)	4.16303
60:40T(3)	5.23337
55:45T(3)	4.12803
50:50T(3)	3.58087

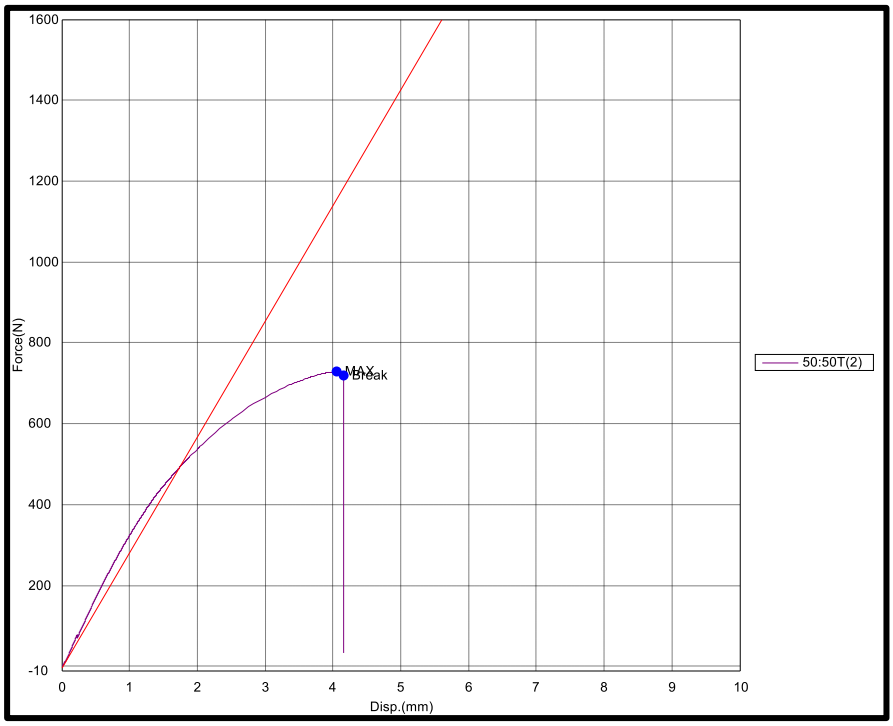
Gambar A. 15 Data Hasil Pengujian *Bamboo Powder Composite* Sampel 2 dan 3 Temperatur 40˚C



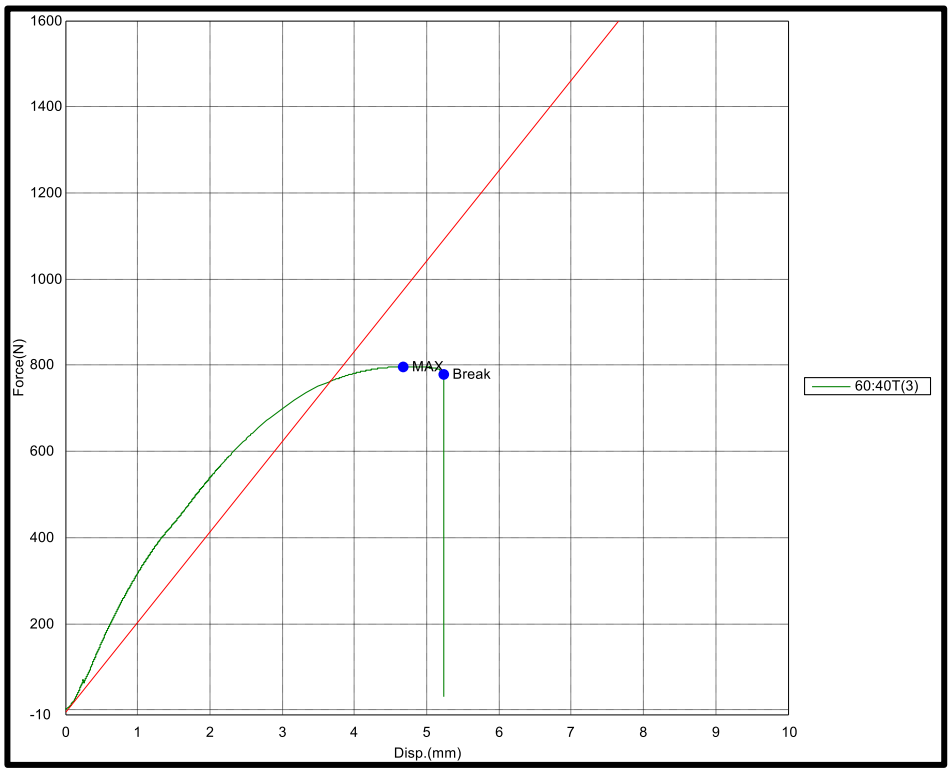
Gambar A. 16 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (60%:40%) Temperatur 40˚C



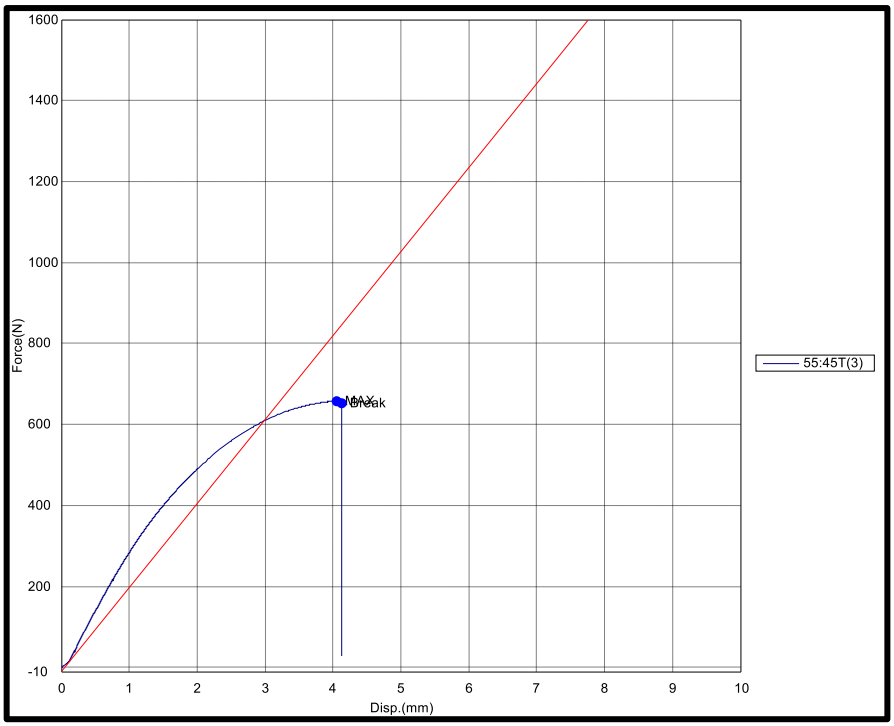
Gambar A. 17 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (55%:45%) Temperatur 40˚C



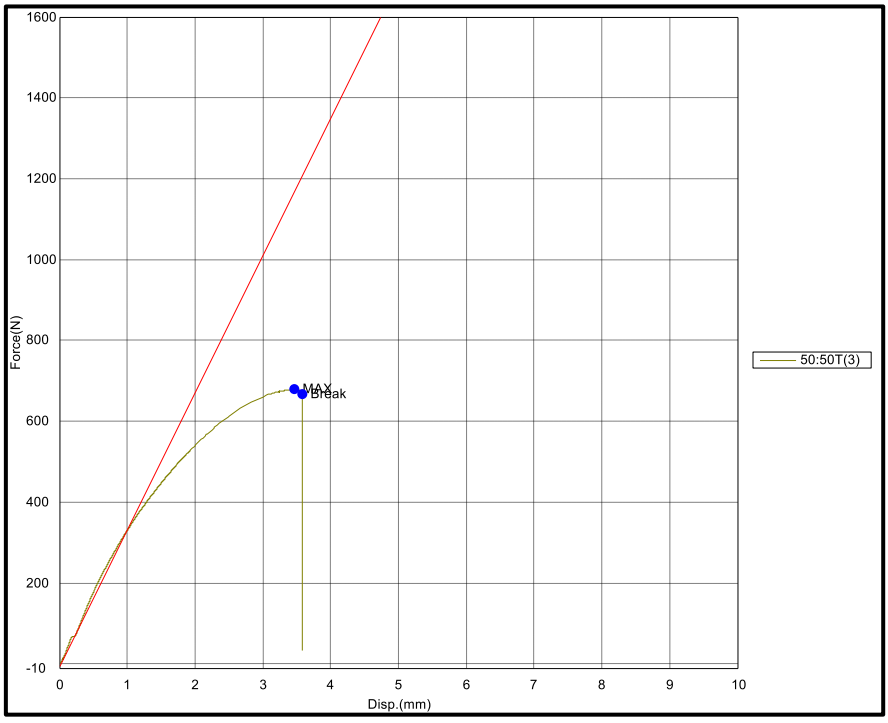
Gambar A. 18 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 40˚C



Gambar A. 19 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (60%:40%) Temperatur 40˚C



Gambar A. 20 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (55%:45%) Temperatur 40˚C



Gambar A. 21 Hubungan *Force* dengan *Disp Bamboo Powder Composite* (50%:50%) Temperatur 40˚C

LABORATORIUM METALURGI FISIK

RESIN POLYESTER

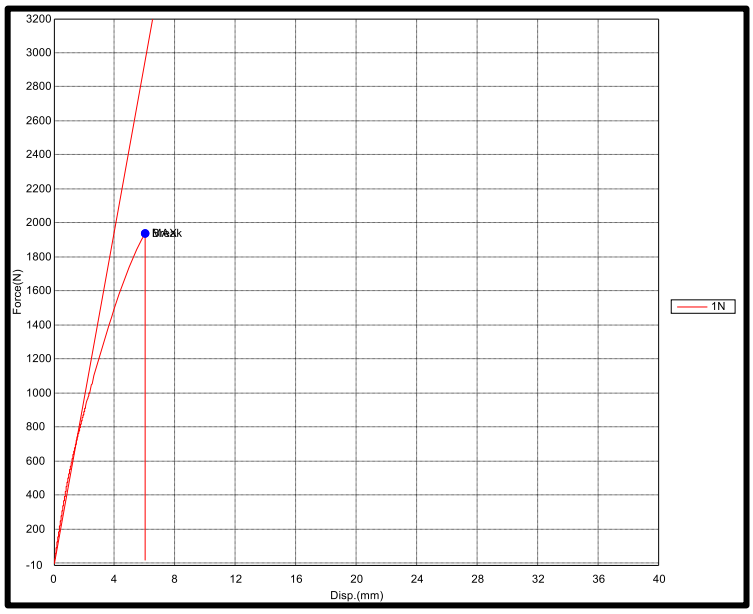
Key Word	KR-T	**Product Name**	Resin Polyester
Test File Name	Resin Polyesterltax	**Method File Name**	TENSILE KOMPOSIT.lma
Operator	Edi Iskandar	**Report Date**	2213/01/08
Test Date	2213/01/08	**Temperature**	26
Test Type	Tensile	**Speed**	1mm/min
Shape	Plate	**No of Batches:**	1
Qty/Batch:	6		

Name	Thickness	Width	Gauge_Length
Unit	mm	mm	mm
1N	3.0000	13.0000	150.0000
2N	3.0000	13.0000	150.0000
3N	3.0000	13.0000	150.0000
1T	3.0000	13.0000	150.0000
2T	3.0000	13.0000	150.0000
3T	3.0000	13.0000	150.0000

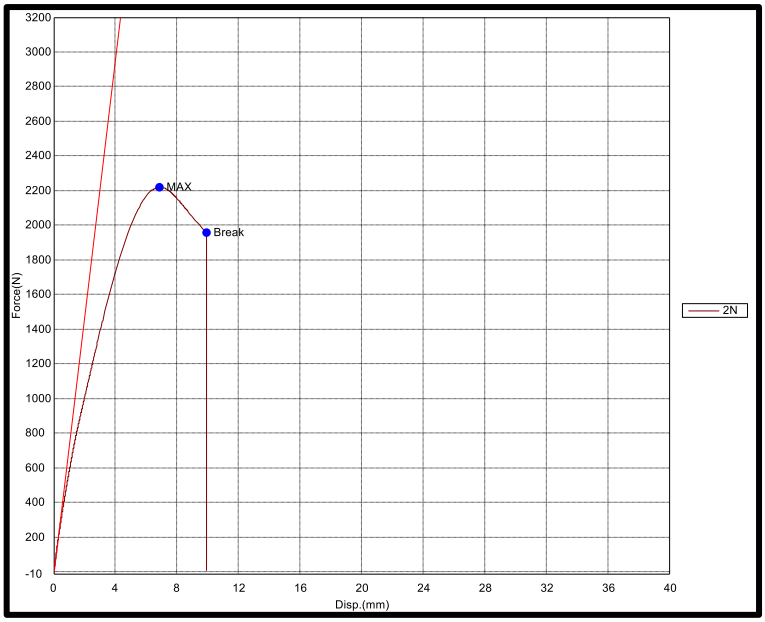
Name	Elastic	Max_Force	Max_Disp.	Break_Force
Parameters	Force 10 - 20 N	Calc. at Entire Area	Calc. at Entire Area	Sensitivity 10
Unit	N/mm2	N	mm	N
1N	1892.79	1936.19	6.05287	1936.19
2N	2856.31	2219.13	6.88253	1958.12
3N	2464.87	2147.60	5.44153	2147.60
1T	769.423	992.987	5.72270	957.087
2T	673.839	931.946	4.94000	800.722
3T	808.094	960.805	5.13503	869.483

Name	Break_Disp.
Parameters	Sensitivity 10
Unit	mm
1N	6.05287
2N	9.95170
3N	5.44153
1T	22.1487
2T	15.8237
3T	10.0377

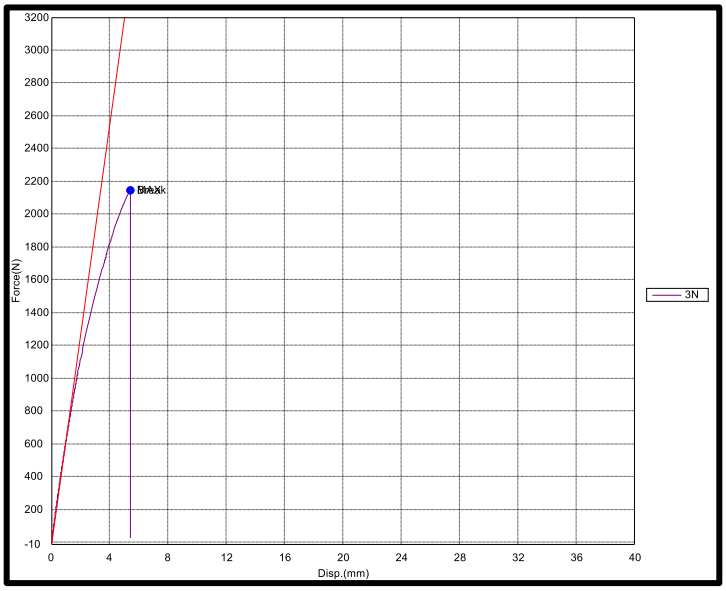
Gambar A. 22 Hasil Pengujian Tarik Resin *Polyester*



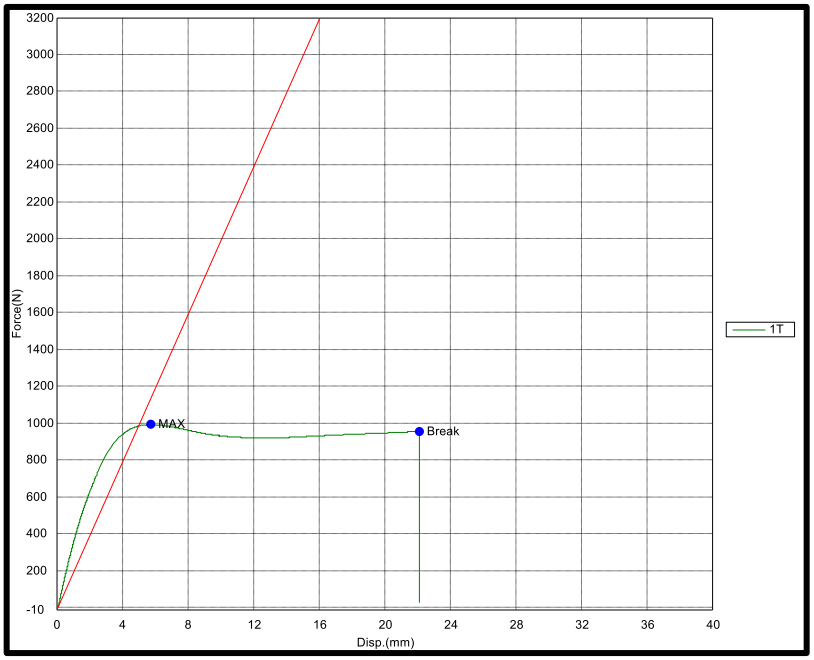
Gambar A. 23 Hubungan Tegangan dan Regangan Resin *Polyester* Sampel 1 28˚C



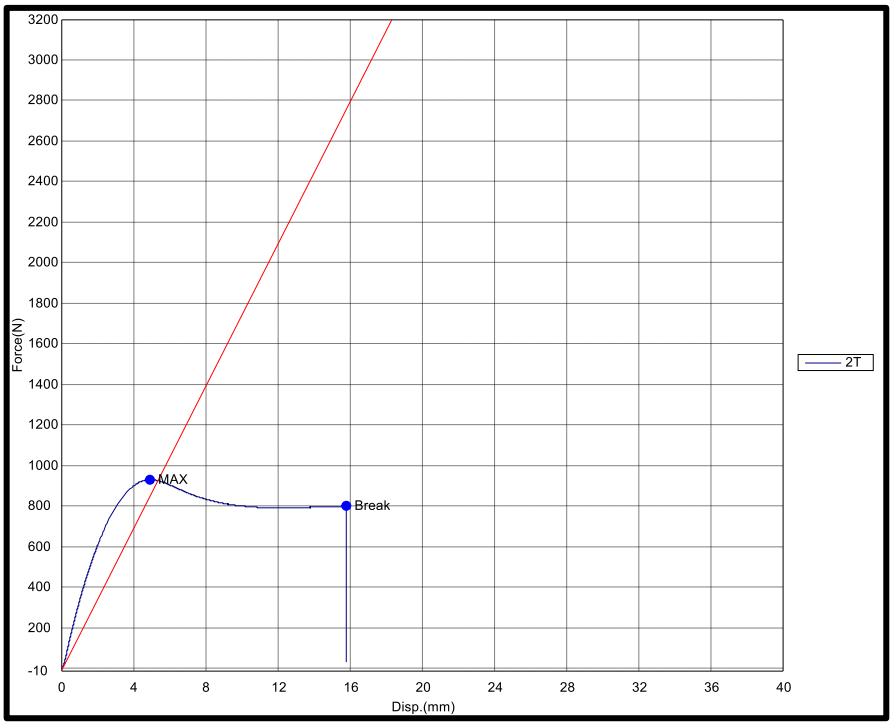
Gambar A. 24 Hubungan Tegangan dan Regangan Resin *Polyester* Sampel 2 28˚C



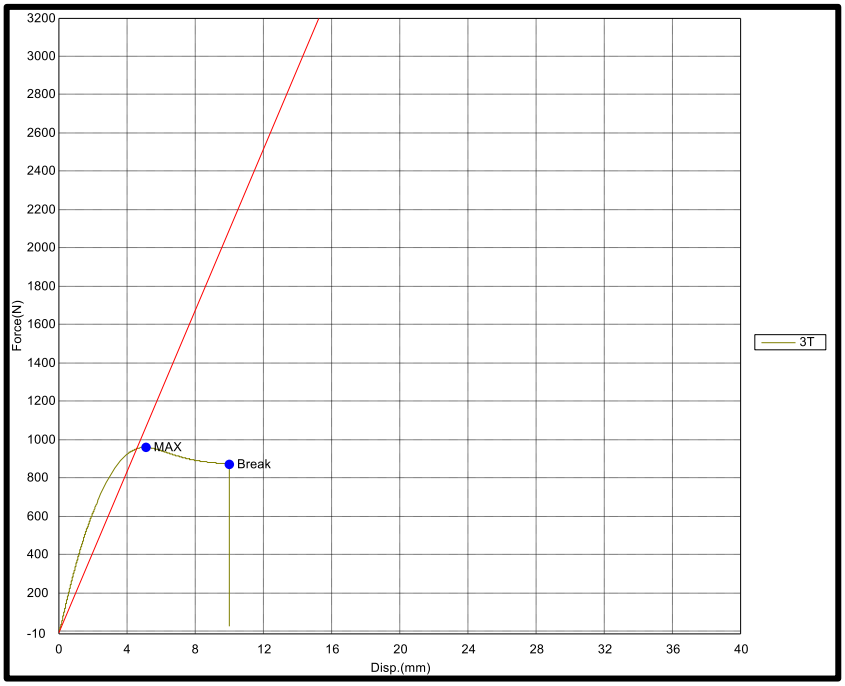
Gambar A. 25 Hubungan Tegangan dan Regangan Resin *Polyester* Sampel 3 28˚C



Gambar A. 26 Hubungan Tegangan dan Regangan Resin *Polyester* Sampel 1 40˚C



Gambar A. 27 Hubungan Tegangan dan Regangan Resin *Polyester* Sampel 2 40˚C



Gambar A. 28 Hubungan Tegangan dan Regangan Resin *Polyester* Sampel 3 40˚C

Lampiran 2 Gambar Proses Penelitian

Gambar B. 1 Penggilingan Bambu menggunakan Mesin *Disk Mill*

Gambar B. 2 Proses *Meshing* menggunakan *Mesh* 60 & 80

Gambar B. 3 Pemanasan Serbuk bambu menggunakan lampu pijar

Gambar B. 4 Penghitungan Densitas

Gambar B. 5 Melakukan Penggabungan cetakan kaca menggunakan lakban

Gambar B. 6 Melakukan pengolesan menggunakan *mirror glaze*

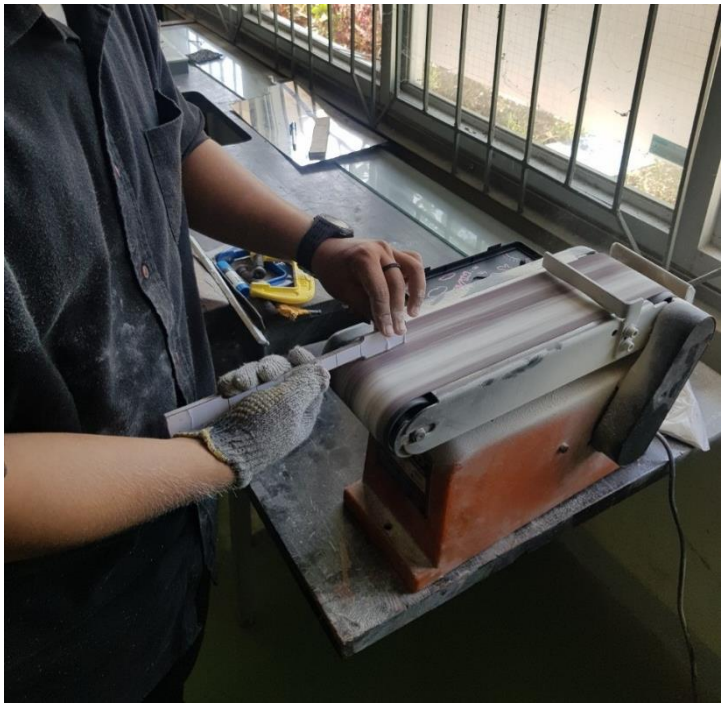
Gambar B. 7 Melakukan penimbangan serbuk bambu

Gambar B. 8 Melakukan penimbangan Resin *Polyester*

Gambar B. 9 Melakukan Penggabungan Resin, serbuk bambu dan *hardener*

Gambar B. 10 Pengadukan komposit

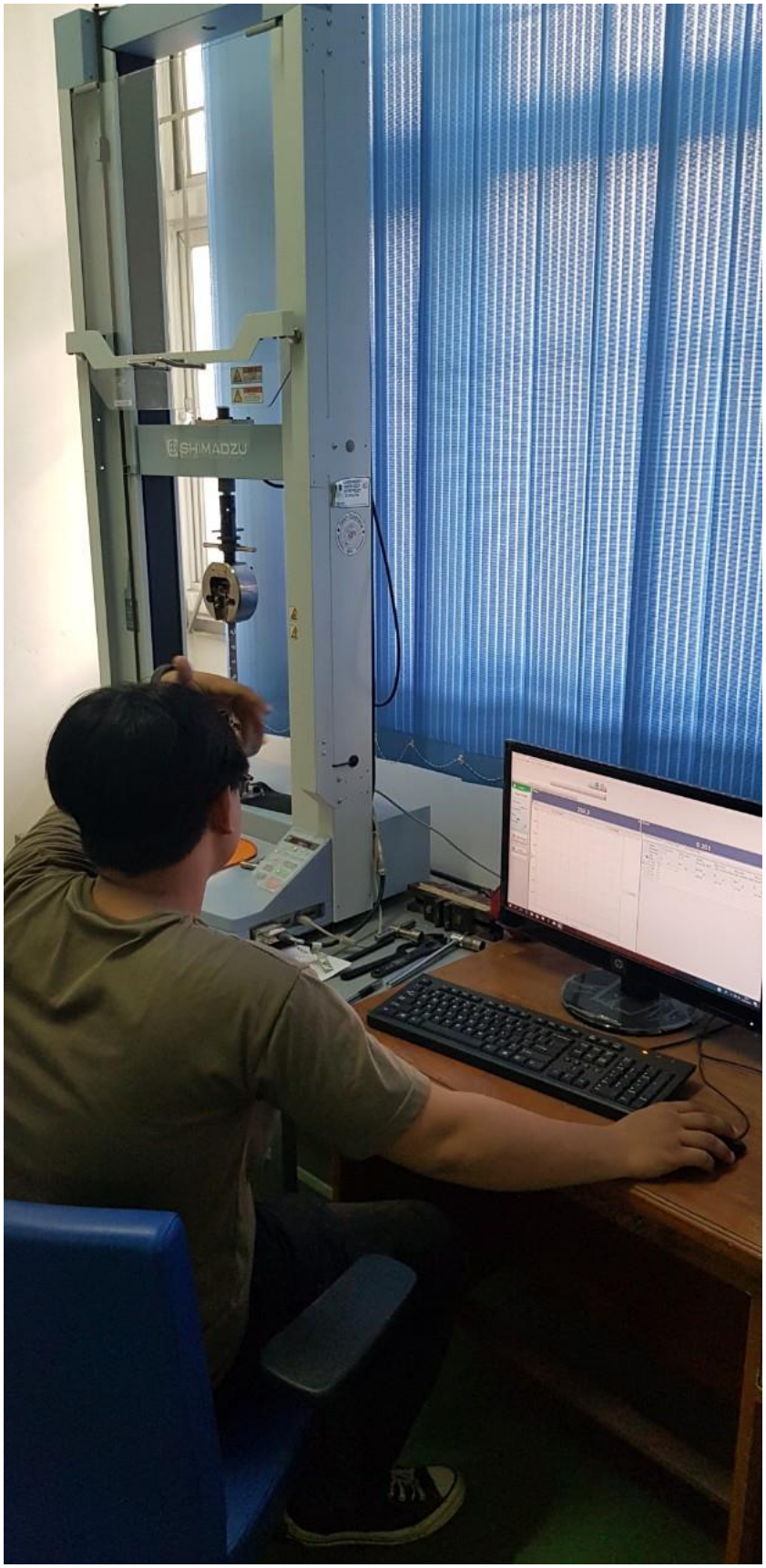
Gambar B. 11 Pemotongan menggunakan gurinda



Gambar B. 92 Pengamplasan menggunakan mesin amplas

Gambar B. 13 Pembuatan *Chamber*

Gambar B. 14 Chamber



Gambar B. 15 Pengujian Tarik 28˚C

Gambar B. 16 Pengujian Tarik 40˚C