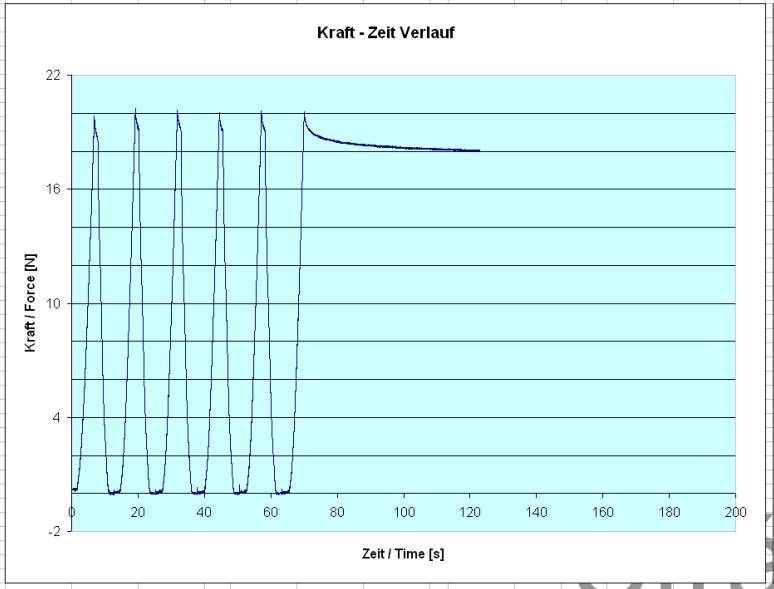
TENSILE TEST 5+1CYCLE

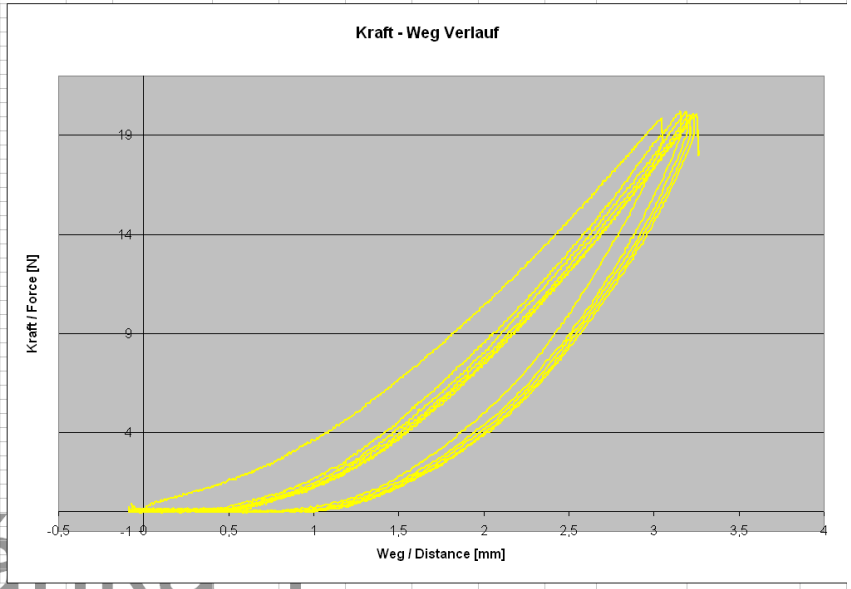
Short requirements description

TEST REPORT EXAMPLE

Date	11.7.2011

MATERIAL NAME / BATCH





					Soll	UTG / LTL	OTG / UTL		Ist
Factual material requirement example	1 Elasticity @ WP	=	Elastizität im Arbeitspunkt	mm / N	0,15	0,05	0,2	PRAVDA	0,132
Field of elong.range, where material applicable	2 Elongation rate @ WP		Dehnung @ AP	%	0,38%	0,13%	1,00%	PRAVDA	0,6171%
General requirements valid for all material	3 Creeping value (30s)	=	Kriechwert (30 s)	%	< 10%	0	10%	PRAVDA	9,558%
	4 delta 4. 5. Cycl (@ 0,05 N/mm)	=	Konvergenz 4. - 5. in AP	%	< 0,02 %	0	0,02%	PRAVDA	0,009%
	5 Force variation caused by delta 1. 5. Cycl (@ 0,05 N/mm)		Kraft Variation durch Delta - 1. - 5.cycle in AP	N	< 10	0	10	PRAVDA	8,089
L := 1000 mm B:= 800 mm	6 Force per mm roof-width deviation	=	Kraft pro Dachmilimeter Breitenfehler	N / mm	16,667		12,5		19,000

REQUIREMENTS SUMMARY + STATUSES

CHARACTERISTIC	UNIT	SPECIFICATION	FORMULATION
Elasticity @ WP (elasticita v pracovním bodě; pracovní bod = 5N) **(Z50)**	**mm/N**	**0,15 +/- 0,05**	= ds/df = = (Elong1 – Elong.2) / (F1 – F2) = [mm] / [N] (mathematicaly: 1/tgθ) (okamžité prodloužení v bodu 1 – okam.prodl.v bodu 2) / síla v bodu1– síla v bodu 2); jinak převrácená hodnota směrnice přímky vztažená k pátému cyklu)
Elongation rate @ WP	%	**0,35 +/- 0,15**	**= $Elongation_{1cyclus}$ /200 *100**
Creeping value (30s)	%	**< 10**	**= $Fmax_{6cyzcle}$ –$F_{30s\ later}$** (při dosažení max. síly při 6.cyklu – prodleva 30s; měří se procentuelní pokles síly po 30s)
delta 1. 5. Cycl (rozdíl prodloužení při 5N na 1.cyklu a 5.cyklu)	%	(informative value)	= (**$Elongation_{5zyclus}$ - $Elongation_{1zyclus}$)/200*100**
delta 4. 5. Cycl (rozdíl prodloužení při 5N na 4.cyklu a 5.cyklu)	%	**< 0,02**	= (**$Elongation_{5zyclus}$ - $Elongation_{4zyclus}$)/200*100**
Force variation caused by delta 1. 5. Cycl (@ WP	N	**< 10**	= (**$Elongation_{5zyclus}$ - $Elongation_{1zyclus}$) * Z56** (**Z56** = Force per mm roof-width deviation)
Force per mm roof-width deviation **(Z56)**	**N/mm**	**16**	**=1/(800/200*Z50)*1000/100** **(Z50 =** Elasticity @ WP)

Elasticity @ WP
=) schetch of taking points for calculation
unit: mm/N

For elasticity the calculation is done based on taking 2 points on the 5th cycle.

Working point (WP) is 5N

Range means 10 data points on the Force axis

Point 1 = WP + range = WP + 10 data points = 5N + 10 data points

(approximatelly may be in area of 5,5N, depending on tested material)

Point 2 = WP – range = WP – 10 data points = 5N - 10 data points

(approximatelly may be in area of 4,5N, depending on tested material)

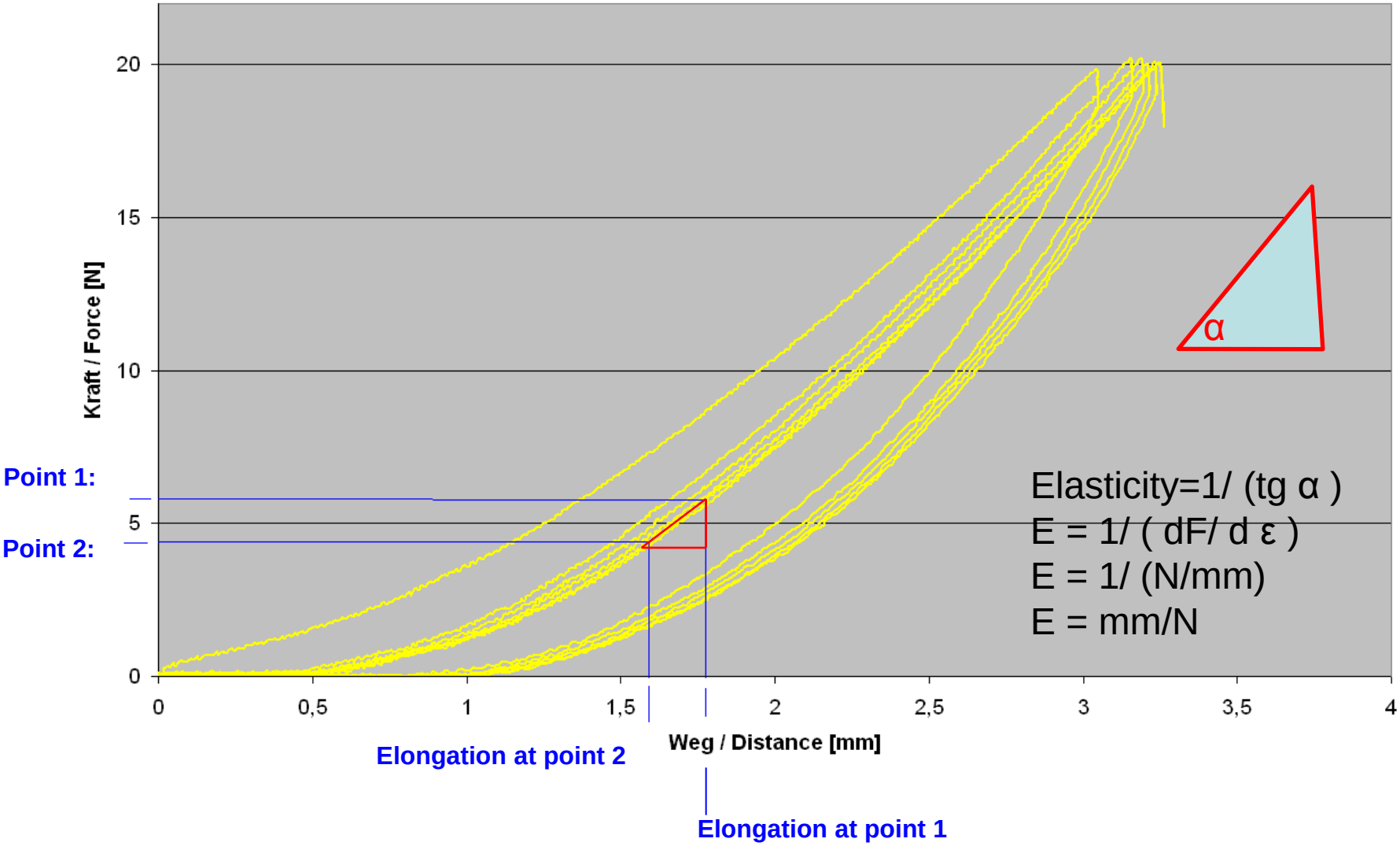
(Force variation caused by delta 1. 5. Cycl (@ WP =) calculated just from item 3

Force per mm roof-width deviation =) calculated just from item 1)

Elasticity @ WP

=) schetch of taking points for calculation

unit: mm/N α



Stting parametr summary:

Sample size:	100 x 200 In width Y and length X direction
Test speed:	20mm/min
Pre-tention:	0,02
Fmax:	20N
WP = working point:	5N
Number of cycle:	5 + 1
Elasticity at WP and elongation at WP calculated:	On 5th cycle