

## LAMPIRAN

Perbandingan serat karbon/abaka (1:3)

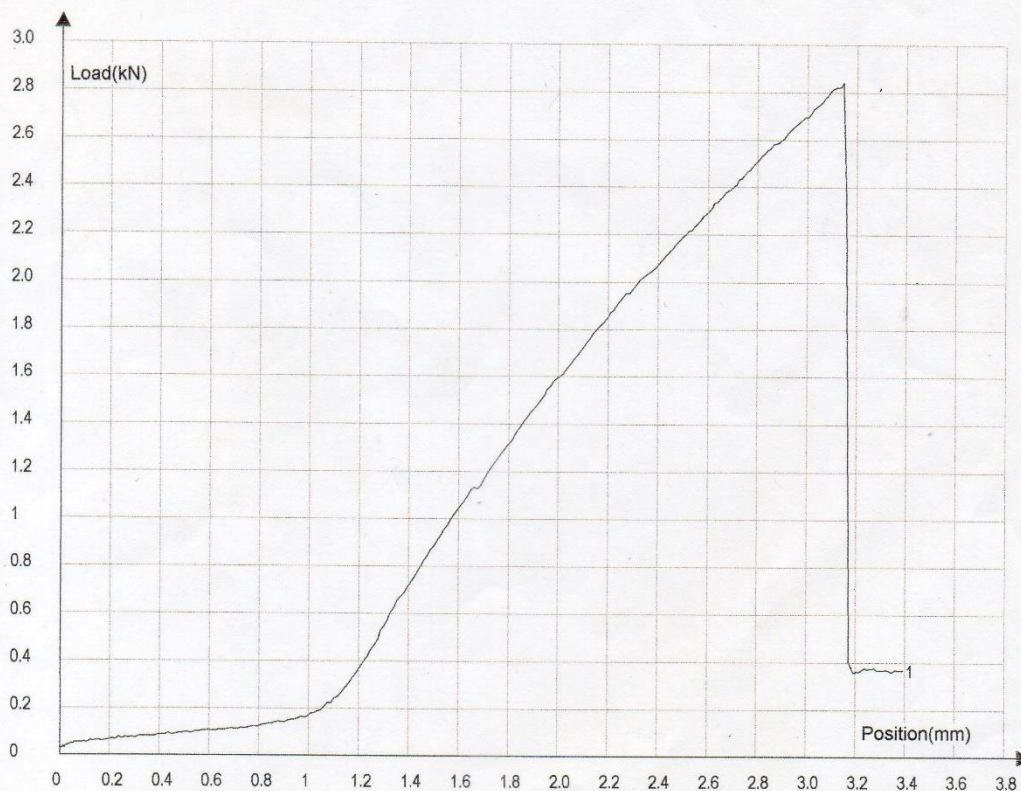
No	a (mm)	b (mm)	Beban (N)	$\Delta L$ (mm)	Mod.Elast (MPa)	Teg. Tarik (MPa)	Elongation (%)
1	3.4	12.7	2840	2.37	4579.01	65.77	1.44
2	3.6	13.0	3850	3.60	3770.48	82.26	2.18
3	3.6	13.0	3320	2.97	3941.12	70.94	1.80
4	3.4	13.0	3101	2.77	4179.11	70.16	1.68
5	3.3	13.0	3250	3.56	3511.24	75.76	2.16
Min					3511.24	65.77	1.44
Max					4579.01	82.26	2.18
Rata-Rata					4010.17	73.28	1.84
Standar Deviasi					281.48	6.29	0.09

## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.40		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	43.18			66		2.84			

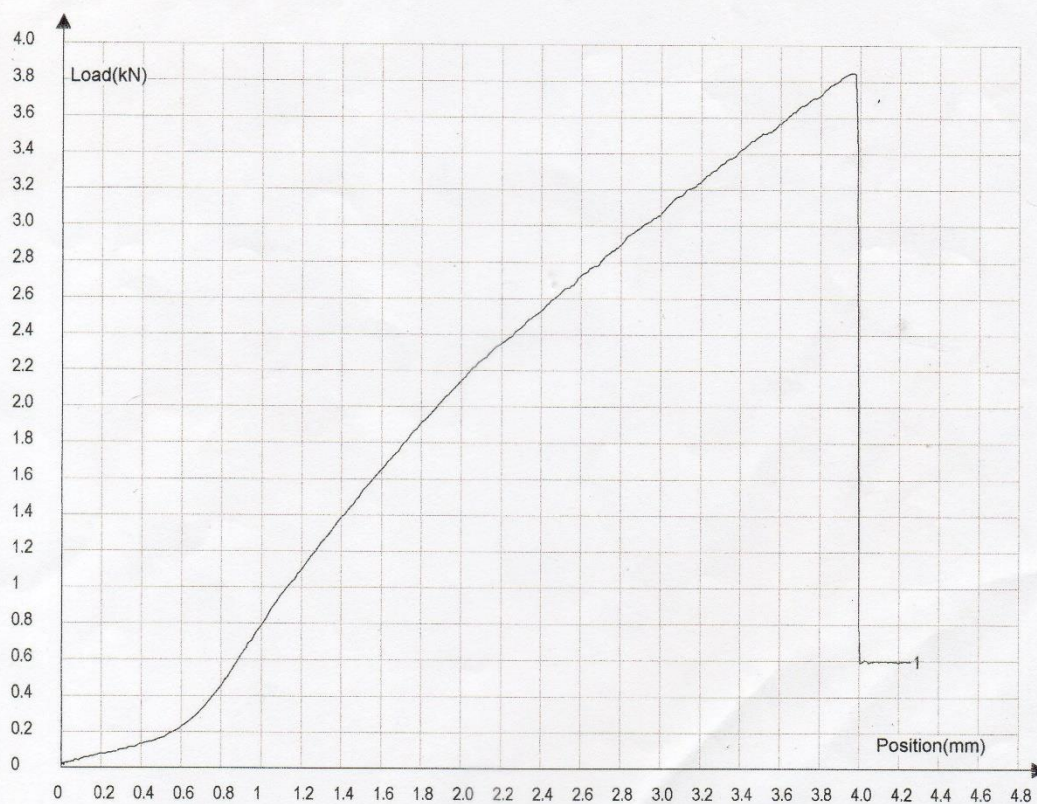


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.60		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	46.80			82		3.85			



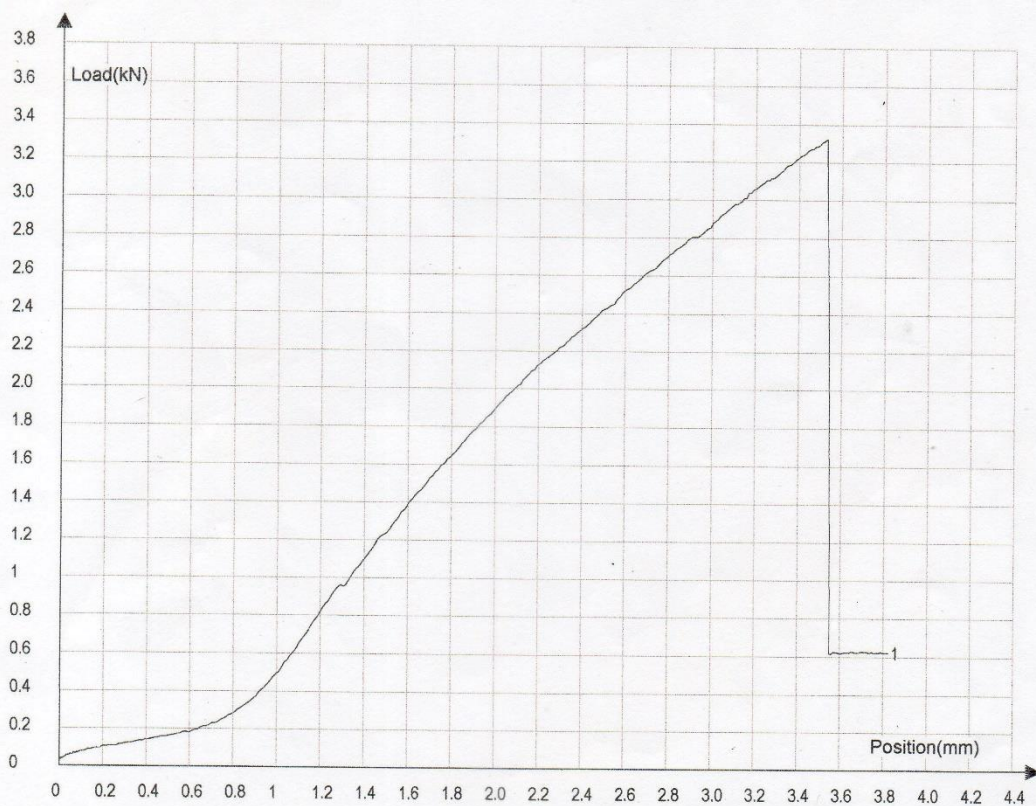


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.60		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	46.80			71		3.32			

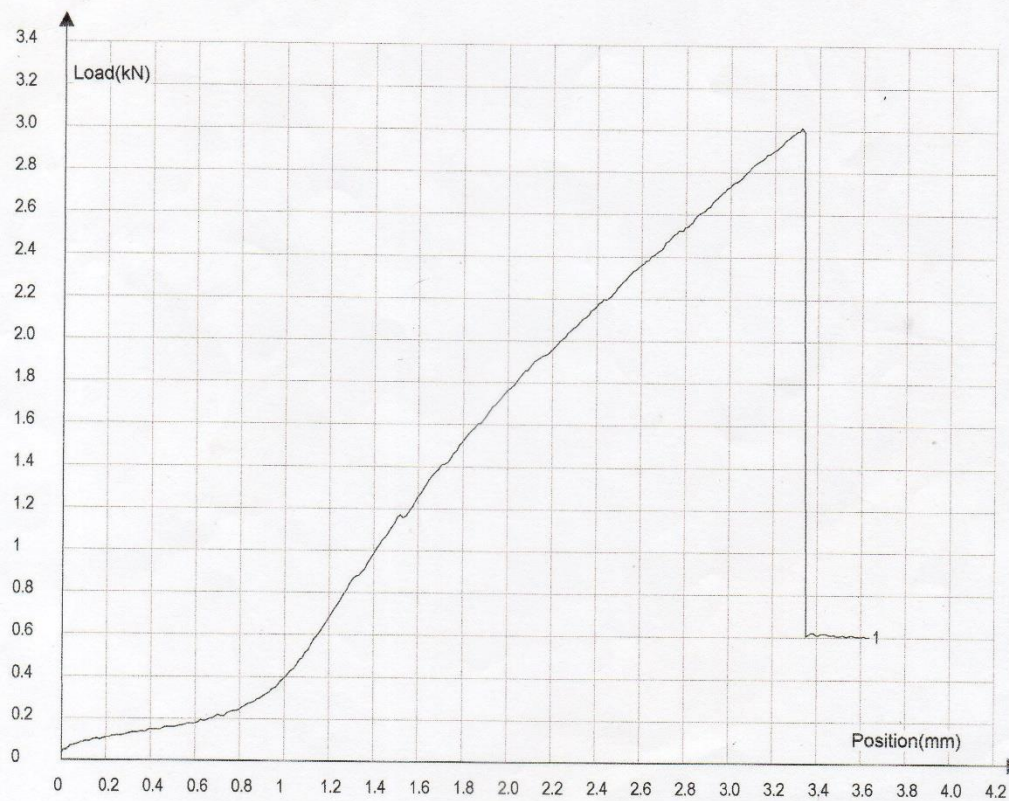


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.40		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	44.20			70		3.10			



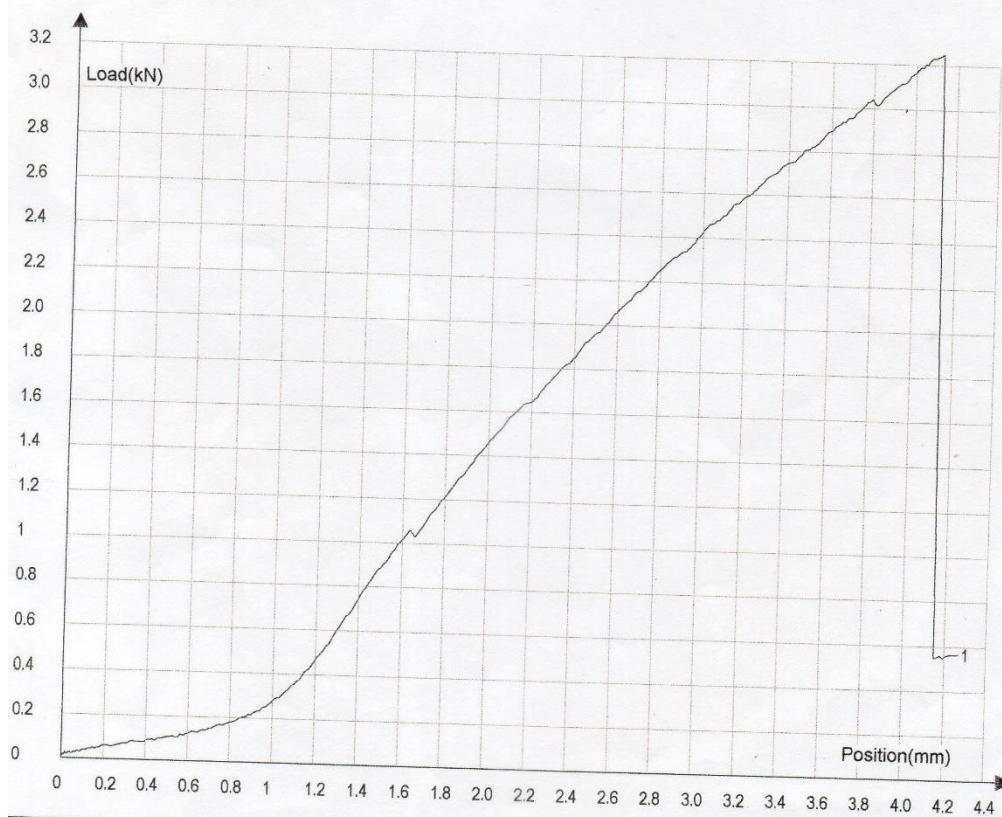


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.30		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	42.90			76		3.25			



ser: Audit:

## Perbandingan serat karbon/abaka (1:2)

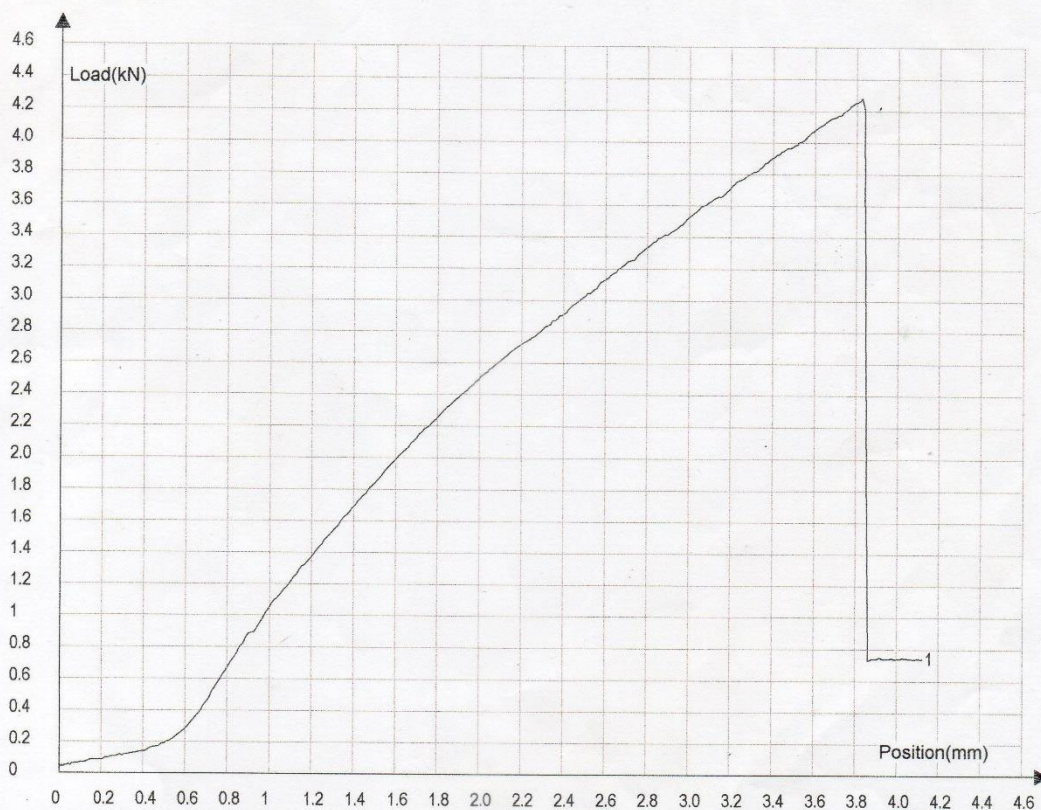
No	a (mm)	b (mm)	Beban (N)	$\Delta L$ (mm)	Mod.Elast (MPa)	Teg. Tarik (MPa)	Elongation (%)
1	3.6	13.0	4280	3.33	4531.45	91.45	2.02
2	3.4	13.0	3480	2.93	4433.77	78.73	1.78
3	3.6	13.0	3660	2.88	4480.50	78.21	1.75
4	3.4	13.0	3550	2.83	4682.78	80.32	1.72
5	3.6	13.0	3580	2.93	4307.78	76.50	1.78
Min					4307.78	76.50	1.72
Max					4682.78	91.45	2.02
Rata-Rata					4489.55	81.88	1.82
Standar Deviasi					137.20	5.98	0.12

# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.60		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	46.80			91		4.28			



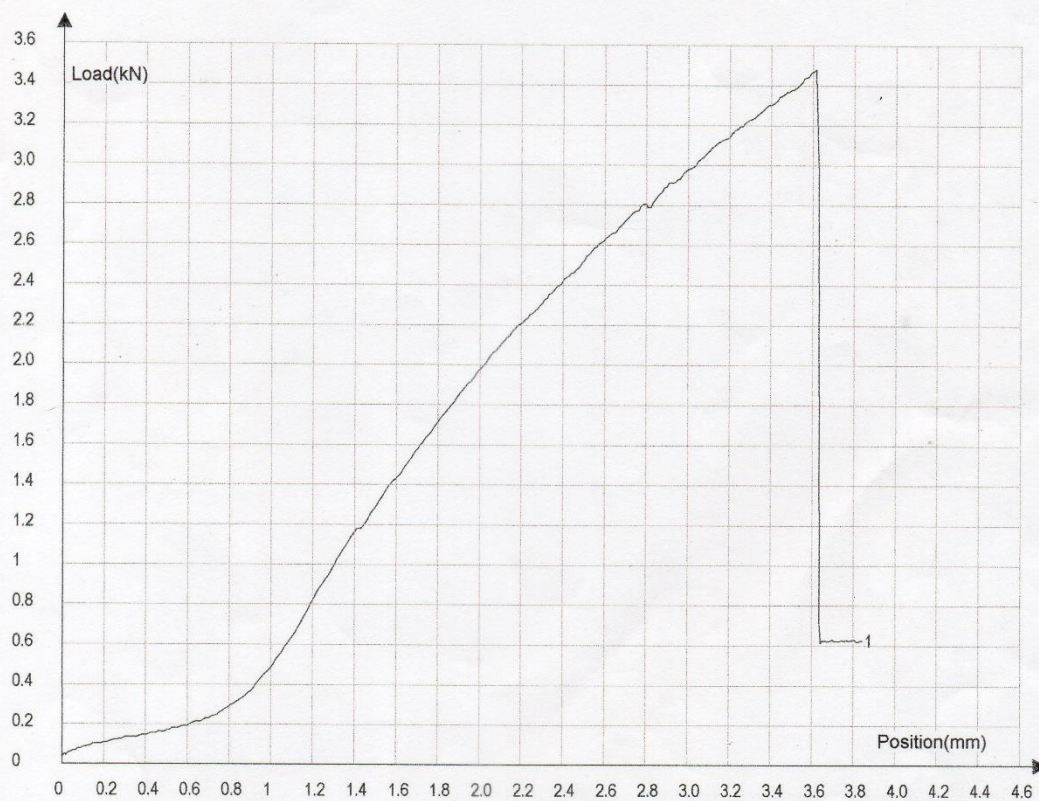


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.40		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	44.20			79		3.48			

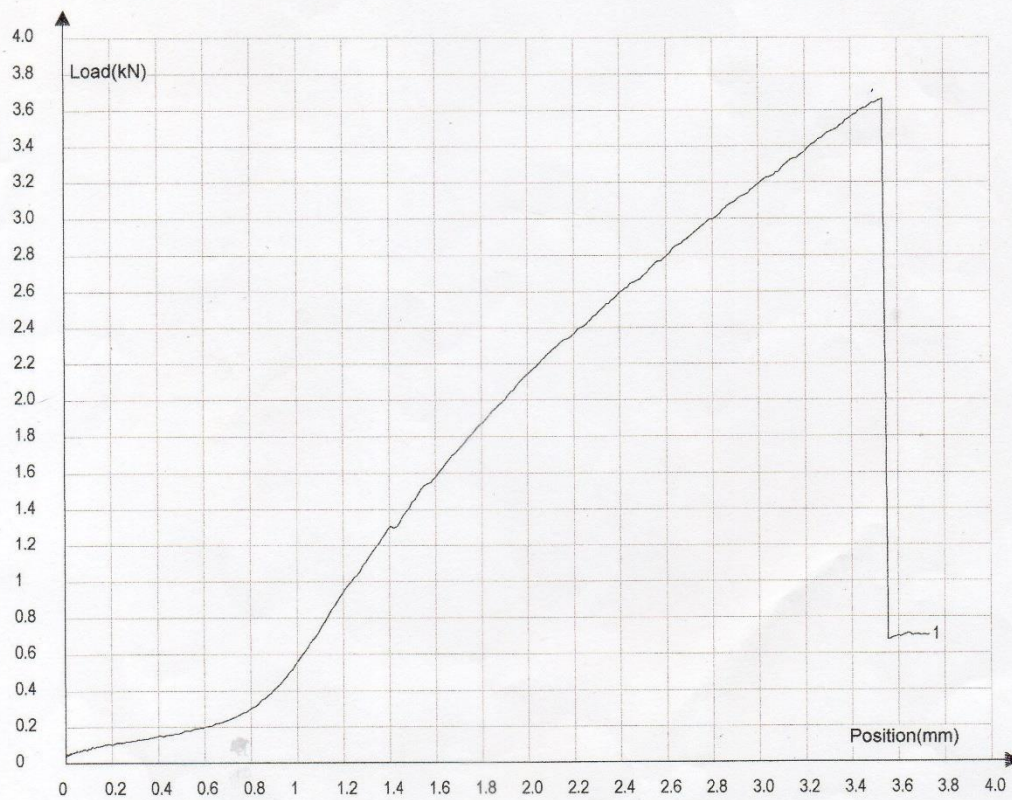


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.60		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	46.80			78		3.66			



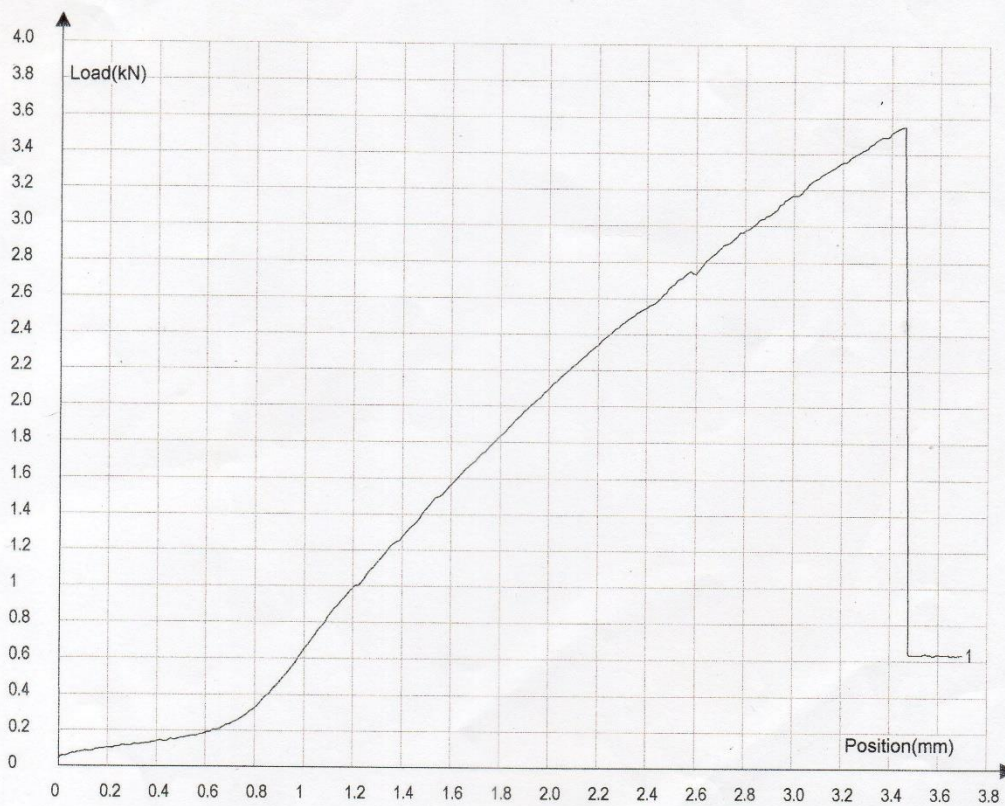


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.40		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	44.20			80		3.55			



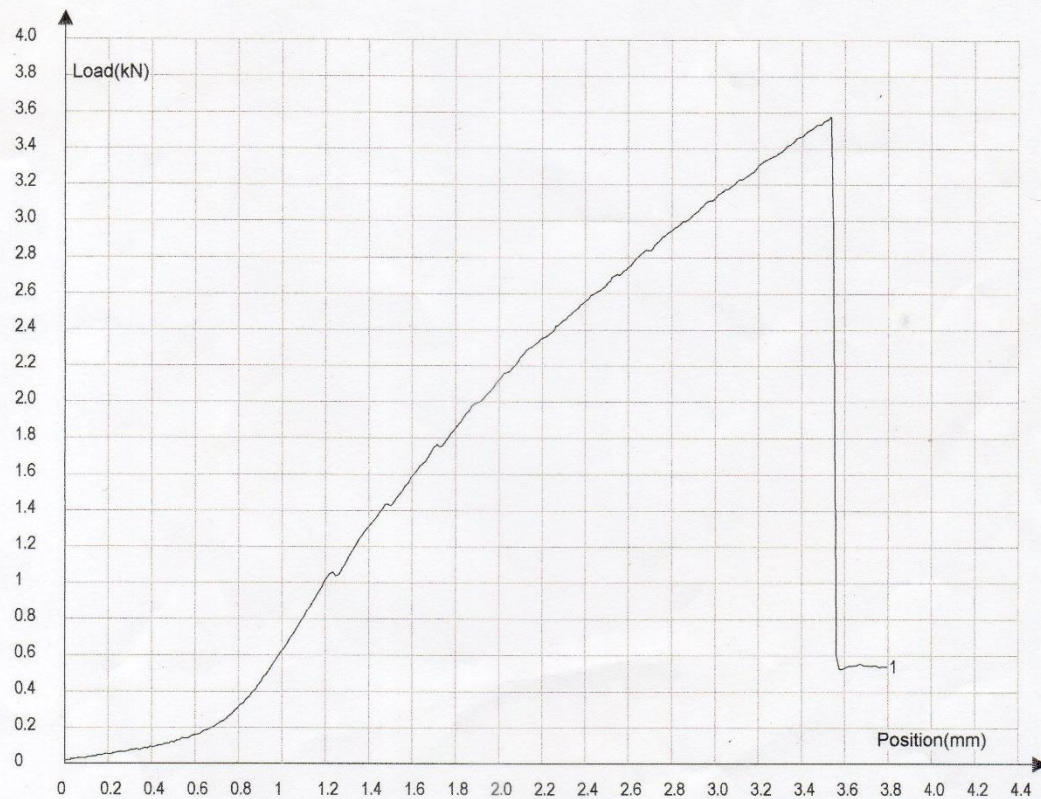


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.60		13.00		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	46.80			77		3.58			



## Perbandingan serat karbon/abaka (1:1)

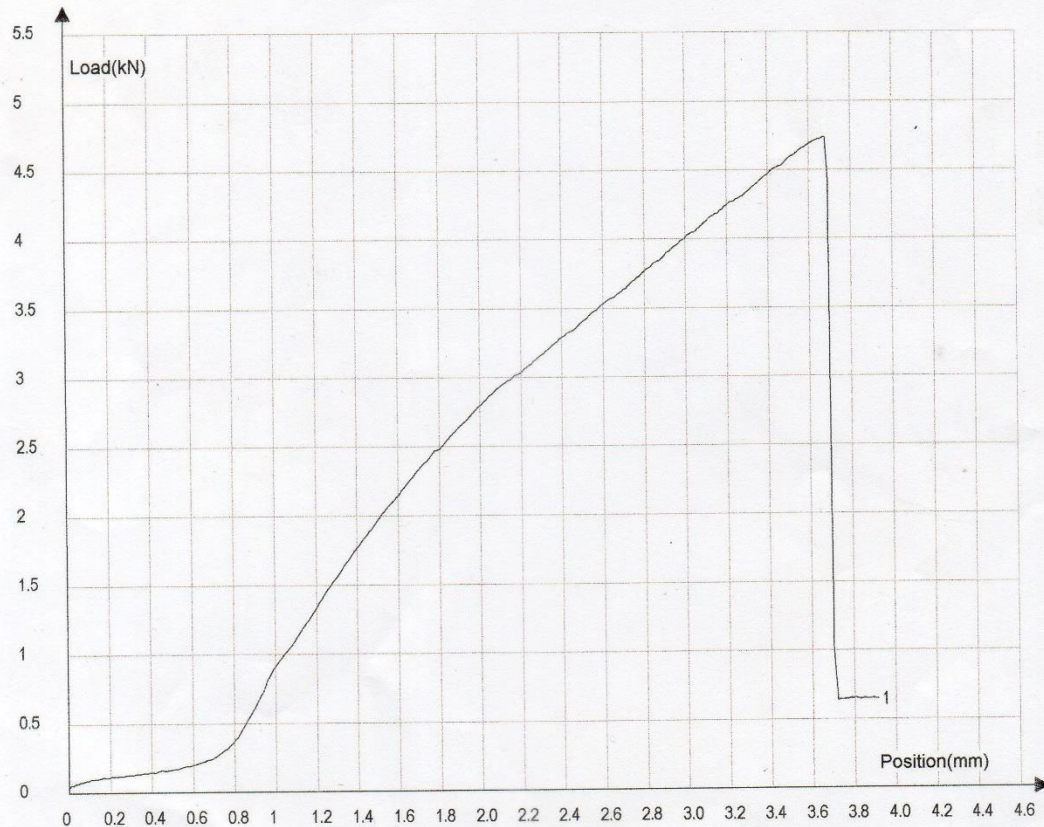
No	a (mm)	b (mm)	Beban (N)	$\Delta L$ (mm)	Mod.Elast (MPa)	Teg. Tarik (MPa)	Elongation (%)
1	3.6	12.7	4740	3.10	5518.16	103.67	1.88
2	3.4	12.7	4370	2.85	5859.19	101.20	1.73
3	3.5	12.7	4240	2.60	6053.47	95.39	1.58
4	3.3	12.7	4210	2.88	5755.14	100.45	1.75
5	3.2	12.7	4160	2.72	6209.47	102.36	1.65
Min					5518.16	95.39	1.58
Max					6209.47	103.67	1.88
Rata-Rata					5874.72	100.31	1.72
Standar Deviasi					267.20	3.17	0.13

# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.60		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	45.72			104		4.74			



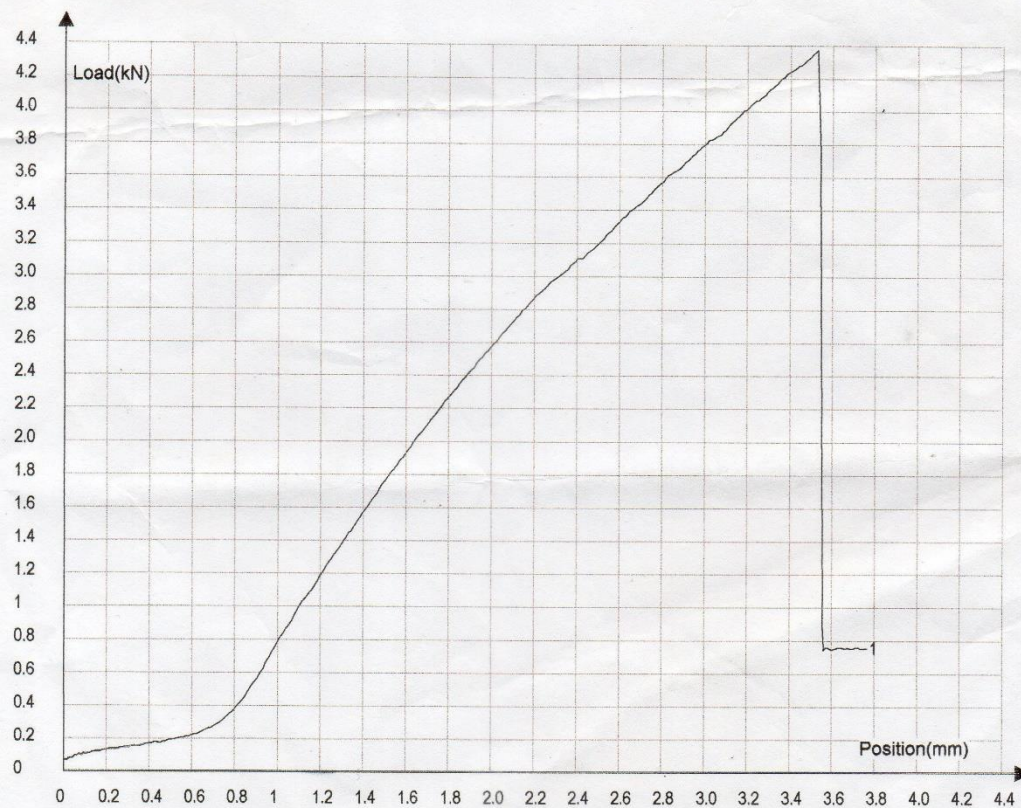


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.40		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	43.18			101		4.37			

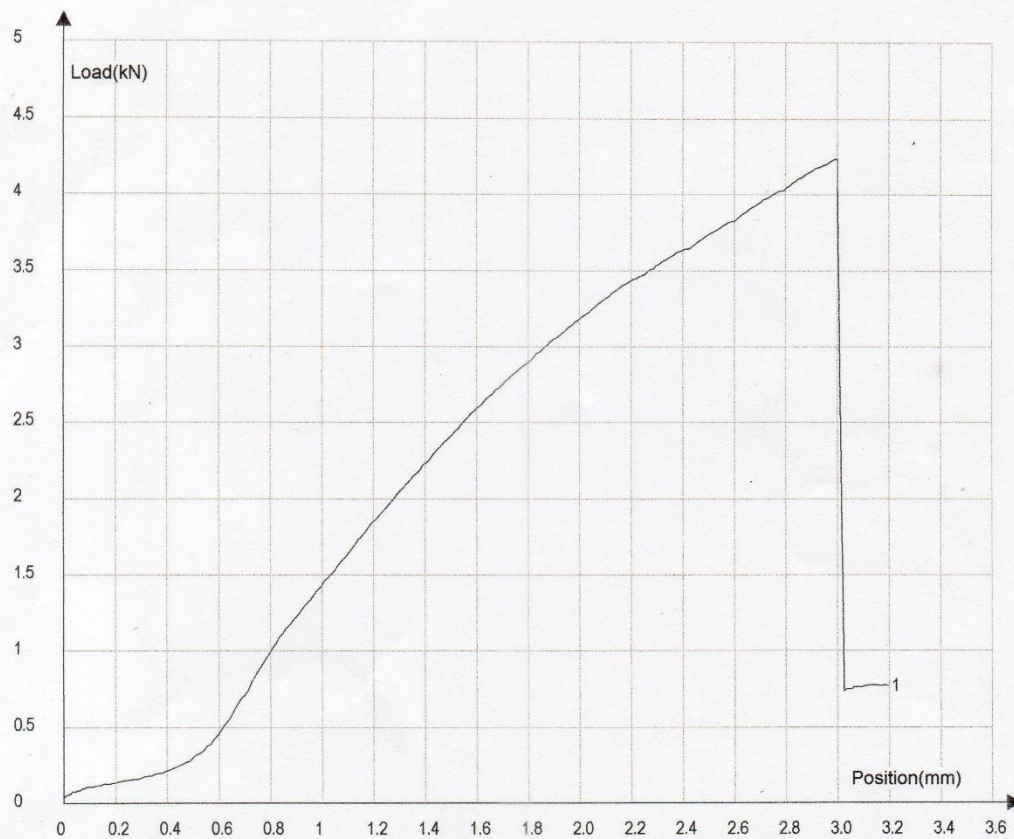


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.50		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	44.45			95		4.24			



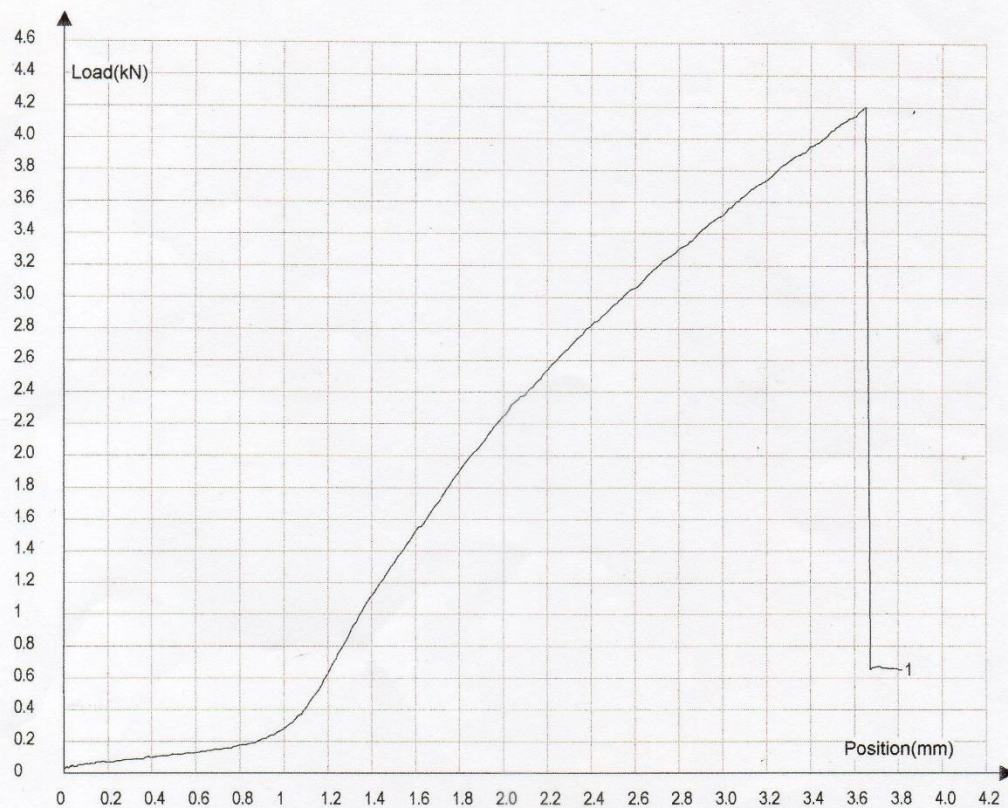


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.30		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	41.91			100		4.21			



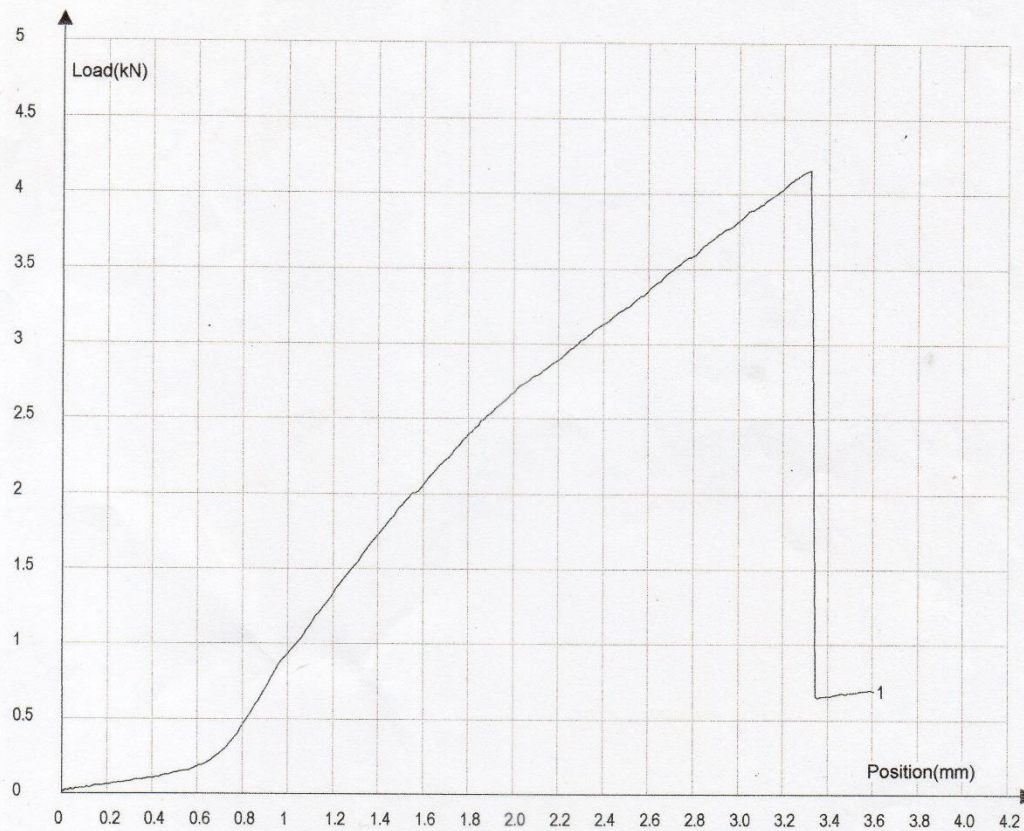


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.20		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	40.64			102		4.16			



## Perbandingan serat karbon/abaka (2:1)

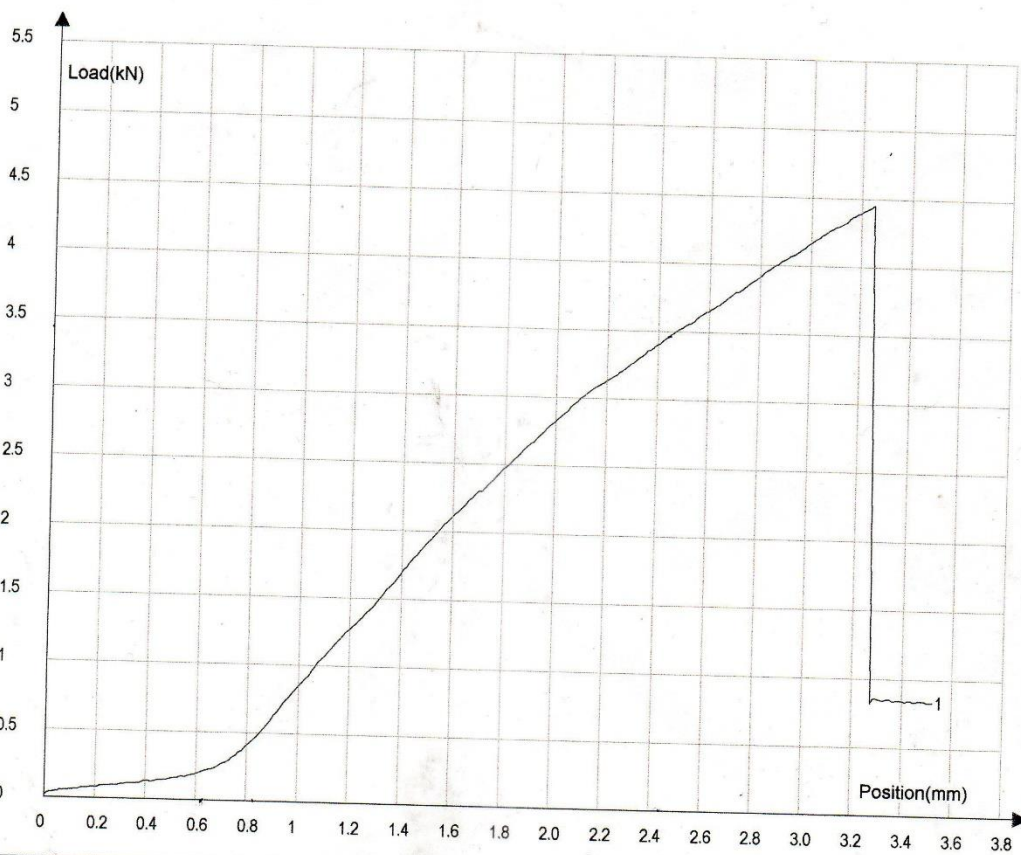
No	a (mm)	b (mm)	Beban (N)	$\Delta L$ (mm)	Mod.Elast (MPa)	Teg. Tarik (MPa)	Elongation (%)
1	3.2	12.7	4450	2.91	6208.65	109.50	1.76
2	3.2	12.7	4290	2.71	6427.15	105.56	1.64
3	3.3	12.7	4370	2.98	5773.40	104.27	1.81
4	3.2	12.7	4020	2.66	6333.89	102.11	1.61
5	3.3	12.7	4480	2.75	6413.74	106.90	1.67
Min					5773.40	102.11	1.61
Max					6427.15	109.50	1.81
Rata-Rata					6193.91	105.71	1.70
Standar Deviasi					270.35	2.77	0.09

# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.20		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	40.64			110		4.45			



Tester: Audit:

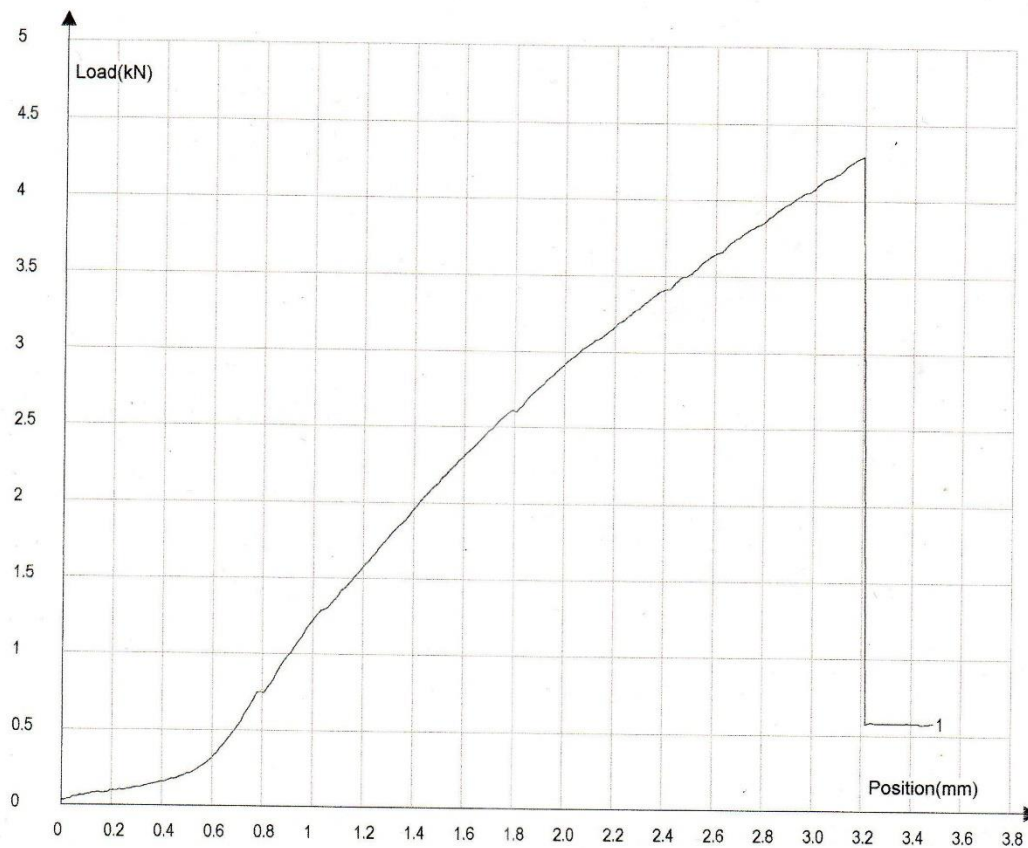


## Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.20		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	40.64			106		4.29			



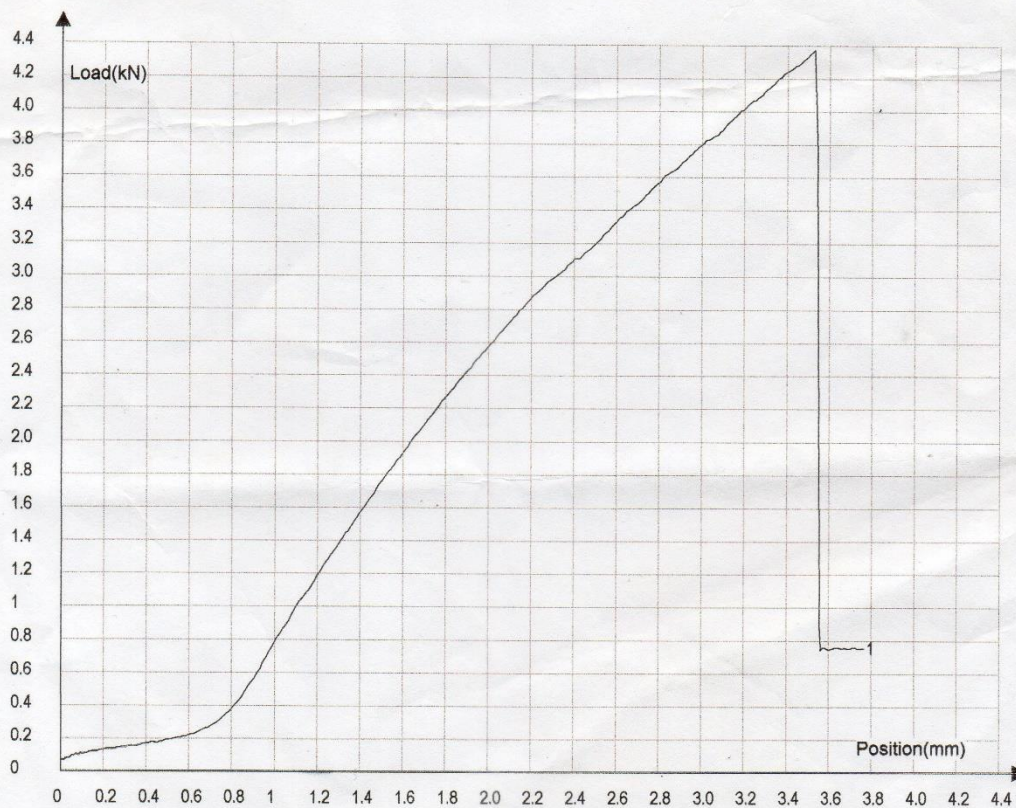
Tester: Audit:

# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.30		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	41.91			104		4.37			



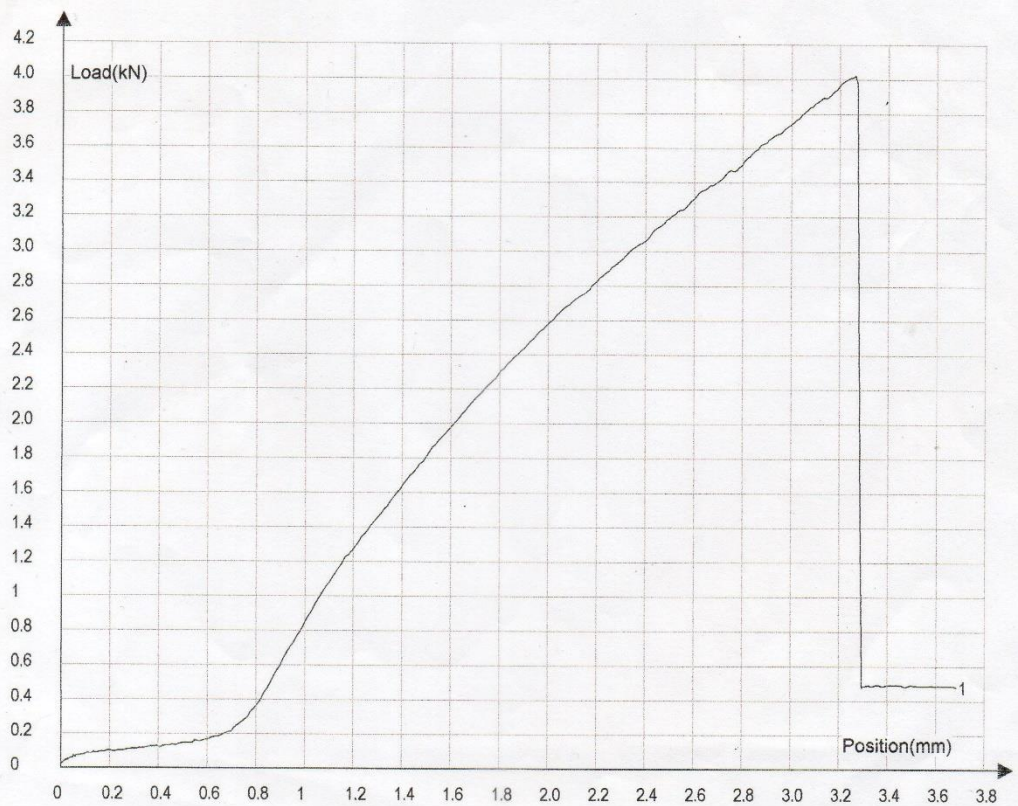


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.20		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	40.64			102		4.02			



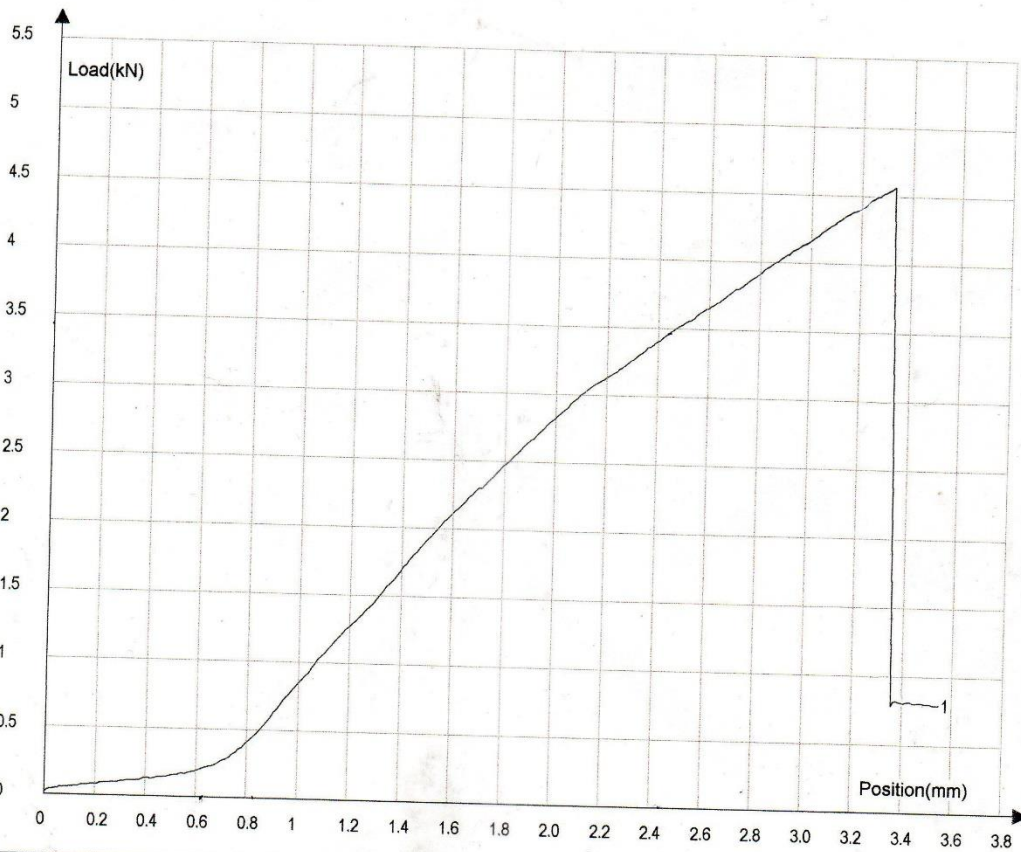


# Metallic materials-Tensile Testing Report

Standard: BS EN10002-1:2001

Name	a	au	b	bu	Le	Lo	Lu	ep	et
ID	mm	mm	mm	mm	mm	mm	mm	%	%
NO.1	3.30		12.70		115.00	165.00			

Name	So	Su	ReH	Rm	ReL	Fm	E	A	Z
ID	mm <sup>2</sup>	mm <sup>2</sup>	MPa	MPa	MPa	kN	MPa	%	%
NO.1	41.91			107		4.48			



Tester:                      Audit: