



Retouradres: Postbus 6575, 3002 AN Rotterdam

IGR Team VLG (SO Gem Rdam)

5.1.2.e

Marconistraat 1a
3029 EA
Rotterdam

ONDERZOEKSRAPPORT

Hierbij zenden wij u de resultaten van de door u aangevraagde onderzoeken. De onderzoeksresultaten zijn opgenomen in de bijlage.

Ons kenmerk	2019-014
Omschrijving	landmaken HSBC
Geografische referentie	Amsterdam
Kenmerk opdrachtgever	MVJ19079

Verrichte onderzoeken

<u>Proef</u>	<u>Referentiemethode</u>
Gloeiverlies + organisch stof gehalte	RAW2015-28
Classificatie (beschrijven) Ongerode monsters (/meter)	NEN 5104
Atterbergse grenzen (3 puntsmethode)	RAW 2010 proef 14
Foto grondboring per stuk	IGR
Vol. gewicht + watergehalte	NEN 5112 gelijkw
Triaxiaaltest CIUc Multi-stage (3 op 1)	NEN 5117
kgvQ	NEN 5753 + NEN 5754 + NEN ENISO10693
Samendrukkingsproef (7 traps)	NEN 5118
Ongedr. Schuifsterkte	NEN5106-Torvane
Doorlatendheid (Falling Head)	IGR
Rapportage (compleet)	IGR
Samendrukkingsproef elke extra stap	NEN 5118

Met vriendelijke groet,

Hoogachtend,

5.1.2.e

Hoofd laboratorium

*Veld- en Laboratoriummetingen in de Grond- weg- en waterbouw
Projectmanagement en Engineering Gemeente Rotterdam*



ONDERZOEKSRESULTATEN

De resultaten van de overige proeven zijn weergegeven in de bijlage:

2x grondsoort classificatie incl. classificatieproeven.

2x boorfoto

6x uitwerking triaxiaalproef

14x uitwerking samendrukkingsproef

6x uitwerking korrelgrootteverdeling

B1 Atterbergse grenzen

Bus	10 5,2-5,6 m-mv	11 5,6-5,95 m-mv	12 6,0-6,4 m-mv	15 7,2-7,6 m-mv
Vloeigrens [%]	132,3	140,2	165,7	76,4
Uitrolgrens [%]	38,9	41,6	48,4	25,5
Plasticiteitsindex [%]	93,4	98,6	117,3	50,9

B1 Atterbergse grenzen

Bus	17 8,0-8,4 m-mv	18 8,4-8,8 m-mv	19 8,8-9,2 m-mv	24 10,8-11,2 m-mv
Vloeigrens [%]	186,2	154,5	165,3	91,4
Uitrolgrens [%]	56,8	44,8	53,7	32,7
Plasticiteitsindex [%]	129,4	109,7	111,6	58,7

B1 Atterbergse grenzen

Bus	25 11,2-11,6 m-mv	26 11,6-12,0 m-mv	29 12,8-13,2 m-mv
Vloeigrens [%]	104,8	125,9	38,1
Uitrolgrens [%]	37,5	46,3	25,3
Plasticiteitsindex [%]	67,3	79,6	12,9

B2 Atterbergse grenzen

Bus	9 4,8-5,2 m-mv	11 5,6-6,0 m-mv	12 6,0-6,4 m-mv	15 7,2-7,6 m-mv
Vloeigrens [%]	139,8	133,0	181	150,8
Uitrolgrens [%]	44,8	41,0	53,6	49,0
Plasticiteitsindex [%]	95,0	92,0	127,4	101,8

B2 Atterbergse grenzen

Bus	17 8,0-8,4 m-mv	18 8,4-8,8 m-mv	20 9,2-9,6 m-mv	28 12,4-12,8 m-mv	29 12,8-13,2 m-mv
Vloeigrens [%]	150,7	133,6	162,9	176,1	225,9
Uitrolgrens [%]	43,8	46,5	64,7	68,3	104,1
Plasticiteitsindex [%]	106,9	87,1	98,2	107,8	121,8



B1
Gloeiverlies

Bus	4 2,8-3,2 m-mv	10 5,2-5,6 m-mv	12 6,0-6,4 m-mv
Gloeiverlies [%m/m]	0,4	9,8	10,9

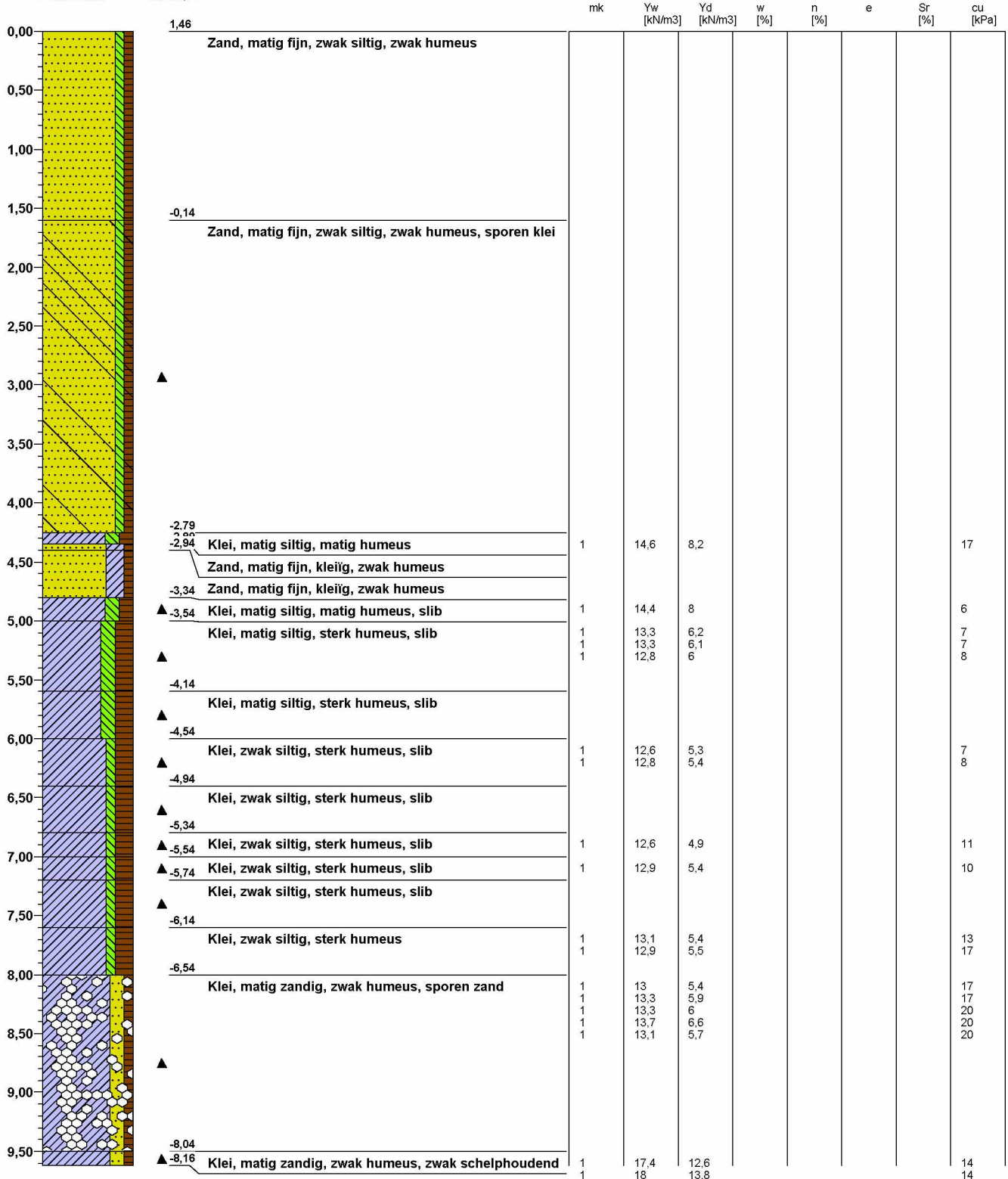
B2
Gloeiverlies

Bus	3 2,4-2,8 m-mv	9 4,8-5,2 m-mv	12 6,0-6,4 m-mv	15 7,2-7,6 m-mv	18 8,4-8,8 m-mv
Gloeiverlies [%m/m]	0,4	10,9	11,7	11,3	11,9



Boring: B1 - 1

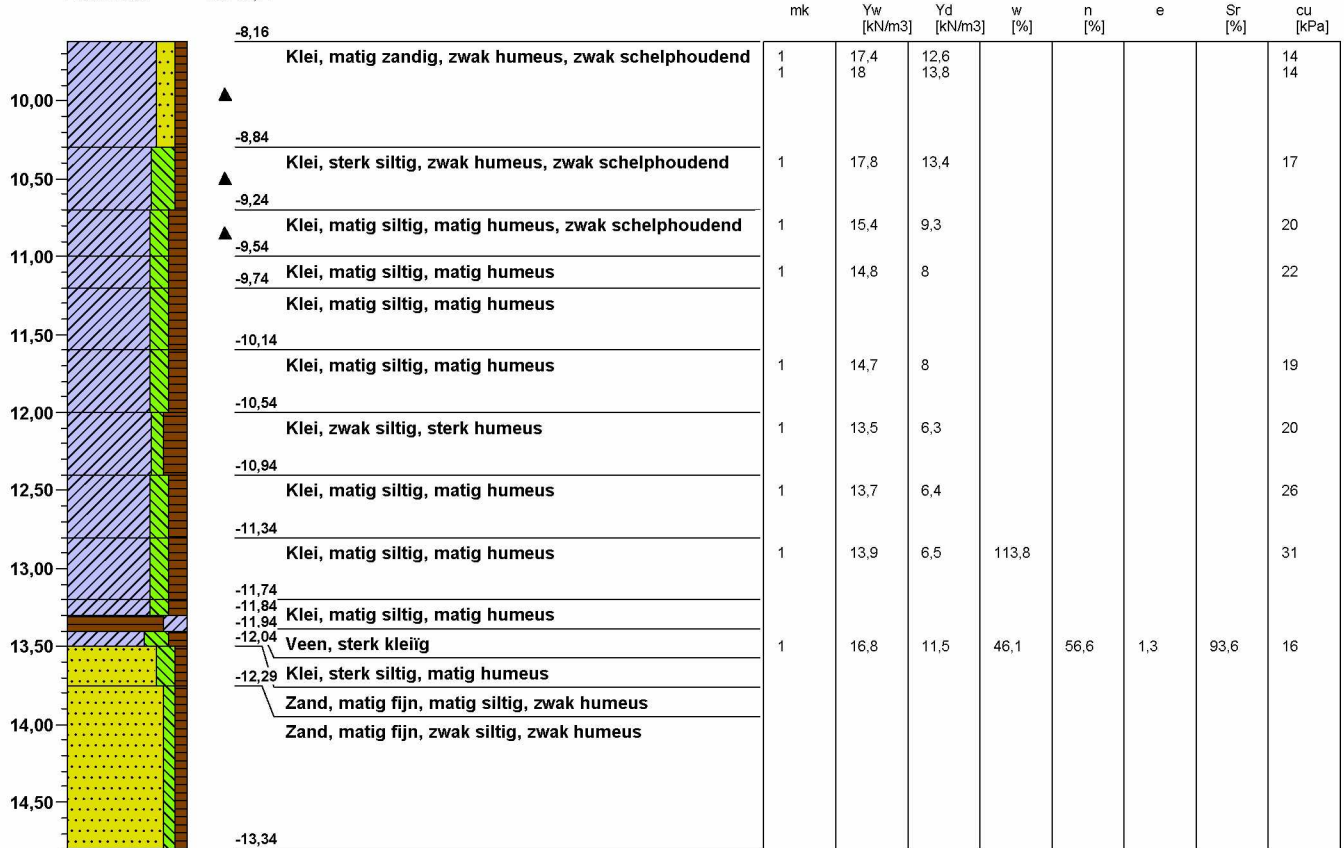
mv m tov NAP: 1,458
X-coördinaat: 126487,95
Y-coördinaat: 486795,77





Boring: B1 - 2

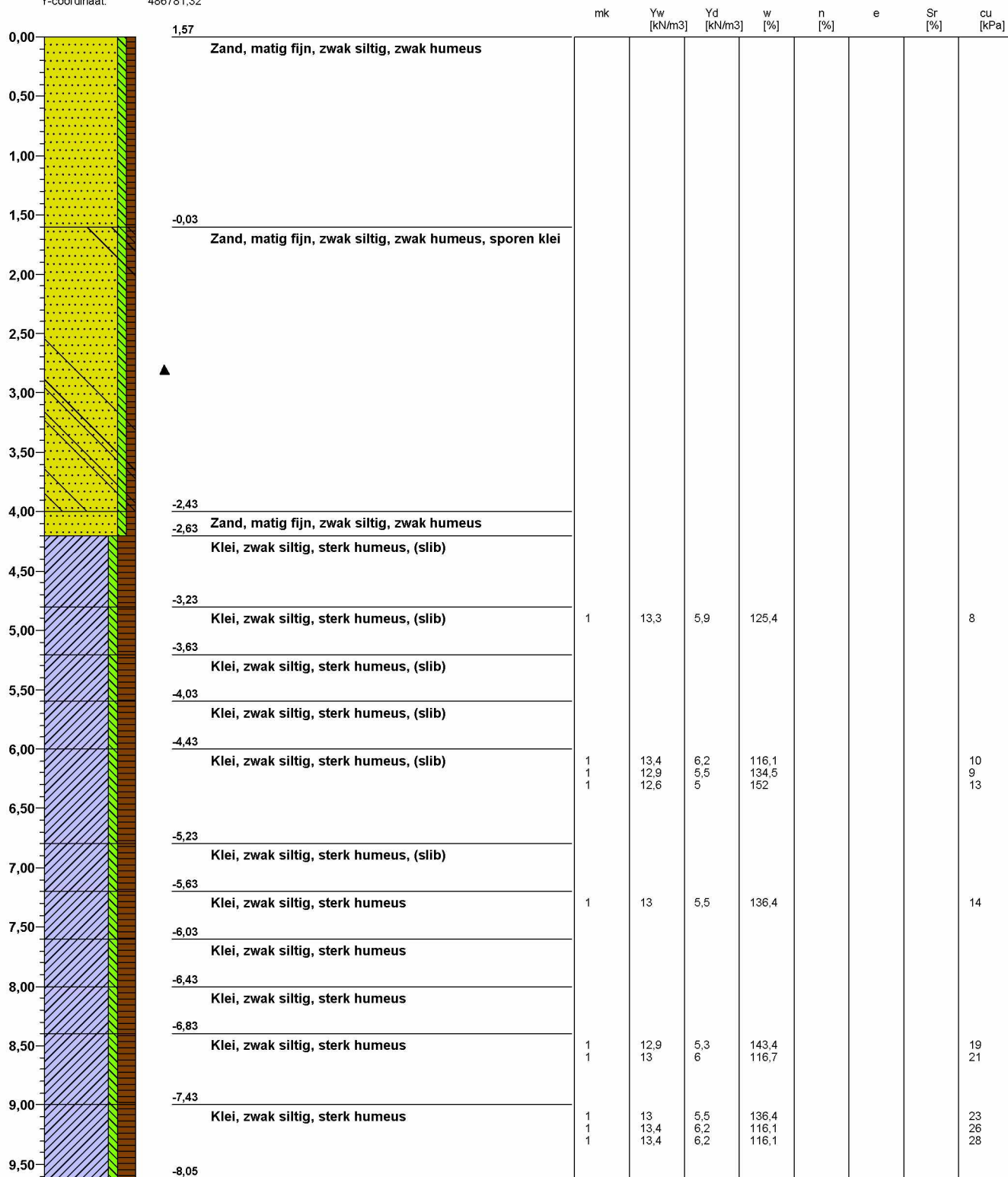
mv m tov NAP: 1,458
X-coördinaat: 126487,95
Y-coördinaat: 486795,77





Boring: B2 - 1

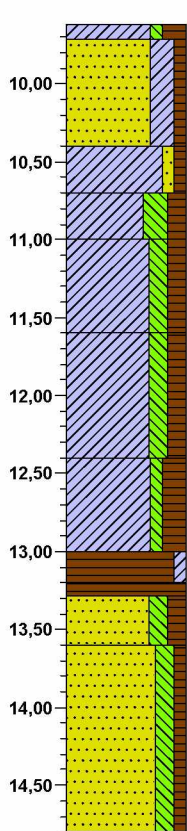
mv m tov NAP: 1,568
X-coördinaat: 126523,30
Y-coördinaat: 486781,32





Boring: B2 - 2

mv m tov NAP: 1,568
X-coördinaat: 126523,30
Y-coördinaat: 486781,32




mk	Yw [kN/m ³]	Yd [kN/m ³]	w [%]	n [%]	e	Sr [%]	cu [kPa]
-8.05							
-8.14							
10,00							
10,50							
11,00							
11,50							
12,00							
12,50							
13,00							
13,50							
14,00							
14,50							
-13,23							

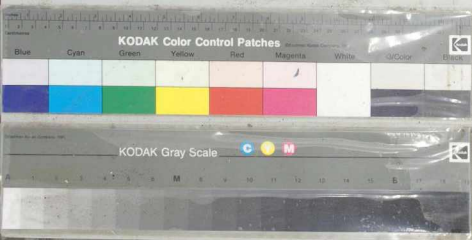
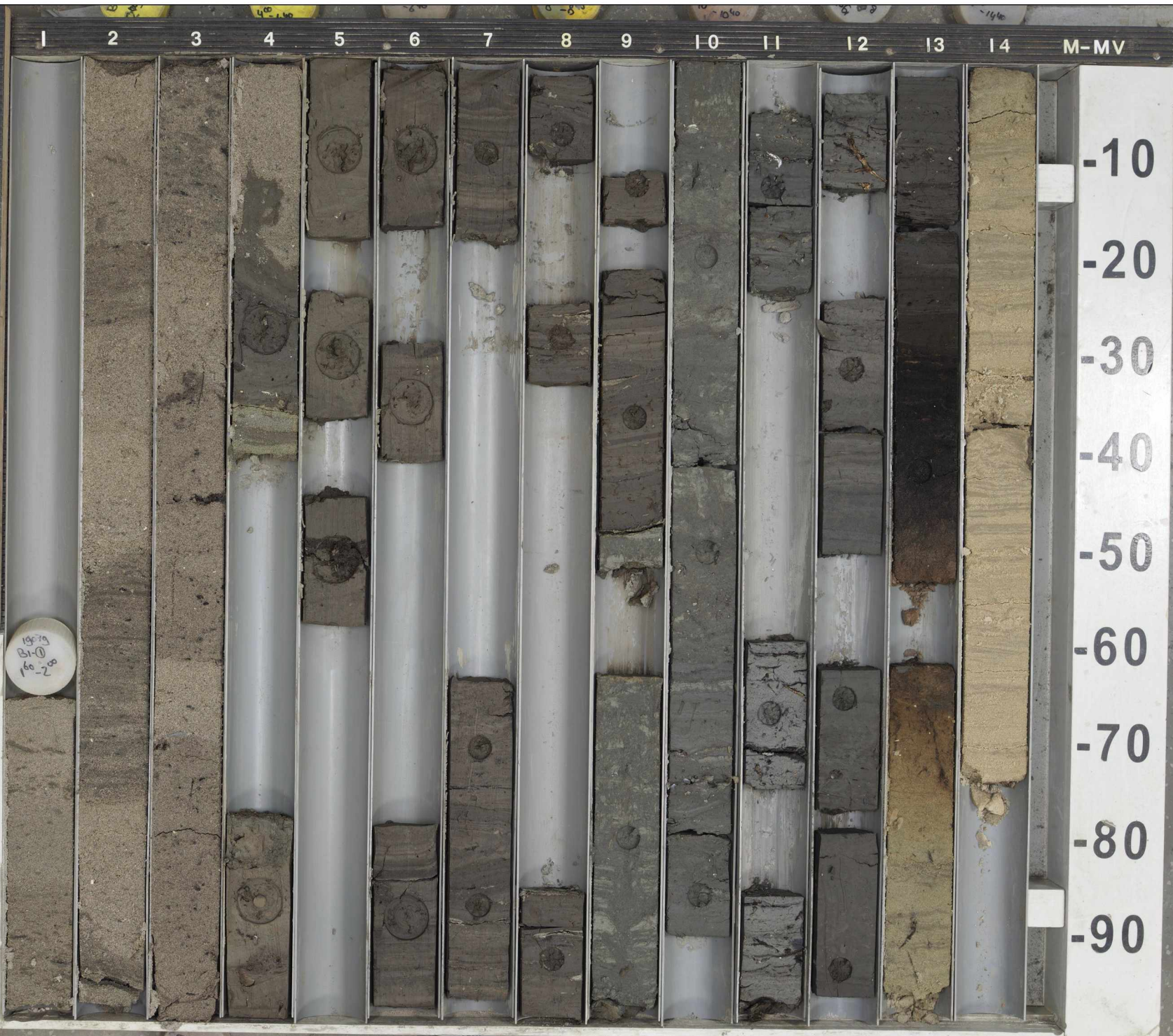
LANDMAKEN HSBC TERREIN
AMSTERDAM

BORING B01

MAP NR 2019-014
MVJ19079

FEBRUARI 2019
BLAD 1/1

 Gemeente Rotterdam
Ingenieursbureau
VLG-Laboratorium




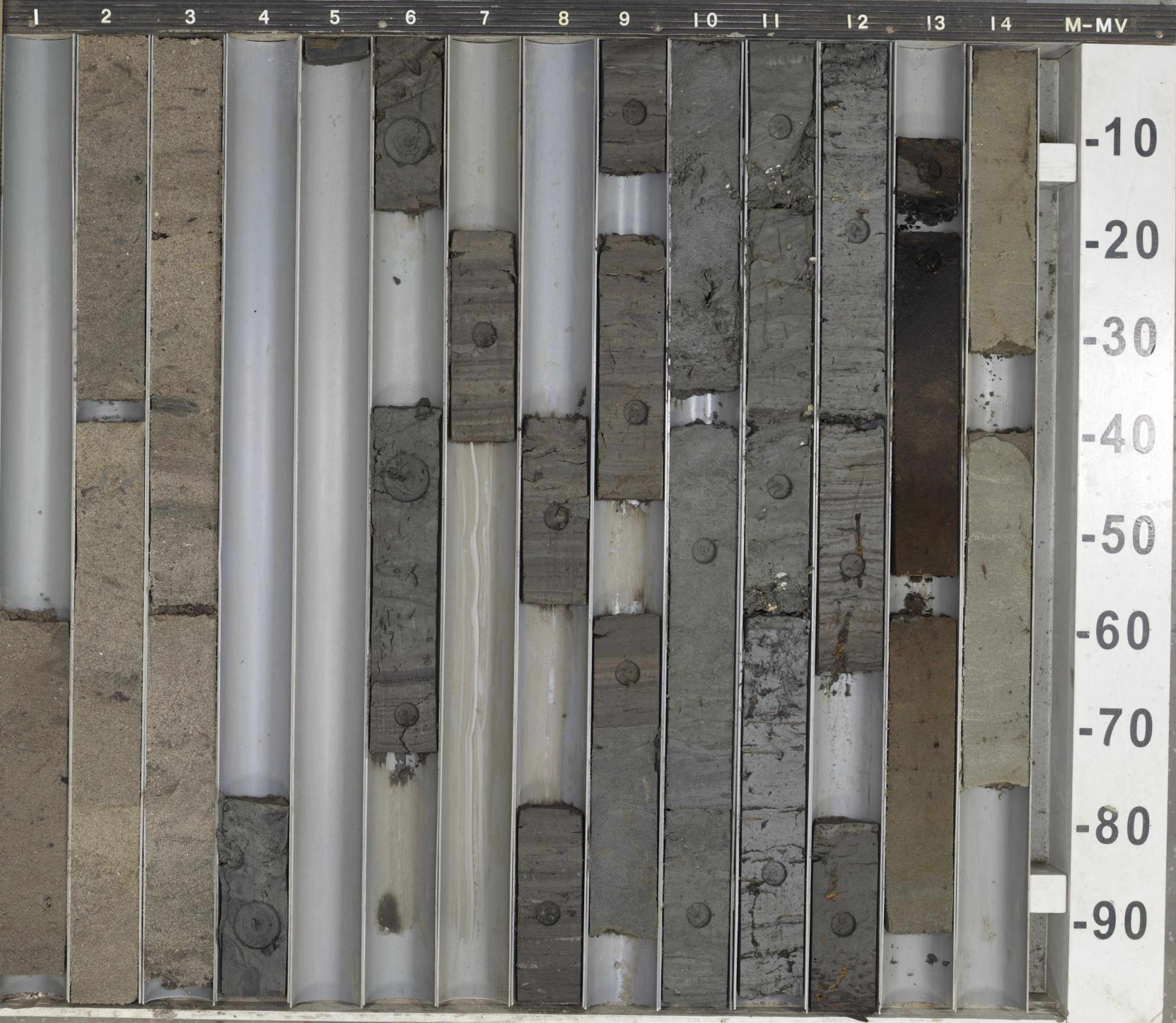
LANDMAKEN HSBC TERREIN
AMSTERDAM

BORING B02

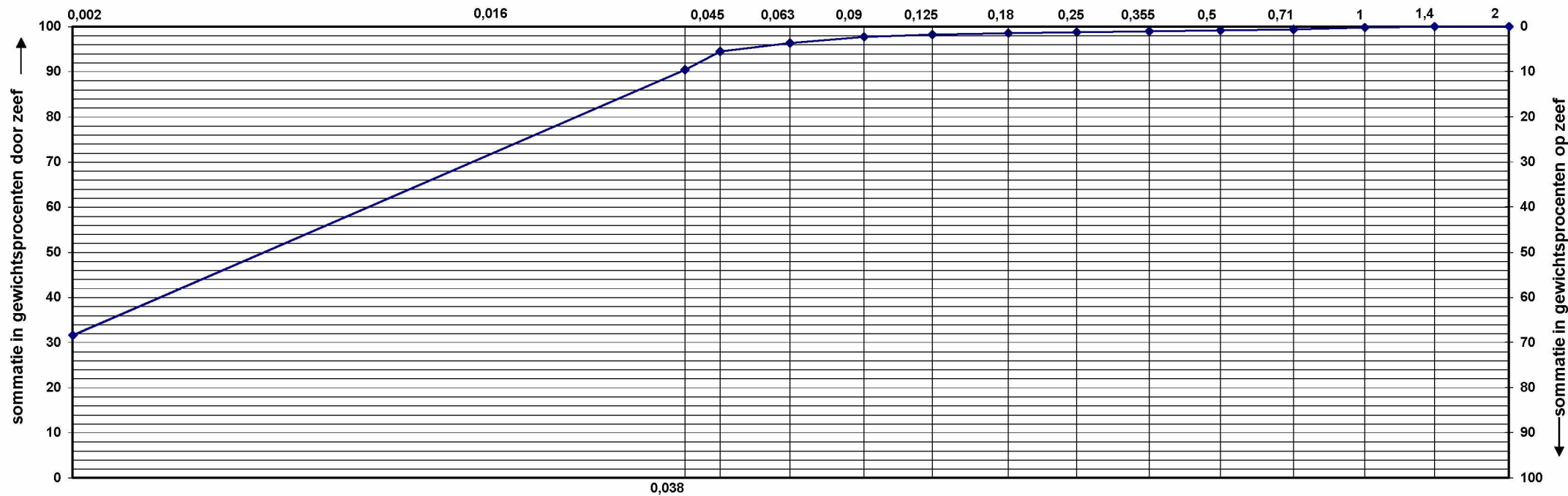
MAP NR 2019-014
MVJI9079

FEBRUARI 2019
BLAD 1/1

 Gemeente Rotterdam
Ingenieursbureau
VLG-Laboratorium



korrelgrootteverdelingsdiagram(exclusief humus, exclusief CaCO3 en inclusief Fe2O3)
korrel diameter in mm



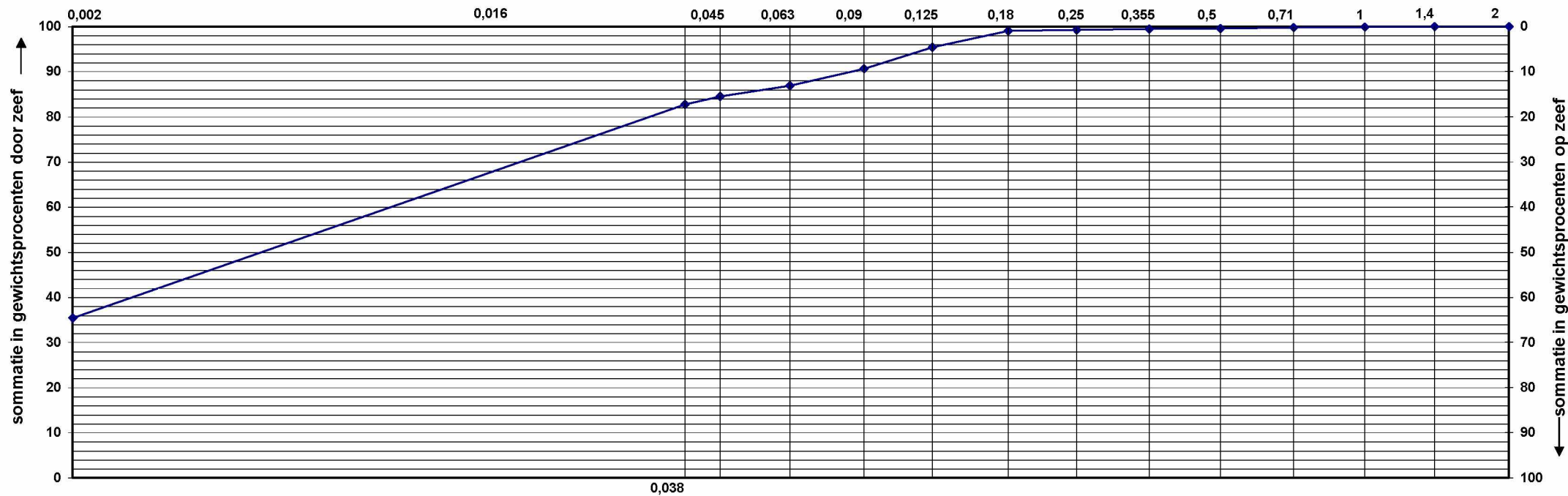
samenstelling monster (inclusief humus, CaCO3 en Fe2O3)

identificatie monster	grind >2 mm %	zand 0.063-2mm %	silt 0.002-0.063mm %	lutum <0.002 mm %	humus %	CaCO3 %	D50 mm	M50 (0.063-2mm) mm	D60/D10 (0.063-2mm)	grondsoort volgens NEN5104
B1 4,8-5,2m-mv	0,0	3,1	54,7	26,7	8,3	7,2	#GETAL!	0,121	2,58	Ks3, h2 ,Ca3

Tabel uitgedrukt in massapercentages van de stoofdroge grond

opdrachtgever: IBA	monsterklasse : 1	datum: 7-3-2019	boringnummer: B1
laborant: 5.1.2.e	projectleider:	mapnr.: 2019-014	hoogteligging: mv tov NAP: 1,46m
GEMEENTE ROTTERDAM INGENIEURSBUREAU Veld- en Laboratoriummetingen Gww		project: Landmaken HSBC-terrein	
KORRELGROOTTEVERDELING			

korrelgrootteverdelingsdiagram(exclusief humus, exclusief CaCO3 en inclusief Fe2O3)
korrel diameter in mm



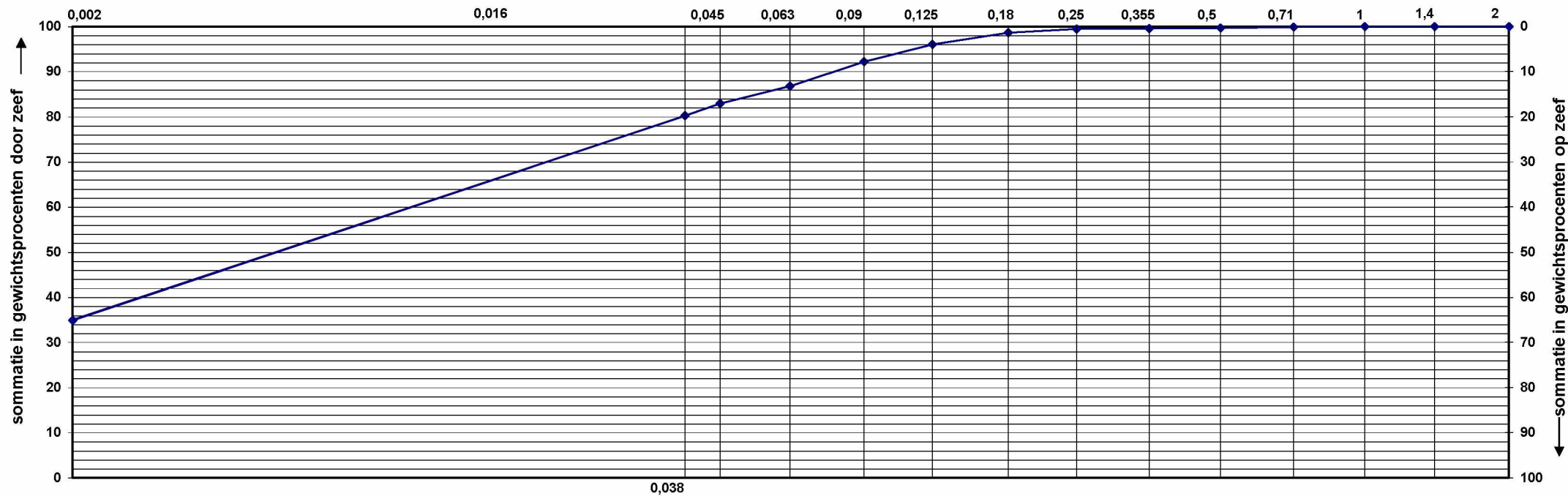
samenstelling monster (inclusief humus, CaCO3 en Fe2O3)

identificatie monster	grind >2 mm %	zand 0.063-2mm %	silt 0.002-0.063mm %	lutum <0.002 mm %	humus %	CaCO3 %	D50 mm	M50 (0.063-2mm) mm	D60/D10 (0.063-2mm)	grondsoort volgens NEN5104
B1 7,2-7,6m-mv	0,0	11,3	44,3	30,6	9,2	4,6	#GETAL!	0,109	1,67	Ks2, h2 ,Ca3

Tabel uitgedrukt in massapercentages van de stoofdrome grond

opdrachtgever: IBA	monsterklasse : 1	datum: 7-3-2019	boringnummer: B1
laborant: 5.1.2.e	projectleider:	mapnr.: 2019-014	hoogteligging: mv tov NAP: 1,46m
GEMEENTE ROTTERDAM INGENIEURSBUREAU Veld- en Laboratoriummetingen Gww		project: Landmaken HSBC-terrein	
KORRELGROOTTEVERDELING			

korrelgrootteverdelingsdiagram(exclusief humus, exclusief CaCO3 en inclusief Fe2O3)
korrel diameter in mm



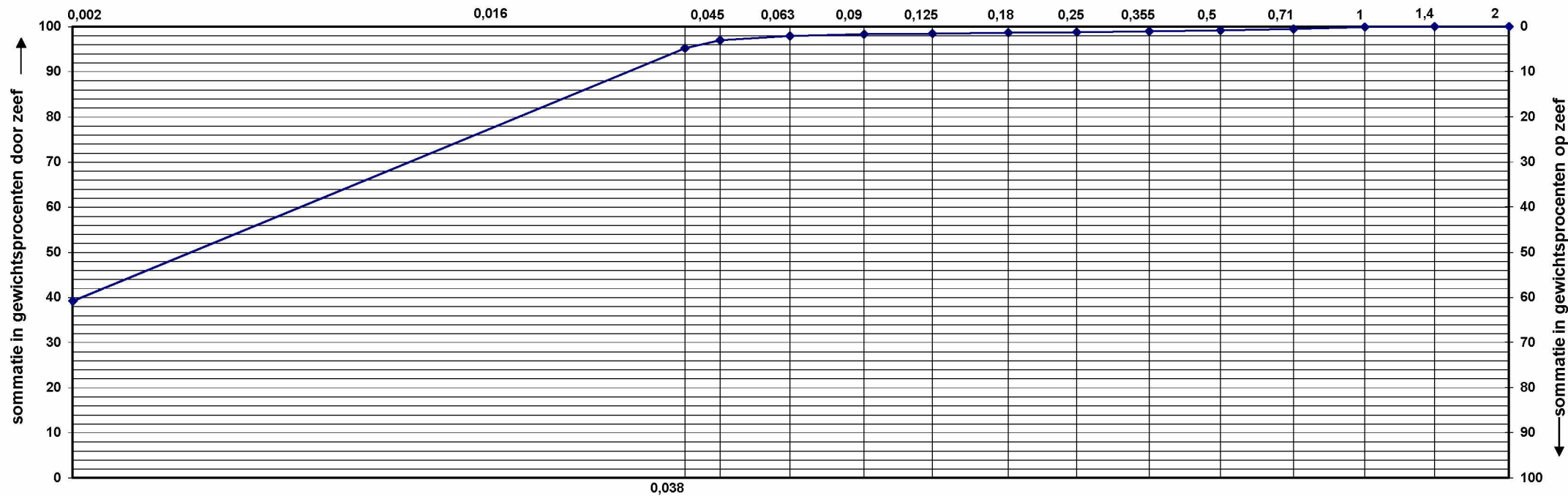
samenstelling monster (inclusief humus, CaCO3 en Fe2O3)

identificatie monster	grind >2 mm %	zand 0.063-2mm %	silt 0.002-0.063mm %	lutum <0.002 mm %	humus %	CaCO3 %	D50 mm	M50 (0.063-2mm) mm	D60/D10 (0.063-2mm)	grondsoort volgens NEN5104
B1 8,4-8,8m-mv	0,0	11,0	43,2	29,2	10,5	6,1	#GETAL!	0,100	1,62	Ks3, h3, Ca3

opdrachtgever: IBA	monsterklasse: 1	datum: 7-3-2019	boringnummer: B1
laborant: 5.1.2.e	projectleider:	mapnr.: 2019-014	hoogteligging: mv tov NAP: 1,46m
GEMEENTE ROTTERDAM INGENIEURSBUREAU Veld- en Laboratoriummetingen Gww		project: Landmaken HSBC-terrein	
KORRELGROOTTEVERDELING			

Tabel uitgedrukt in massapercentages van de stoofdrome grond

korrelgrootteverdelingsdiagram(exclusief humus, exclusief CaCO3 en inclusief Fe2O3)
 korreldiameter in mm →



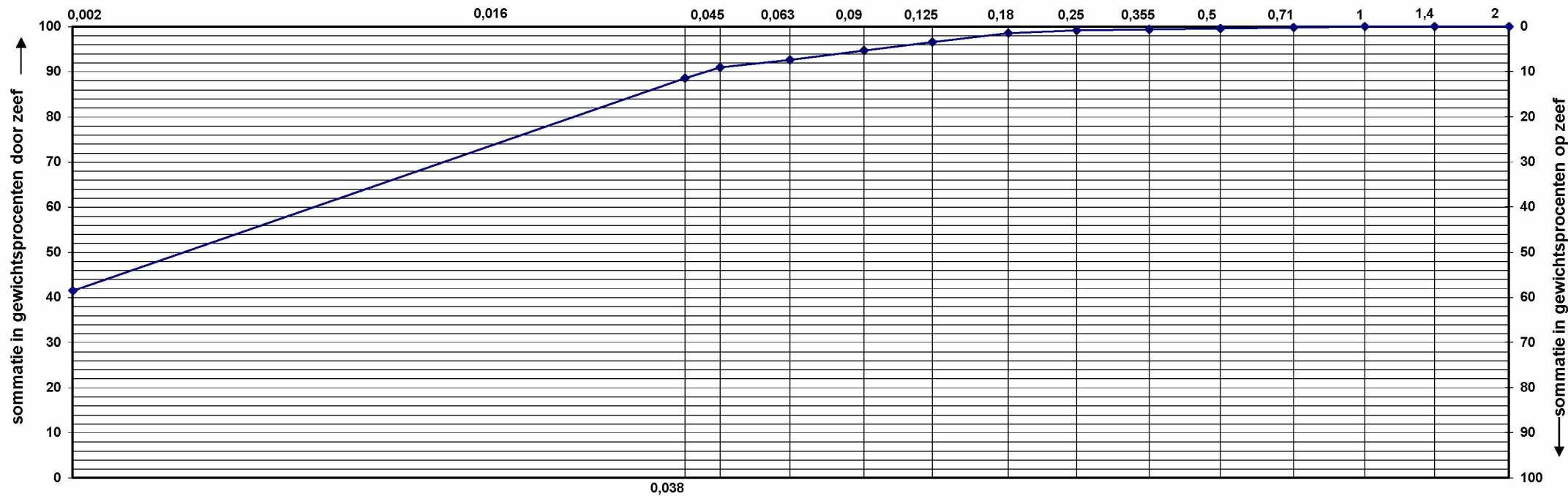
samenstelling monster (inclusief humus, CaCO3 en Fe2O3)

identificatie monster	grind >2 mm %	zand 0.063-2mm %	silt 0.002-0.063mm %	lutum <0.002 mm %	humus %	CaCO3 %	D50 mm	M50 (0.063-2mm) mm	D60/D10 (0.063-2mm)	grondsoort volgens NEN5104
B2 5,6-6,0m-mv	0,0	1,8	49,9	33,3	8,8	6,2	#GETAL!	0,375	6,65	Ks2, h2, Ca3

Tabel uitgedrukt in massapercentages van de stofdroke grond

opdrachtgever: IBA	monsterklasse: 1	datum: 7-3-2019	boringnummer: B2 5,6-6,0m-mv
laborant: 5.1.2.e	projectleider:	mapnr.: 2019-014	hoogteligging: mv tov NAP: 1,57m
GEMEENTE ROTTERDAM INGENIEURSBUREAU Veld- en Laboratoriummetingen Gww		project: Landmaken HSBC-terrein	
KORRELGROOTTEVERDELING			

korrelgrootteverdelingsdiagram(exclusief humus, exclusief CaCO3 en inclusief Fe2O3)
korrel diameter in mm



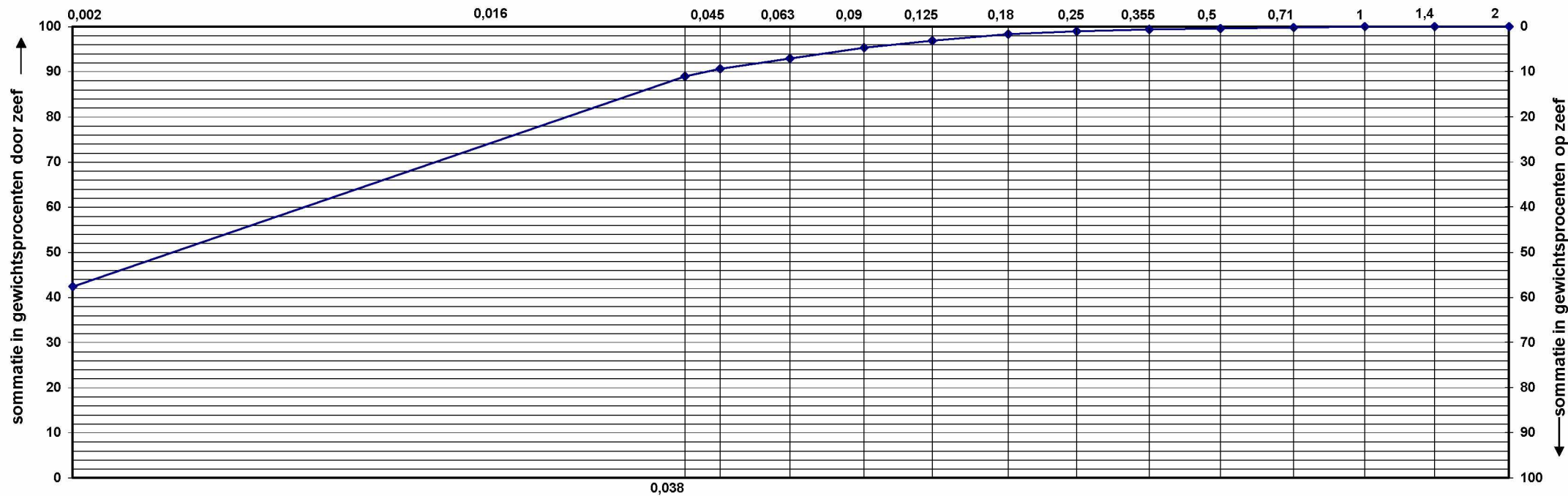
samenstelling monster (inclusief humus, CaCO3 en Fe2O3)

identificatie monster	grind >2 mm %	zand 0.063-2mm %	silt 0.002-0.063mm %	lutum <0.002 mm %	humus %	CaCO3 %	D50 mm	M50 (0.063-2mm) mm	D60/D10 (0.063-2mm)	grondsoort volgens NEN5104
B2 6,4-6,8m-mv	0,0	6,3	43,1	35,0	9,5	6,1	#GETAL!	0,119	1,91	Ks2, h2 ,Ca3

opdrachtgever: IBA	monsterklasse : 1	datum: 7-3-2019	boringnummer: B2
laborant: 5.1.2.e	projectleider:	mapnr.: 2019-014	hoogteligging: mv tov NAP: 1,57m
GEMEENTE ROTTERDAM INGENIEURSBUREAU Veld- en Laboratoriummetingen Gww		project: Landmaken HSBC-terrein	
KORRELGROOTTEVERDELING			

Tabel uitgedrukt in massapercentages van de stoofdrome grond

korrelgrootteverdelingsdiagram(exclusief humus, exclusief CaCO3 en inclusief Fe2O3)
korreldiameter in mm →

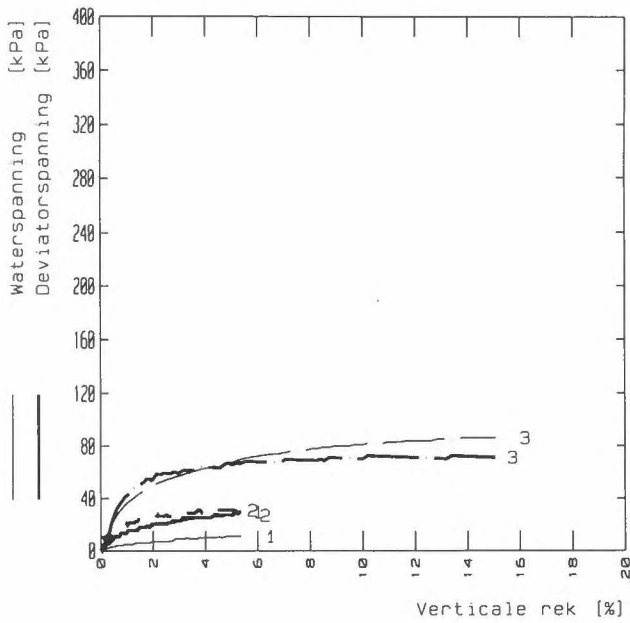


samenstelling monster (inclusief humus, CaCO3 en Fe2O3)

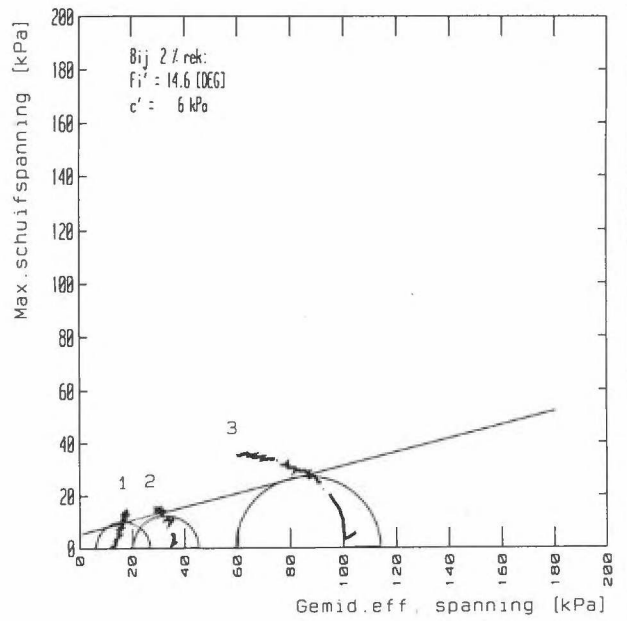
identificatie monster	grind >2 mm %	zand 0.063-2mm %	silt 0.002-0.063mm %	lutum <0.002 mm %	humus %	CaCO3 %	D50 mm	M50 (0.063-2mm) mm	D60/D10 (0.063-2mm)	grondsoort volgens NEN5104
B2 8,0-8,4m-mv	0,0	6,0	42,6	35,7	10,5	5,2	#GETAL!	0,115	1,94	Ks2, h2, Ca3

opdrachtgever: IBA	monsterklasse : 1	datum: 7-3-2019	boringnummer: B2
laborant: 5.1.2.e	projectleider:	mapnr.: 2019-014	hoogteligging: mv tov NAP: 1,57m
GEMEENTE ROTTERDAM INGENIEURSBUREAU Veld- en Laboratoriummetingen Gww		project: Landmaken HSBC-terrein	
KORRELGROOTTEVERDELING			

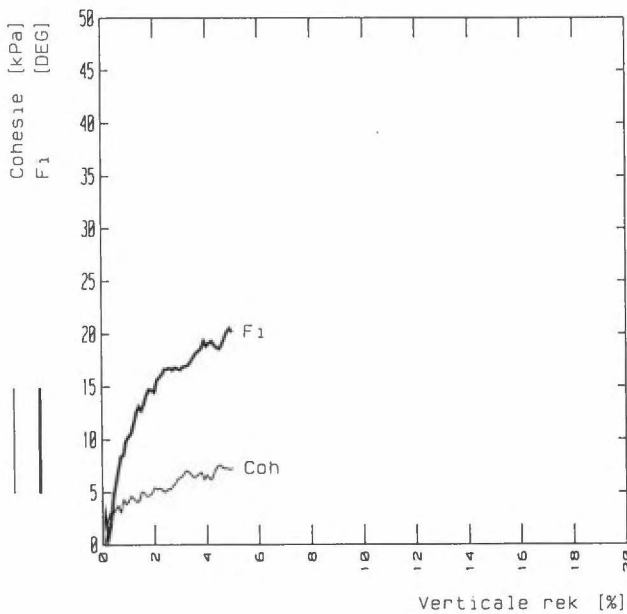
Tabel uitgedrukt in massapercentages van de stoffdroge grond



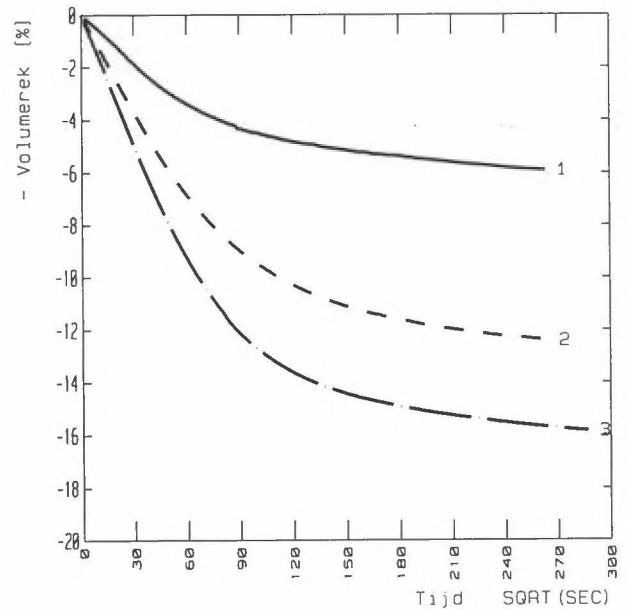
Verloop deviator- en waterspanning



Spanningspad



Mobilisatie curve



Verloop isotrope consolidatie

Monster	VG-nat kN/m3	VG-droog kN/m3	w %	Consolidatie gegevens				Eps50 %	E-50 kPa	B-waarde	
				Celdr kPa	Backpr kPa	Tijd uren	dV/V %				
— — —	1	13.4	5.8	128.8	315	301	19.2	5.9	+1.4	+95E+01	0.99
— — —	2	13.6	6.2	118.8	340	300	19.4	12.4	+0.8	+16E+02	0.99
— — —	3	14.1	7.1	99.2	409	300	22.9	15.8	+1.0	+29E+02	0.99

Type proef CU : Multi stage
 Deformatie 1.3 %/uur
 Laborant 5.12.e
 Adviseur Gem. Amsterdam
 Teamleider

Boring B01 MV NAP +1.46 m
 Monsterdiepte MV - 5.80 m NAP -4.34 m
 Grondsoort Klei, m si., m hu.
 Monsterklasse 1
 Datum proef 28 Feb 2019

Print dd 8 Mar 2019
 File: HSB11.F00.L

Gemeentewerken Rotterdam
 Ingenieursbureau
 Veld en Laboratorium Groep

Project : HSBC TERREIN
 32838
 TRIAXIAALPROEF

B01
 2019-014
 Bijlage

BISGEO_TRIAX : 1
 Boring : B01
 Diepte NAP : -4.34
 Terrein sp : 60
 Datum : 28 Feb 2019
 Grondcode : Ks2h2
 Grondsoort : Klei, m si., m hu.
 Gn-gem kN/m3 : 13.7
 Gdr-gem kN/m3 : 6.4
 W-gem % : 115.6
 Type proef : CU Uitvoering : M Cohesie 0 : N
 Deelproeven : 3 Monsterklasse : 1 Procedure : -
 Deformatie : 1.3 %/uur
 Bestand : HSB1T1.A00

MOBILISATIE GEGEVENS

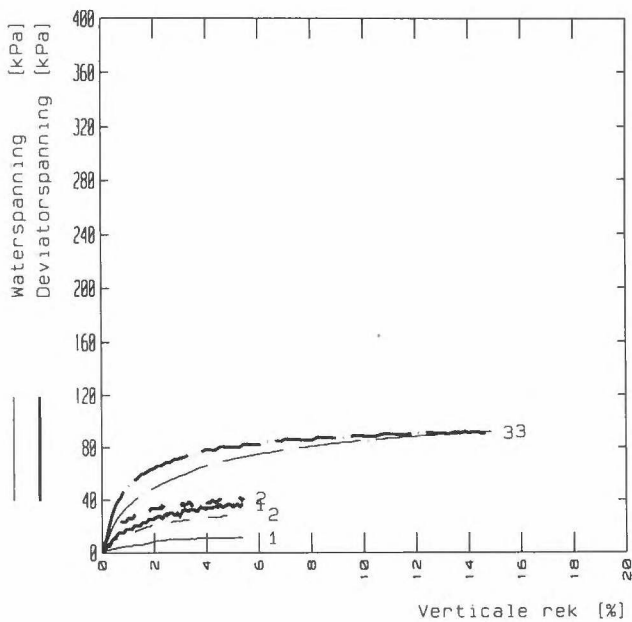
EA	FI	Coh	P1	Q1	dV1	P2	Q2	dV2	P3	Q3	dV3
%	Deg	kPa	kPa	kPa	%	kPa	kPa	%	kPa	kPa	%
0.0	0.0	0.0	14.0	0.0	0.00	40.0	0.0	0.00	109.0	0.0	0.00
.1	2.7	.4	12.7	1.0	0.00	35.5	2.0	0.00	104.1	5.3	0.00
.2	.7	2.4	13.5	2.2	0.00	35.8	3.2	0.00	100.6	3.5	0.00
.3	1.8	3.3	13.7	3.0	0.00	35.8	5.3	0.00	100.2	6.2	0.00
.4	4.3	3.1	13.8	3.8	0.00	35.6	6.1	0.00	99.9	10.4	0.00
.5	5.8	3.4	15.0	5.0	0.00	35.1	6.8	0.00	98.9	13.4	0.00
.6	7.1	3.9	14.3	5.7	0.00	35.5	8.1	0.00	97.7	15.9	0.00
.7	8.5	3.1	14.2	5.3	0.00	34.6	8.1	0.00	96.6	17.3	0.00
.8	8.6	4.5	15.6	7.0	0.00	35.4	9.4	0.00	95.8	18.8	0.00
.9	9.9	3.9	14.6	6.6	0.00	34.4	9.4	0.00	94.9	20.3	0.00
1.0	10.3	4.3	15.2	7.2	0.00	34.4	10.1	0.00	93.8	21.1	0.00
1.1	10.6	4.7	15.8	7.8	0.00	34.7	10.7	0.00	93.0	21.9	0.00
1.2	11.5	4.5	15.8	7.8	0.00	33.7	10.7	0.00	92.3	22.8	0.00
1.3	12.6	4.2	15.1	7.8	0.00	33.8	11.0	0.00	91.9	24.2	0.00
1.4	13.2	4.2	14.8	7.8	0.00	32.9	11.2	0.00	91.0	25.0	0.00
1.5	12.8	5.2	16.1	9.1	0.00	34.0	12.0	0.00	90.1	25.2	0.00
1.6	13.5	5.0	16.1	9.1	0.00	33.2	12.0	0.00	89.8	25.9	0.00
1.7	14.3	4.7	16.0	9.0	0.00	33.0	12.0	0.00	89.4	26.8	0.00
1.8	14.8	4.8	16.1	9.4	0.00	32.4	12.0	0.00	88.5	27.4	0.00
1.9	14.7	5.0	16.1	9.4	0.00	32.1	12.4	0.00	87.4	27.2	0.00
2.0	14.6	5.6	16.3	10.3	0.00	32.5	12.5	0.00	86.4	27.4	0.00
3.0	16.7	6.4	16.5	11.5	0.00	31.4	14.4	0.00	81.5	29.7	0.00
4.0	18.9	6.8	16.6	12.6	0.00	29.8	15.0	0.00	77.9	31.9	0.00
5.0	20.2	7.4	16.7	13.7	0.00	28.5	15.5	0.00	74.7	33.0	0.00

*
*
*
*
*
*
*
*
*
*
*
*

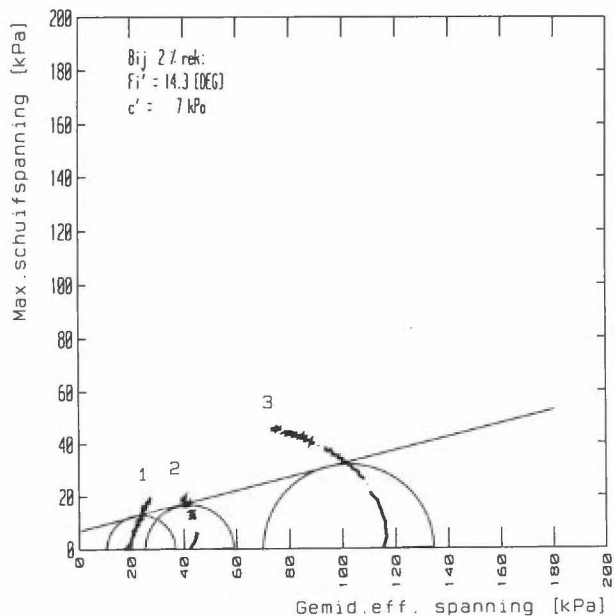
PARAMETERS PER DEELPROEF

Gnat	Gdrg	W	Peff	E50	Eps50	nu	Psi
kN/m3	kN/m3	%	kPa	kPa	%	-	Deg
13.4	5.8	128.8	14	953.3E+0	1.4	.50	0.0
13.6	6.2	118.8	40	163.1E+1	.8	.50	0.0
14.1	7.1	99.2	109	293.0E+1	1.0	.50	0.0

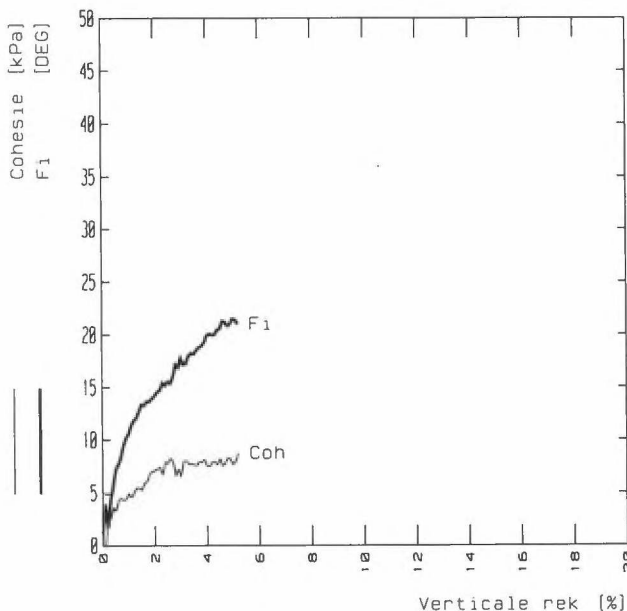
EINDE BESTAND



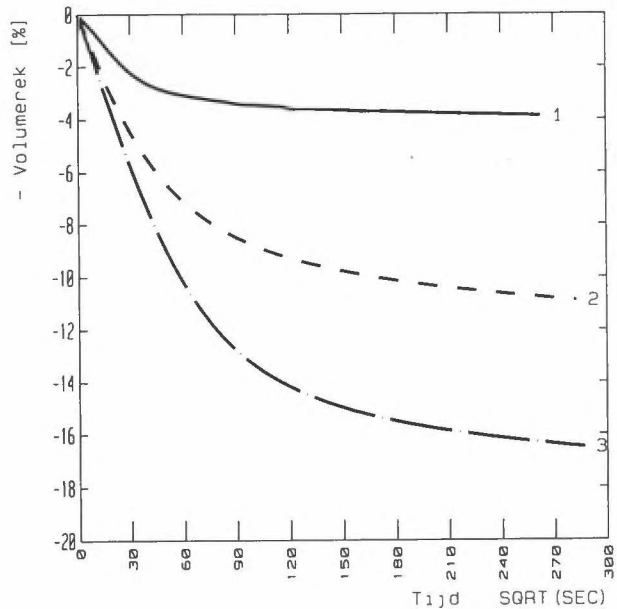
Verloop deviator- en waterspanning



Spanningspad



Mobilisatie curve



Verloop isotrope consolidatie

	Monster	Monster			Consolidatie gegevens				Eps50		E-50	B-waarde
		VG-nat	VG-droog	w	Celdr	Backpr	Tijd	dV/V	%	kPa		
		kN/m ³	kN/m ³	%	kPa	kPa	uren	%	%			
— — —	1	13.2	5.8	127.7	319	301	19.2	3.9	+1.2	+16E+02	0.98	
— — —	2	13.4	6.1	121.2	346	301	22.2	10.9	+0.7	+31E+02	0.98	
— — —	3	13.8	6.8	103.5	419	300	22.9	16.5	+0.8	+55E+02	0.98	

Type proef CU : Multi stage
 Deformatie 4.4 %/uur
 Laborant 5.12.e
 Adviseur Gem. Amsterdam
 Teamleider

Boring B01
 Monsterdiepte MV - 7.40 m
 Grondsoort Klei, m si., m hu.
 Monsterklasse 1
 Datum proef 28 Feb 2019

MV NAP +1.46 m
 NAP -5.94 m

Print dd: 9 Mar 2019
 File: HSB1T2.F00 L

Gemeentewerken Rotterdam
 Ingenieursbureau
 Veld en Laboratorium Groep

Project : HSBC TERREIN
 32838
 TRIAXIAALPROEF

B01
 2019-014
 Bijlage

BISGEO_TRIAX : 1
 Boring : B01
 Diepte NAP : -5.94
 Terrein sp : 70
 Datum : 28 Feb 2019
 Grondcode : Ks2h2
 Grondsoort : Klei, m si., m hu.
 Gn-gem kN/m3 : 13.5
 Gdr-gem kN/m3 : 6.2
 W-gem % : 117.5
 Type proef : CU Uitvoering : M Cohesie 0 : N
 Deelproeven : 3 Monsterklasse : 1 Procedure : -
 Deformatie : 4.4 %/uur
 Bestand : HSB1T2.A00

MOBILISATIE GEGEVENS

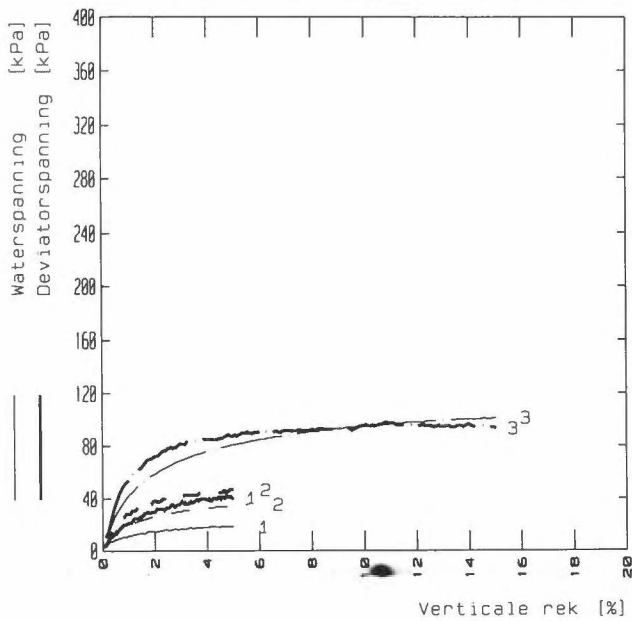
EA	FI	Coh	P1	Q1	dV1	P2	Q2	dV2	P3	Q3	dV3
%	Deg	kPa	kPa	kPa	%	kPa	kPa	%	kPa	kPa	%
0.0	0.0	0.0	18.0	0.0	0.00	45.0	0.0	0.00	119.0	0.0	0.00
.1	3.6	0.0	.2	-17.8	0.00	44.3	3.7	0.00	116.3	3.4	0.00
.2	2.2	2.9	19.6	2.6	0.00	44.8	6.2	0.00	116.2	7.0	0.00
.3	4.6	2.6	19.7	3.0	0.00	44.9	7.9	0.00	115.5	11.4	0.00
.4	5.8	3.7	20.1	5.0	0.00	44.8	9.1	0.00	114.3	14.9	0.00
.5	7.3	3.4	20.6	5.8	0.00	44.1	9.2	0.00	113.3	17.7	0.00
.6	7.8	4.4	21.1	7.1	0.00	44.1	10.5	0.00	111.9	19.4	0.00
.7	8.5	4.6	21.6	7.7	0.00	43.9	11.0	0.00	110.8	20.8	0.00
.8	9.6	4.4	21.0	7.7	0.00	43.8	11.8	0.00	110.4	22.7	0.00
.9	10.3	4.5	21.6	8.6	0.00	42.9	11.8	0.00	109.5	24.1	0.00
1.0	10.7	5.0	22.0	9.0	0.00	43.6	13.1	0.00	108.6	25.1	0.00
1.1	11.4	4.7	22.0	9.0	0.00	43.1	13.1	0.00	108.0	26.0	0.00
1.2	11.9	5.1	21.8	9.7	0.00	42.8	13.5	0.00	107.1	27.1	0.00
1.3	12.2	5.6	22.2	10.2	0.00	42.7	14.3	0.00	106.1	27.8	0.00
1.4	12.8	5.5	22.2	10.2	0.00	42.8	15.0	0.00	105.8	28.8	0.00
1.5	13.4	5.3	22.8	10.8	0.00	42.4	14.6	0.00	105.1	29.7	0.00
1.6	13.4	6.0	23.0	11.5	0.00	42.2	15.2	0.00	104.2	30.0	0.00
1.7	13.7	6.1	22.6	11.6	0.00	41.9	15.6	0.00	103.4	30.6	0.00
1.8	13.7	6.9	23.4	12.7	0.00	42.0	16.0	0.00	103.0	31.2	0.00
1.9	14.0	7.1	23.3	12.7	0.00	42.0	16.9	0.00	102.5	31.8	0.00
2.0	14.3	7.2	23.4	13.0	0.00	41.8	16.8	0.00	101.9	32.1	0.00
3.0	17.8	6.6	24.1	14.4	0.00	40.9	17.9	0.00	96.2	36.0	0.00
4.0	20.0	7.6	25.3	16.8	0.00	39.3	19.3	0.00	93.0	39.2	0.00
5.0	21.5	7.7	26.3	17.8	0.00	38.1	20.1	0.00	89.0	40.1	0.00

*
*
*
*
*
*
*
*
*
*
*
*

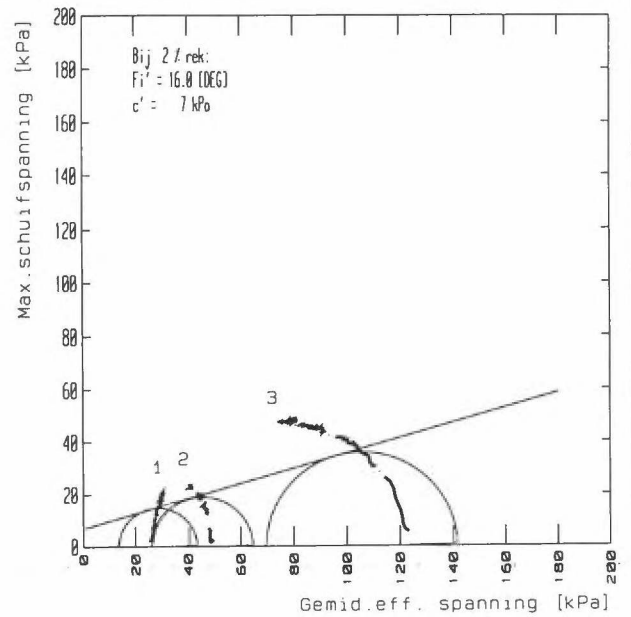
PARAMETERS PER DEELPROEF

Gnat	Gdrg	W	Peff	E50	Eps50	nu	Psi
kN/m3	kN/m3	%	kPa	kPa	%	-	Deg
13.2	5.8	127.7	18	157.9E+1	1.2	.50	0.0
13.4	6.1	121.2	45	305.3E+1	.7	.50	0.0
13.8	6.8	103.5	119	548.3E+1	.8	.50	0.0

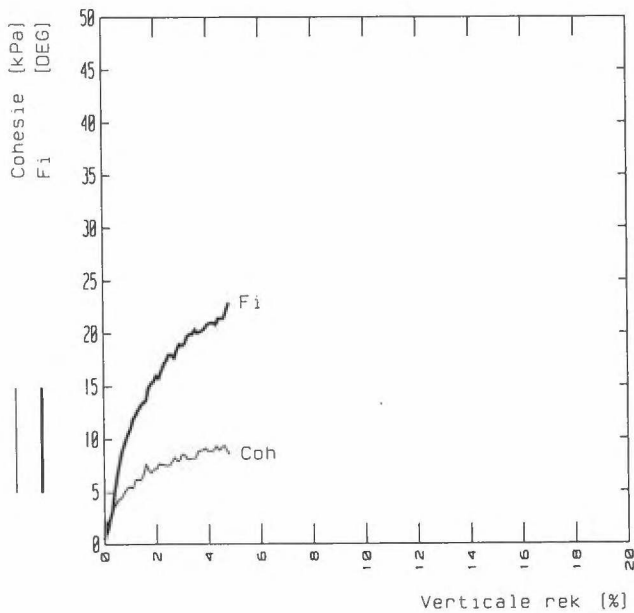
EINDE BESTAND



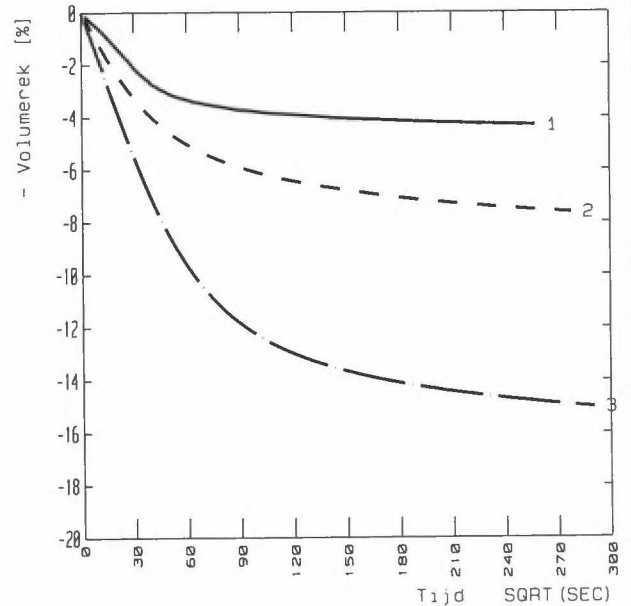
Verloop deviator- en waterspanning



Spanningspad



Mobilisatie curve



Verloop isotrope consolidatie

	Monster	VG-nat kN/m3	VG-droog kN/m3	w %	Consolidatie gegevens				Eps50 %	E-50 kPa	B-waarde
					Celldr kPa	Backpr kPa	Tijd uren	dV/V %			
— — —	1	13.5	5.9	128.2	327	300	18.4	4.3	+1.2	+16E+02	0.96
— — —	2	13.6	6.2	121.0	351	300	21.4	7.6	+0.8	+25E+02	0.96
— — —	3	13.9	6.7	108.8	427	300	23.4	15.0	+1.0	+42E+02	0.96

Type proef CU : Multi stage
 Deformatie 2.8 %/uur
 Laborant 5.12.e
 Adviseur Gem. Amsterdam
 Teamleider

Boring B01
 Monsterdiepte MV - 8.60 m
 Grondsoort Klei, m sl., m hu.
 Monsterklasse 1
 Datum proef 28 Feb 2019

MV NAP +1.46 m
 NAP -7.14 m
 Print op: 8 Mar 2019
 File: HSBIT3_F00.L

Gemeentewerken Rotterdam
 Ingenieursbureau
 Veld en Laboratorium Groep

Project : HSBC TERREIN
 32838
 TRIAXIAALPROEF

B01
 2019-014
 Bijlage

BISGEO_TRIAX : 1
 Boring : B01
 Diepte NAP : -7.14
 Terrein sp : 78
 Datum : 28 Feb 2019
 Grondcode : Ks2h2
 Grondsoort : Klei, m si., m hu.
 Gn-gem kN/m3 : 13.7
 Gdr-gem kN/m3 : 6.2
 W-gem % : 119.3
 Type proef : CU Uitvoering : M Cohesie 0 : N
 Deelproeven : 3 Monsterklasse : 1 Procedure : -
 Deformatie : 2.8 %/uur
 Bestand : HSB1T3.A00

MOBILISATIE GEGEVENS

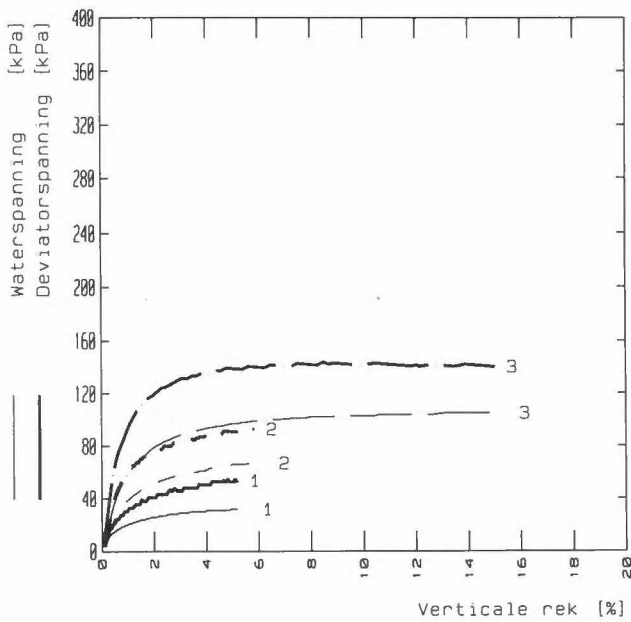
EA	FI	Coh	P1	Q1	dV1	P2	Q2	dV2	P3	Q3	dV3
%	Deg	kPa	kPa	kPa	%	kPa	kPa	%	kPa	kPa	%
0.0	0.0	0.0	27.0	0.0	0.00	51.0	0.0	0.00	127.0	0.0	0.00
.1	1.9	1.0	26.9	2.6	0.00	48.4	1.7	0.00	123.7	5.3	0.00
.2	2.4	2.0	25.7	3.2	0.00	48.2	3.9	0.00	121.7	7.1	0.00
.3	3.4	3.6	26.5	5.2	0.00	48.2	6.5	0.00	120.9	10.8	0.00
.4	5.3	3.7	26.3	5.8	0.00	47.9	8.4	0.00	119.8	14.7	0.00
.5	6.7	4.2	26.3	7.2	0.00	47.9	9.9	0.00	118.5	18.1	0.00
.6	8.1	4.4	26.5	7.8	0.00	47.9	11.4	0.00	117.9	20.8	0.00
.7	9.1	4.6	27.0	8.8	0.00	46.4	12.0	0.00	117.1	23.1	0.00
.8	9.8	5.2	27.2	9.9	0.00	46.9	12.9	0.00	115.9	24.9	0.00
.9	10.5	5.5	27.3	10.3	0.00	47.2	14.1	0.00	114.3	26.2	0.00
1.0	11.0	5.5	27.1	10.7	0.00	46.4	14.2	0.00	113.1	27.1	0.00
1.1	11.9	5.4	27.4	10.9	0.00	46.3	14.9	0.00	112.4	28.4	0.00
1.2	12.3	6.2	27.7	12.3	0.00	45.8	15.4	0.00	111.7	30.0	0.00
1.3	12.8	6.2	27.7	12.4	0.00	46.1	16.1	0.00	110.6	30.6	0.00
1.4	13.2	6.2	28.0	12.5	0.00	45.6	16.3	0.00	109.4	31.1	0.00
1.5	13.5	6.7	27.8	13.2	0.00	45.3	16.9	0.00	108.6	32.0	0.00
1.6	13.7	7.7	27.5	14.4	0.00	45.9	17.9	0.00	108.4	33.3	0.00
1.7	14.8	7.1	28.2	14.6	0.00	44.9	17.7	0.00	107.9	34.6	0.00
1.8	15.3	6.9	28.1	14.5	0.00	44.6	17.9	0.00	106.9	35.0	0.00
1.9	15.5	7.3	28.2	14.9	0.00	44.5	18.5	0.00	106.0	35.4	0.00
2.0	16.0	7.2	28.2	14.9	0.00	45.1	19.1	0.00	105.3	36.0	0.00
3.0	18.9	8.7	29.4	18.4	0.00	43.5	21.5	0.00	99.9	40.7	0.00
4.0	21.0	8.9	29.9	19.5	0.00	41.5	22.5	0.00	95.3	42.5	0.00

*
*
*
*
*
*
*
*
*
*
*
*
*
*
*

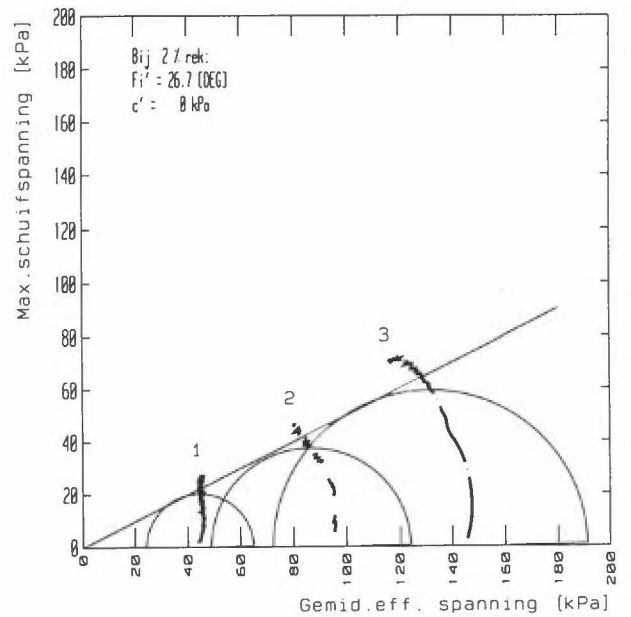
PARAMETERS PER DEELPROEF

Gnat	Gdrg	W	Peff	E50	Eps50	nu	Psi
kN/m3	kN/m3	%	kPa	kPa	%	-	Deg
13.5	5.9	128.2	27	156.8E+1	1.2	.50	0.0
13.6	6.2	121.0	51	246.5E+1	.8	.50	0.0
13.9	6.7	108.8	127	419.9E+1	1.0	.50	0.0

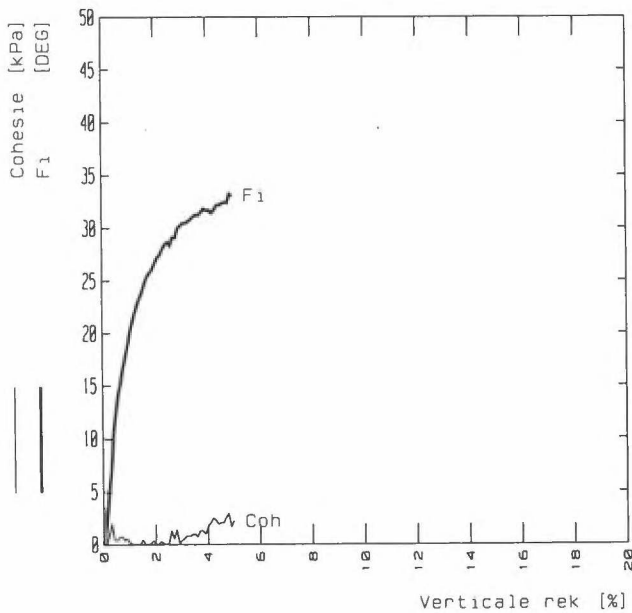
EINDE BESTAND



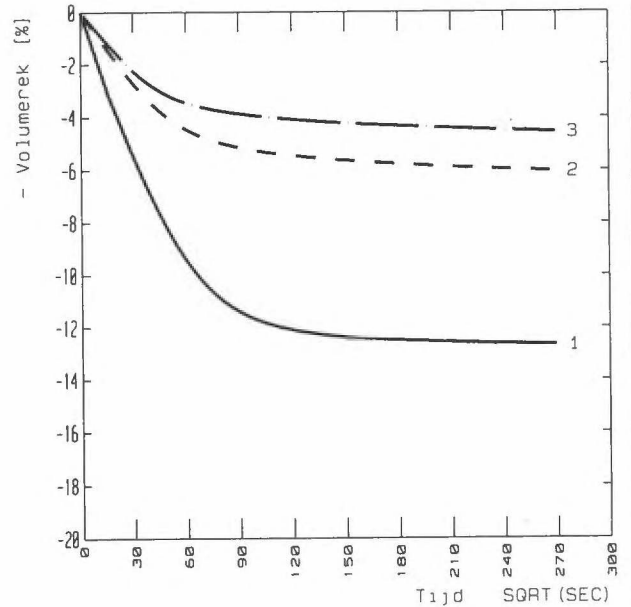
Verloop deviator- en waterspanning



Spanningspad



Mobilisatie curve



Verloop isotrope consolidatie

Monster	VG-nat kN/m3	VG-droog kN/m3	w %	Consolidatie gegevens				Eps50 %	E-50 kPa	B-waarde	
				Celldr kPa	Backpr kPa	Tijd uren	dV/V %				
— — —	1	14.6	7.9	83.3	350	300	20.2	12.7	+0.9	+28E+02	0.99
— — —	2	15.3	9.1	67.6	401	300	20.2	6.0	+0.7	+56E+02	0.99
— — —	3	15.6	9.7	61.1	450	300	20.2	4.6	+0.7	+11E+03	0.99

Type proof CU : Multi stage
 Deformatie 1.5 %/uur
 Laborant 5.1.2.e
 Adviseur Gem. Amsterdam
 Teamleider

Boring B01
 Monsterdiepte MV -11.40 m
 Grondsoort Klei, m sl., m hu.
 Monsterklasse 1
 Datum proof 4 Mar 2019

MV NAP +1.46 m
 NAP -9.94 m

Print dd. 8 Mar 2019
 File: HSB174.F00 L

Gemeentewerken Rotterdam
 Ingenieursbureau

Project : HSBC TERREIN
 32838

B01

Veld en Laboratorium Groep

TRIAXIAALPROEF

2019-014

Bijlage

BISGEO_TRIAX : 1
 Boring : B01
 Diepte NAP : -9.94
 Terrein sp : 101
 Datum : 4 Mar 2019
 Grondcode : Ks2h2
 Grondsoort : Klei, m si., m hu.
 Gn-gem kN/m3 : 15.1
 Gdr-gem kN/m3 : 8.9
 W-gem % : 70.7
 Type proef : CU Uitvoering : M Cohesie 0 : N
 Deelproeven : 3 Monsterklasse : 1 Procedure : -
 Deformatie : 1.5 %/uur
 Bestand : HSB1T4.A00

MOBILISATIE GEGEVENS

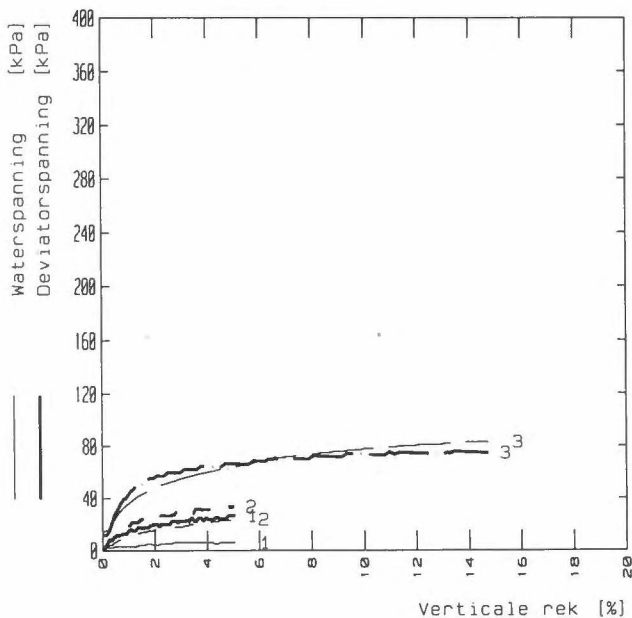
EA	FI	Coh	P1	Q1	dV1	P2	Q2	dV2	P3	Q3	dV3
%	Deg	kPa	kPa	kPa	%	kPa	kPa	%	kPa	kPa	%
0.0	0.0	0.0	50.0	0.0	0.00	101.0	0.0	0.00	150.0	0.0	0.00
.1	1.5	0.0	44.0	2.3	0.00	94.4	-3.3	0.00	146.6	6.7	0.00
.2	4.5	.9	44.8	4.9	0.00	95.7	7.5	0.00	147.3	12.8	0.00
.3	6.8	2.1	45.8	8.5	0.00	95.5	11.3	0.00	147.1	20.5	0.00
.4	10.4	.6	45.6	9.4	0.00	95.8	16.7	0.00	146.0	27.5	0.00
.5	12.7	.5	45.9	11.0	0.00	95.4	20.5	0.00	144.4	32.7	0.00
.6	14.4	.7	45.6	12.4	0.00	94.6	23.5	0.00	142.9	36.5	0.00
.7	15.6	.8	45.3	13.4	0.00	93.4	25.2	0.00	141.4	39.3	0.00
.8	17.1	.5	44.9	13.9	0.00	92.7	27.3	0.00	139.8	41.8	0.00
.9	18.2	.6	45.3	15.1	0.00	91.8	28.5	0.00	138.6	44.2	0.00
1.0	19.5	.3	45.2	15.6	0.00	91.2	30.2	0.00	138.0	46.6	0.00
1.1	20.7	0.0	45.4	16.4	0.00	90.8	31.4	0.00	137.5	48.9	0.00
1.2	21.6	0.0	44.8	16.8	0.00	90.0	32.4	0.00	136.5	50.7	0.00
1.3	22.5	0.0	45.3	17.7	0.00	89.6	33.3	0.00	135.8	52.5	0.00
1.4	23.3	0.0	44.7	17.7	0.00	88.6	33.7	0.00	135.2	54.1	0.00
1.5	23.8	.5	44.8	19.1	0.00	88.5	35.0	0.00	134.5	55.3	0.00
1.6	24.7	0.0	45.0	19.0	0.00	88.2	35.9	0.00	134.2	56.5	0.00
1.7	25.4	0.0	44.4	19.0	0.00	87.4	36.7	0.00	133.7	57.7	0.00
1.8	25.8	.1	45.4	20.4	0.00	86.6	36.3	0.00	132.9	58.3	0.00
1.9	26.1	.4	44.3	20.3	0.00	86.5	37.4	0.00	132.2	58.9	0.00
2.0	26.7	0.0	44.3	20.3	0.00	86.2	37.7	0.00	131.5	59.5	0.00
3.0	30.3	.4	43.8	23.0	0.00	83.1	41.1	0.00	128.0	65.4	0.00
4.0	31.7	1.7	44.5	25.2	0.00	81.8	43.8	0.00	125.2	67.6	0.00
5.0	33.1	2.2	44.3	26.3	0.00	80.7	45.5	0.00	123.5	69.5	0.00

*
*
*
*
*
*
*
*
*
*
*
*
*

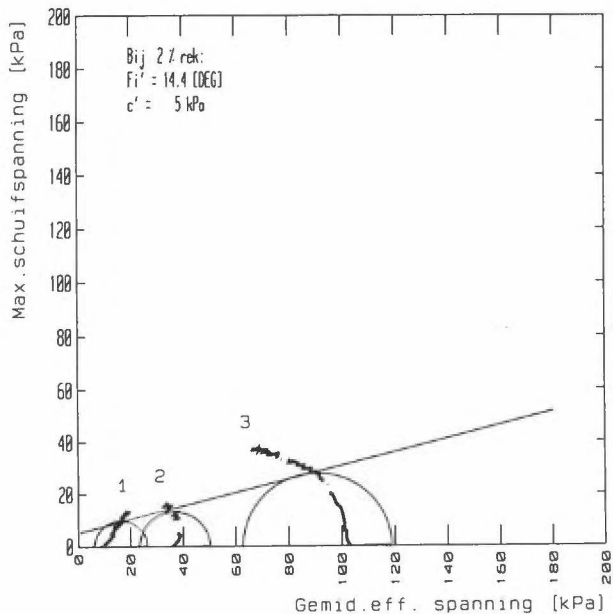
PARAMETERS PER DEELPROEF

Gnat	Gdrg	W	Peff	E50	Eps50	nu	Psi
kN/m3	kN/m3	%	kPa	kPa	%	-	Deg
14.6	7.9	83.3	50	281.7E+1	.9	.50	0.0
15.3	9.1	67.6	101	557.0E+1	.7	.50	0.0
15.6	9.7	61.1	150	105.0E+2	.7	.50	0.0

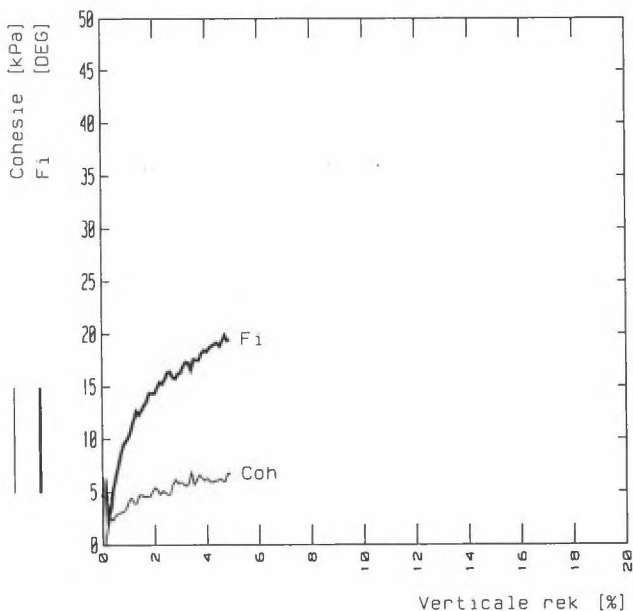
EINDE BESTAND



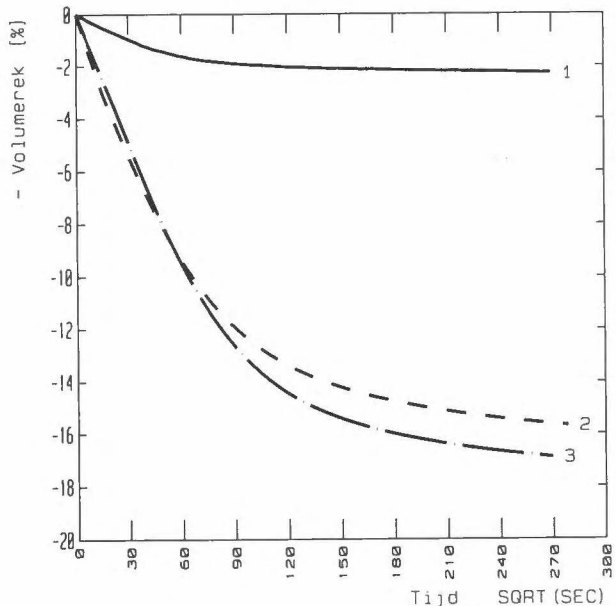
Verloop deviator- en waterspanning



Spanningspad



Mobilisatie curve



Verloop isotrope consolidatie

Monster	VG-nat kN/m ³	VG-droog kN/m ³	w %	Consolidatie gegevens				Eps50 %	E-50 kPa	B-waarde
				Celdr kPa	Backpr kPa	Tijd uren	dV/V %			
1	13.0	5.5	133.8	311	301	20.2	2.3	+0.9	+14E+02	0.99
2	13.0	5.7	129.8	340	301	21.5	15.7	+0.9	+19E+02	0.99
3	13.6	6.7	102.6	410	300	20.2	16.9	+0.8	+47E+02	0.99

Type proef CU : Multi stage
 Deformatie 2.6 %/uur
 Laborant 5.12e
 Adviseur Gem. Amsterdam
 Teamleider

Boring B02
 Monsterdiepte MV - 5.80 m
 Grondsoort Klei, m si., s hu.
 Monsterklasse 1
 Datum proef 4 Mar 2019

MV NAP +1.57 m
 NAP -4.23 m
 Print dd: 8 Mar 2019
 File: HSB2T1 F00 L

Gemeentewerken Rotterdam
 Ingenieursbureau
 Veld en Laboratorium Groep

Project : HSBC TERREIN
 32838
 TRIAXIAALPROEF

B02
 2019-014
 Bijlage

BISGEO_TRIAX : 1
 Boring : B02
 Diepte NAP : -4.23
 Terrein sp : 61
 Datum : 4 Mar 2019
 Grondcode : Ks2h3
 Grondsoort : Klei, m si., s hu.
 Gn-gem kN/m3 : 13.2
 Gdr-gem kN/m3 : 6.0
 W-gem % : 122.1
 Type proef : CU Uitvoering : M Cohesie 0 : N
 Deelproeven : 3 Monsterklasse : 1 Procedure : -
 Deformatie : 2.6 %/uur
 Bestand : HSB2T1.A00

MOBILISATIE GEGEVENS

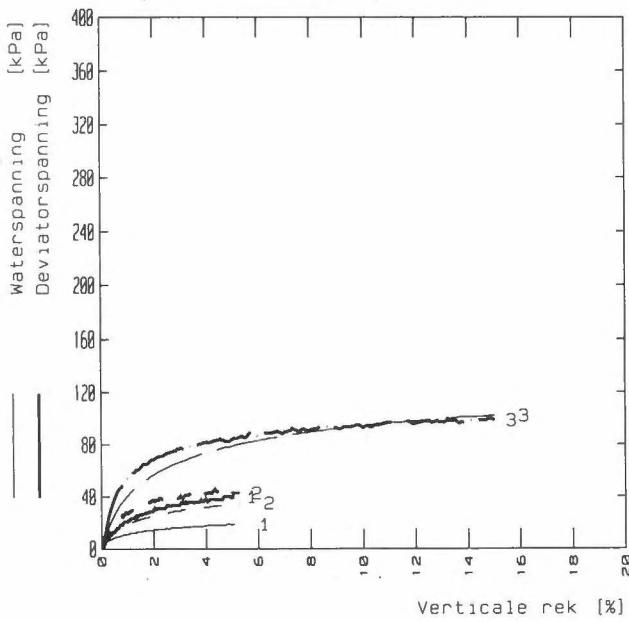
EA	FI	Coh	P1	Q1	dV1	P2	Q2	dV2	P3	Q3	dV3
%	Deg	kPa	kPa	kPa	%	kPa	kPa	%	kPa	kPa	%
0.0	0.0	0.0	10.0	0.0	0.00	39.0	0.0	0.00	110.0	0.0	0.00
.1	6.3	0.0	10.6	1.6	0.00	37.2	1.2	0.00	96.9	11.4	0.00
.2	2.5	2.0	12.0	3.0	0.00	38.4	2.9	0.00	101.0	6.6	0.00
.3	3.4	2.7	12.9	4.1	0.00	39.1	4.1	0.00	100.9	9.0	0.00
.4	5.3	2.4	12.7	4.6	0.00	38.3	4.4	0.00	100.3	12.0	0.00
.5	6.4	2.9	12.9	5.6	0.00	38.0	5.4	0.00	99.5	14.6	0.00
.6	7.5	3.0	13.2	5.5	0.00	38.1	6.8	0.00	98.0	16.1	0.00
.7	8.7	3.1	13.3	5.9	0.00	38.0	7.7	0.00	97.1	18.1	0.00
.8	9.6	3.2	13.4	6.4	0.00	37.6	8.1	0.00	96.5	19.6	0.00
.9	9.9	3.5	13.3	6.3	0.00	37.7	9.0	0.00	95.8	20.1	0.00
1.0	10.3	4.2	13.6	7.6	0.00	37.4	9.4	0.00	95.4	21.6	0.00
1.1	11.0	4.5	14.7	8.0	0.00	37.7	10.5	0.00	95.0	22.9	0.00
1.2	11.9	4.0	14.6	7.6	0.00	37.8	10.8	0.00	94.5	23.7	0.00
1.3	12.7	4.0	15.0	8.1	0.00	36.8	10.8	0.00	93.8	24.8	0.00
1.4	12.4	4.8	14.8	8.8	0.00	37.2	11.2	0.00	92.9	25.0	0.00
1.5	12.8	4.8	14.8	8.5	0.00	37.1	12.1	0.00	92.4	25.4	0.00
1.6	13.3	4.6	15.8	8.8	0.00	37.1	12.1	0.00	91.9	25.9	0.00
1.7	13.7	4.6	14.9	8.8	0.00	36.6	12.1	0.00	91.3	26.4	0.00
1.8	14.4	4.6	15.2	9.2	0.00	36.1	12.1	0.00	91.1	27.6	0.00
1.9	14.4	5.0	16.0	9.6	0.00	36.9	12.9	0.00	90.6	27.7	0.00
2.0	14.4	5.5	16.0	10.0	0.00	36.5	13.4	0.00	90.5	28.1	0.00
3.0	16.3	6.0	16.2	11.2	0.00	35.5	14.5	0.00	85.2	30.1	0.00
4.0	18.3	6.4	17.3	12.2	0.00	33.7	15.7	0.00	82.4	32.2	0.00
5.0	19.5	6.9	18.4	13.4	0.00	33.5	16.8	0.00	79.3	33.3	0.00

*
*
*
*
*
*
*
*
*
*
*
*
*

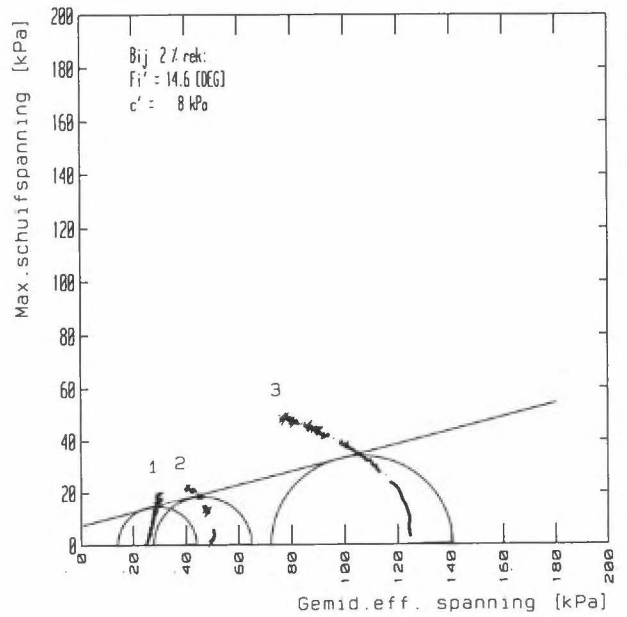
PARAMETERS PER DEELPROEF

Gnat	Gdrg	W	Peff	E50	Eps50	nu	Psi
kN/m3	kN/m3	%	kPa	kPa	%	-	Deg
13.0	5.5	133.8	10	142.6E+1	.9	.50	0.0
13.0	5.7	129.8	39	194.0E+1	.9	.50	0.0
13.6	6.7	102.6	110	466.7E+1	.8	.50	0.0

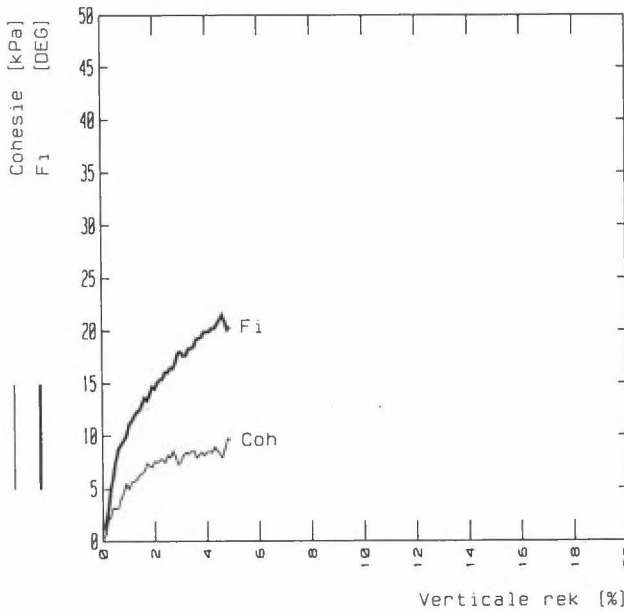
EINDE BESTAND



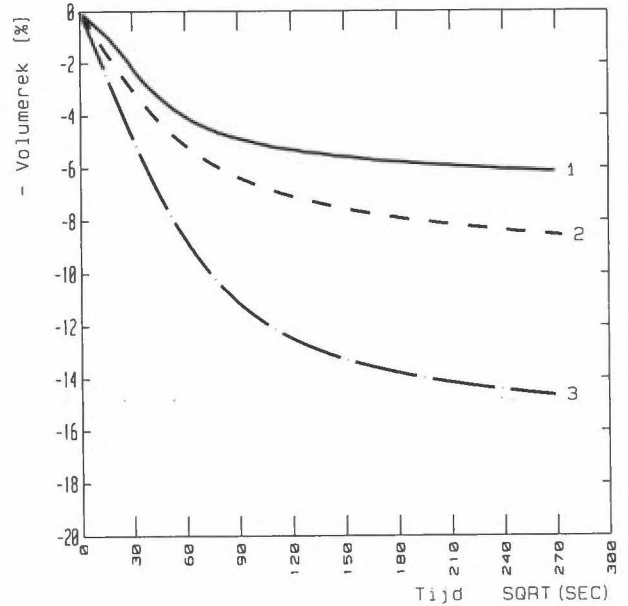
Verloop deviator- en waterspanning



Spanningspad



Mobilisatie curve



Verloop isotrope consolidatie

	Monster	VG-nat kN/m3	VG-droog kN/m3	w %	Consolidatie gegevens				Eps50 %	E-50 kPa	B-waarde
					Celldr kPa	Backpr kPa	Tijd uren	dV/V %			
— — —	1	13.2	5.8	127.6	327	300	20.1	6.1	+0.9	+23E+02	0.96
— — —	2	13.4	6.2	117.2	351	300	20.8	8.6	+0.9	+23E+02	0.96
— — —	3	13.8	6.8	103.6	427	300	20.1	14.7	+0.9	+50E+02	0.96

Type proef CU ; Multi stage
 Deformatie 1.9 %/uur
 Laborant 5.12e
 Adviseur Gem. Amsterdam
 Teamleider

Boring B02
 Monsterdiepte MV - 8.20 m
 Grondsoort Klei, m si., s hu.
 Monsterklasse 1
 Datum proef 4 Mar 2019

MV NAP +1.57 m
 NAP -6.63 m

Print op: 8 Mar 2019
 File: HSB2T2.F00 L

Gemeentewerken Rotterdam
 Ingenieursbureau
 Veld en Laboratorium Groep

Project : HSBC TERREIN
 32838
 TRIAXIAALPROEF

B02
 2019-014
 Bijlage

BISGEO_TRIAX : 1
 Boring : B02
 Diepte NAP : -6.63
 Terrein sp : 78
 Datum : 4 Mar 2019
 Grondcode : Ks2h3
 Grondsoort : Klei, m si., s hu.
 Gn-gem kN/m3 : 13.5
 Gdr-gem kN/m3 : 6.3
 W-gem % : 116.1
 Type proef : CU Uitvoering : M Cohesie 0 : N
 Deelproeven : 3 Monsterklasse : 1 Procedure : -
 Deformatie : 1.9 %/uur
 Bestand : HSB2T2.A00

MOBILISATIE GEGEVENS

EA	FI	Coh	P1	Q1	dV1	P2	Q2	dV2	P3	Q3	dV3
%	Deg	kPa	kPa	kPa	%	kPa	kPa	%	kPa	kPa	%
0.0	0.0	0.0	27.0	0.0	0.00	51.0	0.0	0.00	127.0	0.0	0.00
.1	1.6	.8	25.1	2.0	0.00	49.7	1.5	0.00	124.5	4.4	0.00
.2	3.1	2.1	25.7	3.7	0.00	50.7	4.5	0.00	124.4	8.8	0.00
.3	5.0	2.5	26.0	5.0	0.00	50.3	6.6	0.00	123.6	13.3	0.00
.4	6.2	3.3	26.5	6.2	0.00	49.9	8.6	0.00	122.2	16.6	0.00
.5	7.7	3.1	26.2	6.6	0.00	49.3	9.8	0.00	121.2	19.4	0.00
.6	8.9	3.3	26.9	7.9	0.00	48.8	10.1	0.00	119.8	21.8	0.00
.7	9.2	4.2	27.1	8.9	0.00	48.5	11.3	0.00	118.2	23.2	0.00
.8	9.6	4.7	26.8	9.3	0.00	48.2	12.5	0.00	117.0	24.3	0.00
.9	10.0	5.5	27.4	10.4	0.00	48.3	13.6	0.00	116.2	25.8	0.00
1.0	11.1	5.0	27.4	10.4	0.00	47.3	13.7	0.00	115.0	27.1	0.00
1.1	11.4	5.6	27.3	11.3	0.00	47.3	14.4	0.00	113.4	28.1	0.00
1.2	11.9	5.8	27.7	11.7	0.00	47.1	14.8	0.00	112.3	28.9	0.00
1.3	12.3	5.9	28.2	12.3	0.00	46.9	15.2	0.00	111.7	29.8	0.00
1.4	12.5	6.3	27.6	12.6	0.00	46.7	15.7	0.00	111.0	30.3	0.00
1.5	13.0	6.5	28.0	13.0	0.00	46.0	16.1	0.00	110.2	31.1	0.00
1.6	13.7	6.7	27.7	13.4	0.00	46.0	17.0	0.00	109.5	32.5	0.00
1.7	13.4	7.5	27.8	13.8	0.00	45.9	17.8	0.00	108.5	32.5	0.00
1.8	13.9	7.2	27.9	13.9	0.00	46.0	17.8	0.00	107.5	32.9	0.00
1.9	14.7	7.1	28.2	14.2	0.00	45.6	18.2	0.00	106.8	34.0	0.00
2.0	14.6	7.7	28.7	15.0	0.00	46.0	18.6	0.00	106.2	34.2	0.00
3.0	18.0	7.6	28.9	16.9	0.00	43.4	19.7	0.00	100.4	38.5	0.00
4.0	19.9	8.5	28.9	18.7	0.00	41.5	21.2	0.00	95.9	40.9	0.00
5.0	21.5	8.7	29.1	19.6	0.00	40.5	21.8	0.00	92.0	41.9	0.00

*
*
*
*
*
*
*
*
*
*
*
*

PARAMETERS PER DEELPROEF

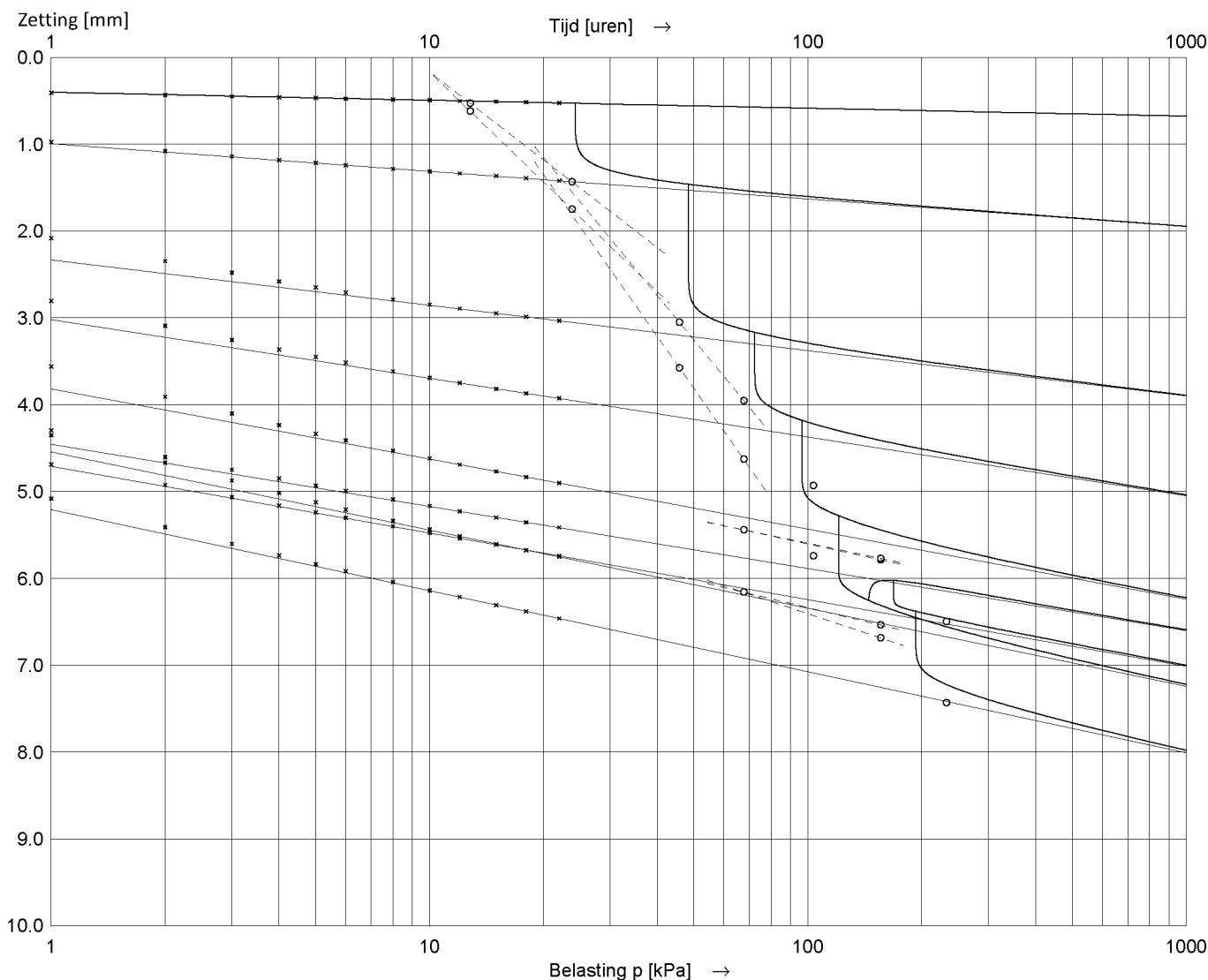
Gnat	Gdrg	W	Peff	E50	Eps50	nu	Psi
kN/m3	kN/m3	%	kPa	kPa	%	-	Deg
13.2	5.8	127.6	27	230.6E+1	.9	.50	0.0
13.4	6.2	117.2	51	231.7E+1	.9	.50	0.0
13.8	6.8	103.6	127	498.5E+1	.9	.50	0.0

EINDE BESTAND

Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei, matig siltig, matig humeus
 Monster : 1 Einddatum : 25-02-2019 Diepte : 3.94 - 3.99 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.44 kN/m³
 Apparaat : 4 Zetting (24u) : 0.528 mm Droog vol. gewicht γ_{dr} : 6.70 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.472 mm Watergehalte W : 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
C _p	13.3	7.8	8.4	8.4	9.3	47.0	49.3	10.7	
C _s	53.0	62.0	49.4	62.7	86.0	87.7	311.9	47.0	
C _{10⁴}	6.6	5.2	5.0	5.5	6.5	15.0	30.2	5.6	

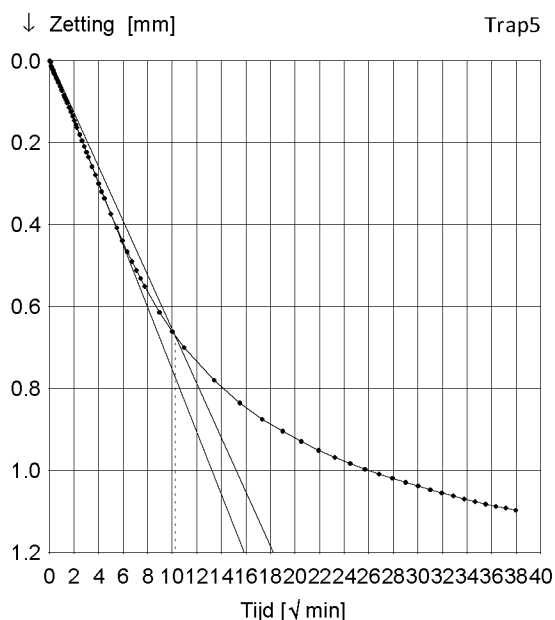
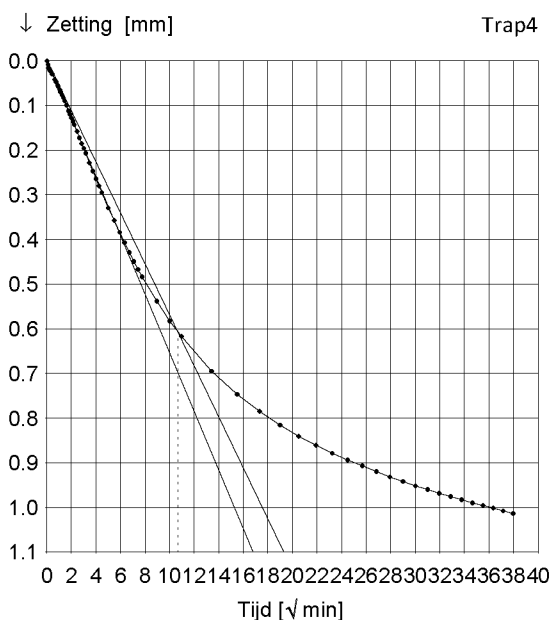
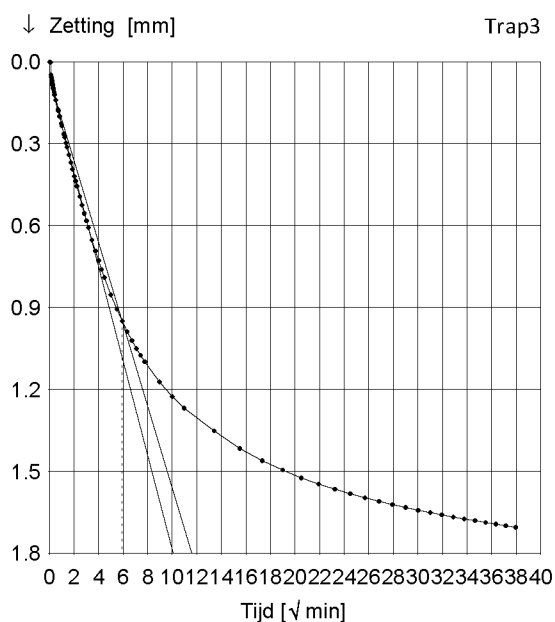
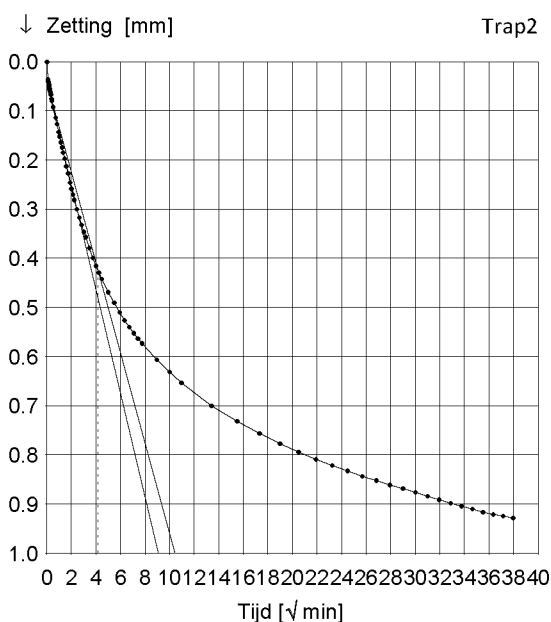
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
21 [kN/m ²]	C _p = 13.3	C _p ' = 8.4	C _p = 47.0	C _p = 49.3		
	C _s = 53.0	C _s ' = 49.4	C _s = 87.7	C _s = 311.9		
	C _{10⁴} = 6.6	C _{10⁴} ' = 5.0	C _{10⁴} = 15.0	C _{10⁴} = 30.2		



Asymptoot tijdinterval : 12 - 48 uur.

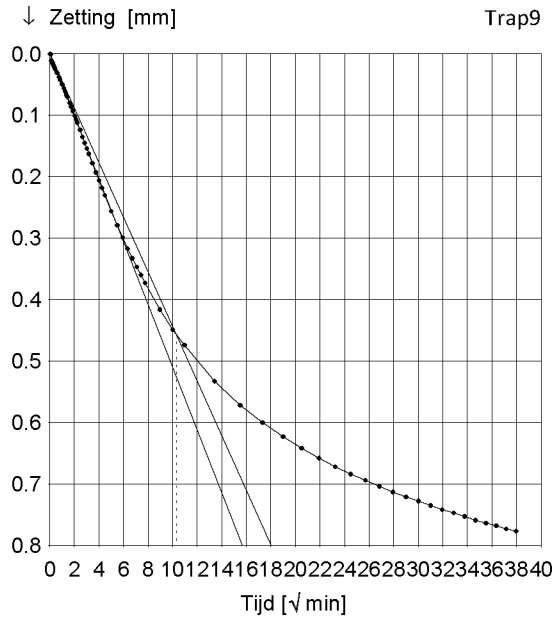
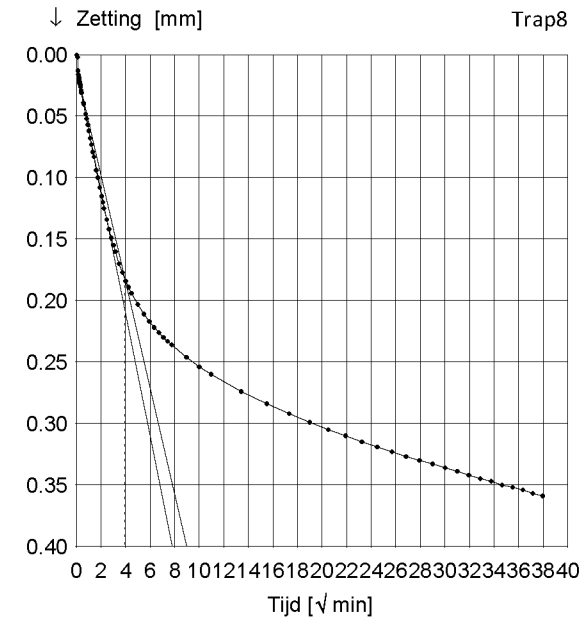
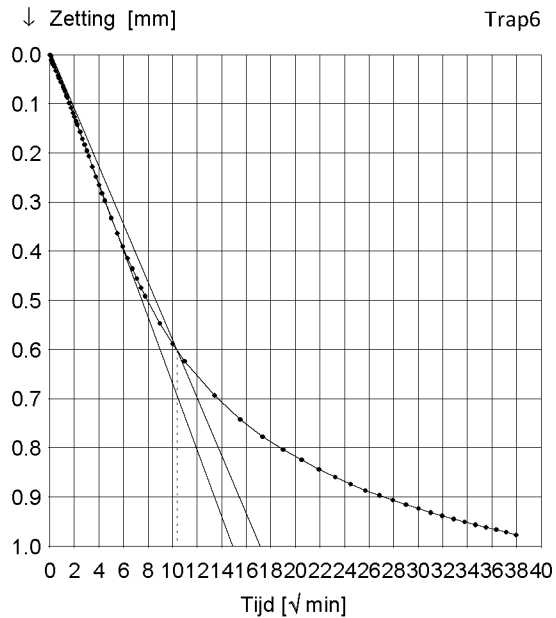
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, matig humeus
Monster	: 1	Einddatum	: 25-02-2019	Diepte	: 3.94 - 3.99 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.44 kN/m ³
Apparaat	: 4	Zetting (24u)	: 0.528 mm	Droog vol. gewicht γ_{dr}	: 6.70 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.472 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		5.57	2.38	0.62	0.59	0.50		3.31	0.44
m_v [1/MPa]		1.99	2.41	1.82	1.33	0.88		0.15	0.49
k_{10} [10^{-11} m/s]		108.58	56.46	11.11	7.64	4.29		4.97	2.07
c_v [10^{-8} m ² /s] (log-t)		4.34	1.22	0.43	0.43	0.38		3.60	0.32
C_α [10^{-3}]		13.27	18.08	18.87	19.69	18.61		5.766	18.43



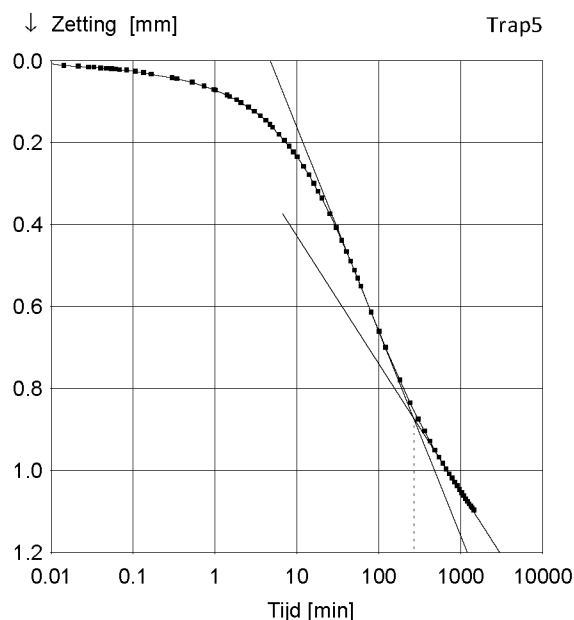
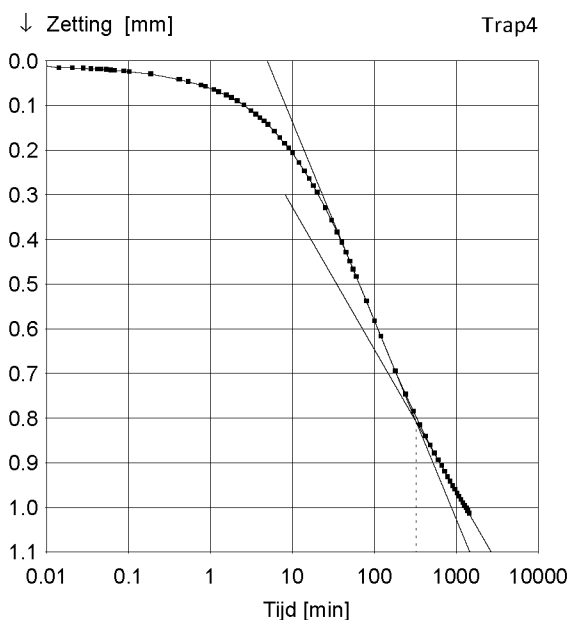
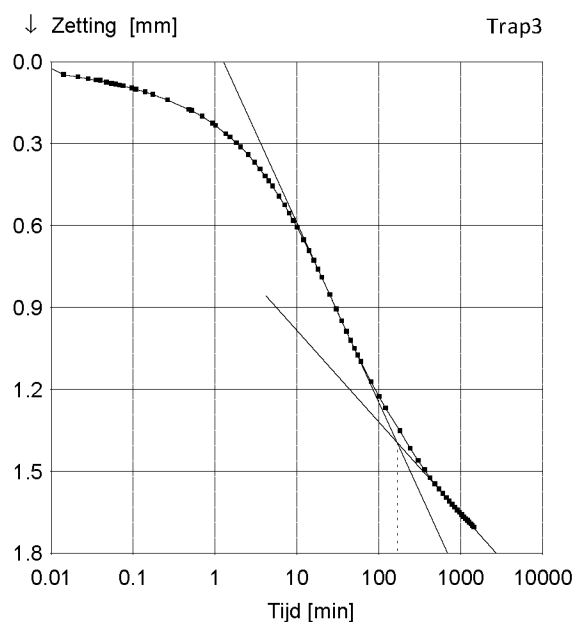
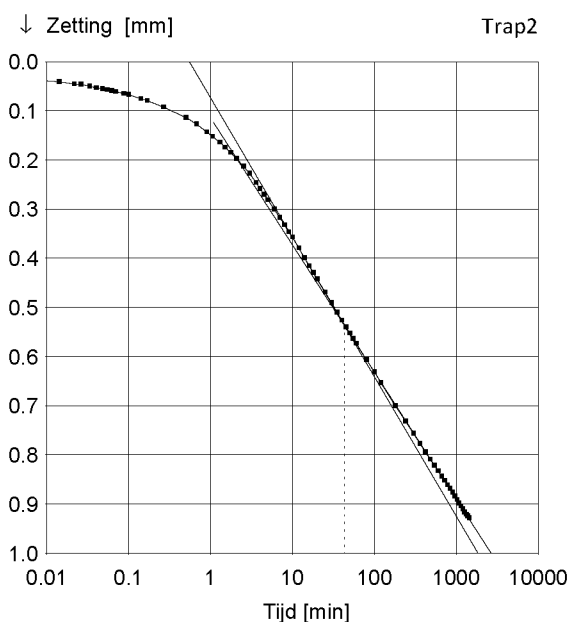
Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei, matig siltig, matig humeus
 Monster : 1 Einddatum : 25-02-2019 Diepte : 3.94 - 3.99 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.44 kN/m³
 Apparaat : 4 Zetting (24u) : 0.528 mm Droog vol. gewicht γ_{dr} : 6.70 kN/m³
 Soort monster : Ongeroid h (24u) : 19.472 mm Watergehalte W : 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10 ⁻⁸ m ² /s] (wortel-t)		5.57	2.38	0.62	0.59	0.50		3.31	0.44
m_v [1/MPa]		1.99	2.41	1.82	1.33	0.88		0.15	0.49
k_{10} [10 ⁻¹¹ m/s]		108.58	56.46	11.11	7.64	4.29		4.97	2.07
c_v [10 ⁻⁸ m ² /s] (log-t)		4.34	1.22	0.43	0.43	0.38		3.60	0.32
C_α [10 ⁻³]		13.27	18.08	18.87	19.69	18.61		5.766	18.43



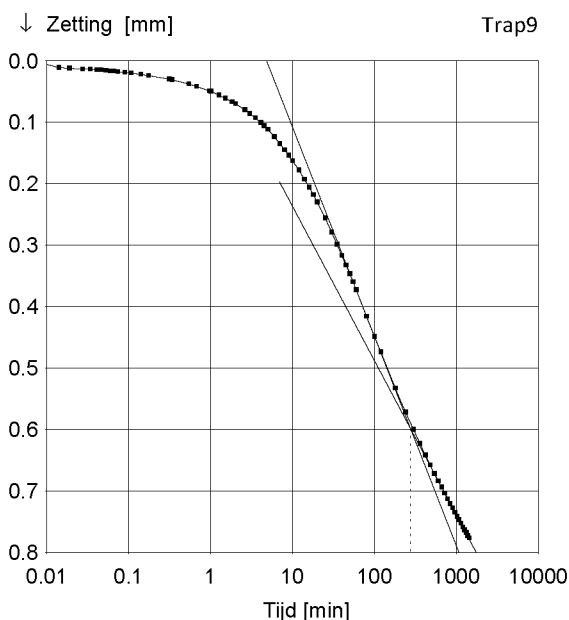
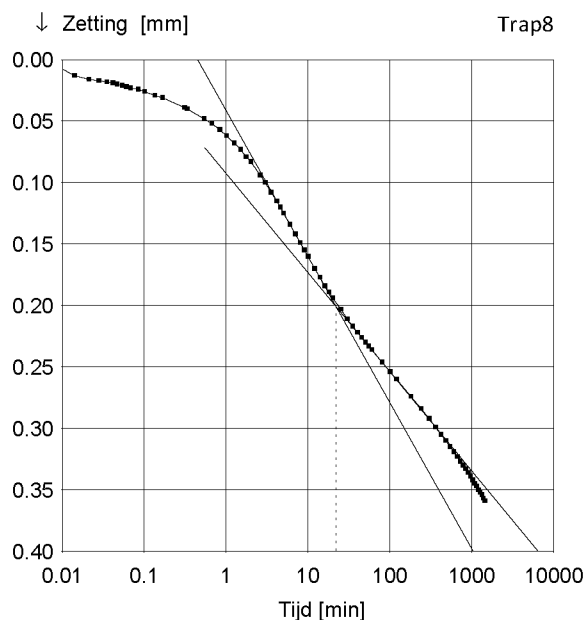
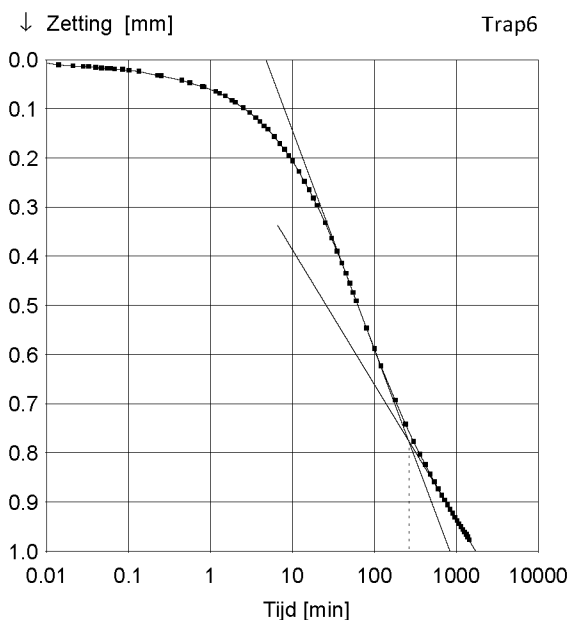
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, matig humeus
Monster	: 1	Einddatum	: 25-02-2019	Diepte	: 3.94 - 3.99 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.44 kN/m ³
Apparaat	: 4	Zetting (24u)	: 0.528 mm	Droog vol. gewicht γ_{dr}	: 6.70 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.472 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		5.57	2.38	0.62	0.59	0.50		3.31	0.44
m_v [1/MPa]		1.99	2.41	1.82	1.33	0.88		0.15	0.49
k_{10} [10^{-11} m/s]		108.58	56.46	11.11	7.64	4.29		4.97	2.07
c_v [10^{-8} m ² /s] (log-t)		4.34	1.22	0.43	0.43	0.38		3.60	0.32
C_α [10^{-3}]		13.27	18.08	18.87	19.69	18.61		5.766	18.43



Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, matig humeus
Monster	: 1	Einddatum	: 25-02-2019	Diepte	: 3.94 - 3.99 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.44 kN/m ³
Apparaat	: 4	Zetting (24u)	: 0.528 mm	Droog vol. gewicht γ_{dr}	: 6.70 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.472 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		5.57	2.38	0.62	0.59	0.50		3.31	0.44
m_v [1/MPa]		1.99	2.41	1.82	1.33	0.88		0.15	0.49
k_{10} [10^{-11} m/s]		108.58	56.46	11.11	7.64	4.29		4.97	2.07
c_v [10^{-8} m ² /s] (log-t)		4.34	1.22	0.43	0.43	0.38		3.60	0.32
C_α [10^{-3}]		13.27	18.08	18.87	19.69	18.61		5.766	18.43

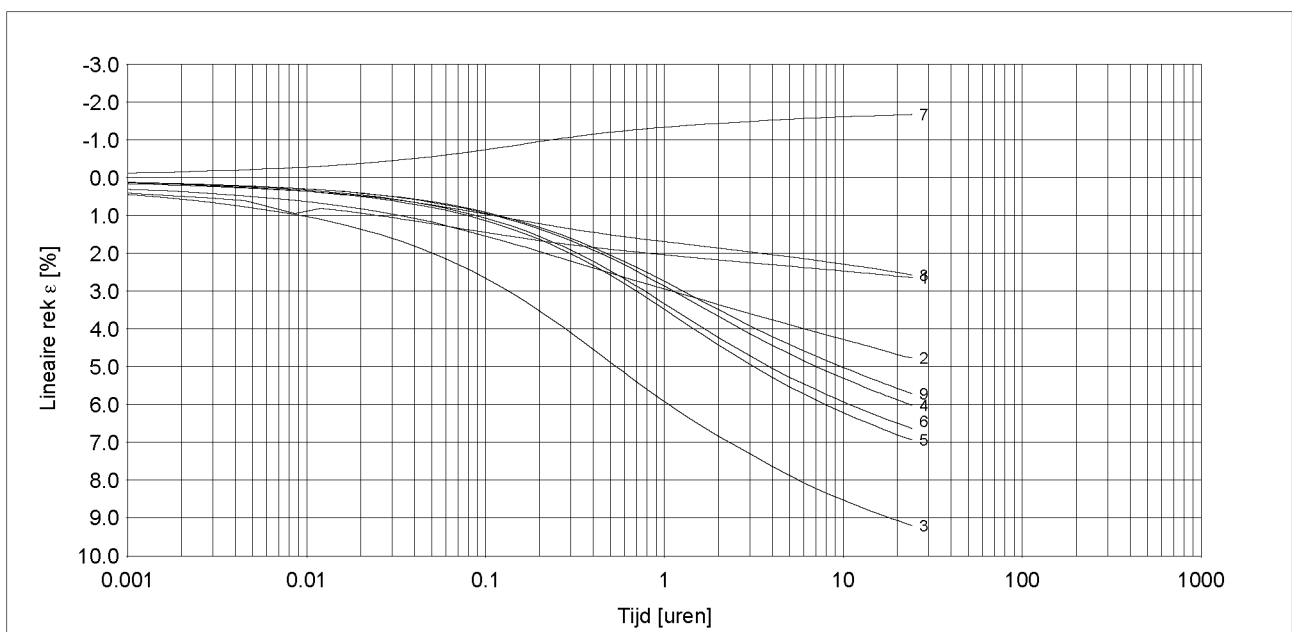
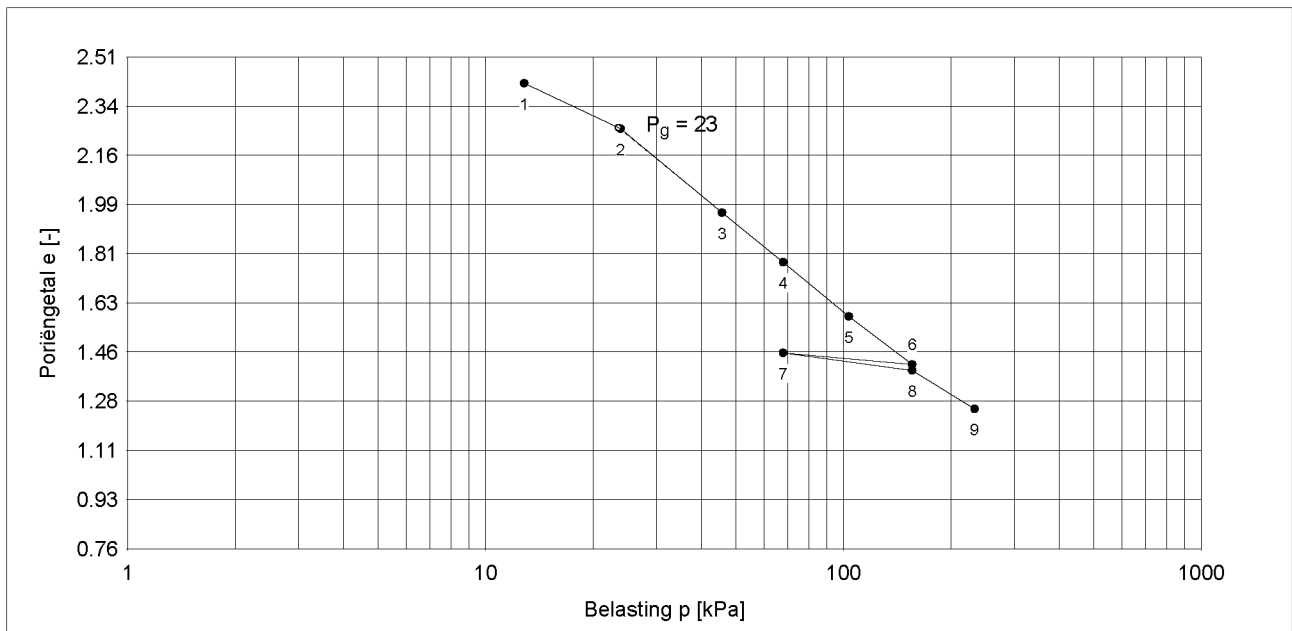


Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei, matig siltig, matig humeus
 Monster : 1 Einddatum : 25-02-2019 Diepte : 3.94 - 3.99 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.44 kN/m³
 Apparaat : 4 Zetting (24u) : 0.528 mm Droog vol. gewicht γ_{dr} : 6.70 kN/m³
 Soort monster : Ongeroerd e_0 : 2.51 Watergehalte W : 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.606	1.054	1.045	1.048	0.967	0.112	0.174	0.782
$C_{\alpha}^* = \Delta \varepsilon / \Delta \log t$			0.0133	0.0181	0.0189	0.0197	0.0186		0.0058 0.0184

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.174$ Trap 7 - 8	$C_c = 1.054$ Trap 2 - 3	$C_{sw} = 0.112$ Trap 6 - 7	$C_{\alpha} = 0.0185$ Trap 3 - 4
---	---	--	---



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, matig humeus
Monster	: 1	Einddatum	: 25-02-2019	Diepte	: 3.94 - 3.99 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.44 kN/m ³
Apparaat	: 4	Zetting (24u)	: 0.528 mm	Droog vol. gewicht γ_{dr}	: 6.70 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.51	Watergehalte W	: 100 %

Bepaling parameters per trap

Belasting p [kPa]		13	24	46	68	103	156	68	156	233
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.6057	1.0538	1.0445	1.0476	0.9671	0.1118	0.1745	0.7823	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0133	0.0181	0.0189	0.0197	0.0186		0.0058	0.0184
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		13.3	7.8	8.4	8.4	9.3	47.0	49.3	10.7	
C_s		53.0	62.0	49.4	62.7	86.0	87.7	311.9	47.0	
C_{10^4}		6.6	5.2	5.0	5.5	6.5	15.0	30.2	5.6	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			5.57	2.38	0.62	0.59	0.50		3.31	0.44
$m_v [1/MPa]$			1.99	2.41	1.82	1.33	0.88		0.15	0.49
$k_{10} [10^{-11} m/s]$			108.58	56.46	11.11	7.64	4.29		4.97	2.07
$c_v [10^{-8} m^2/s]$ (Casagrande)			4.34	1.22	0.43	0.43	0.38		3.60	0.32
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0788	0.1474	0.1582	0.1697	0.1680	0.0199	0.0313	0.1462	
c							0.0082			0.0081

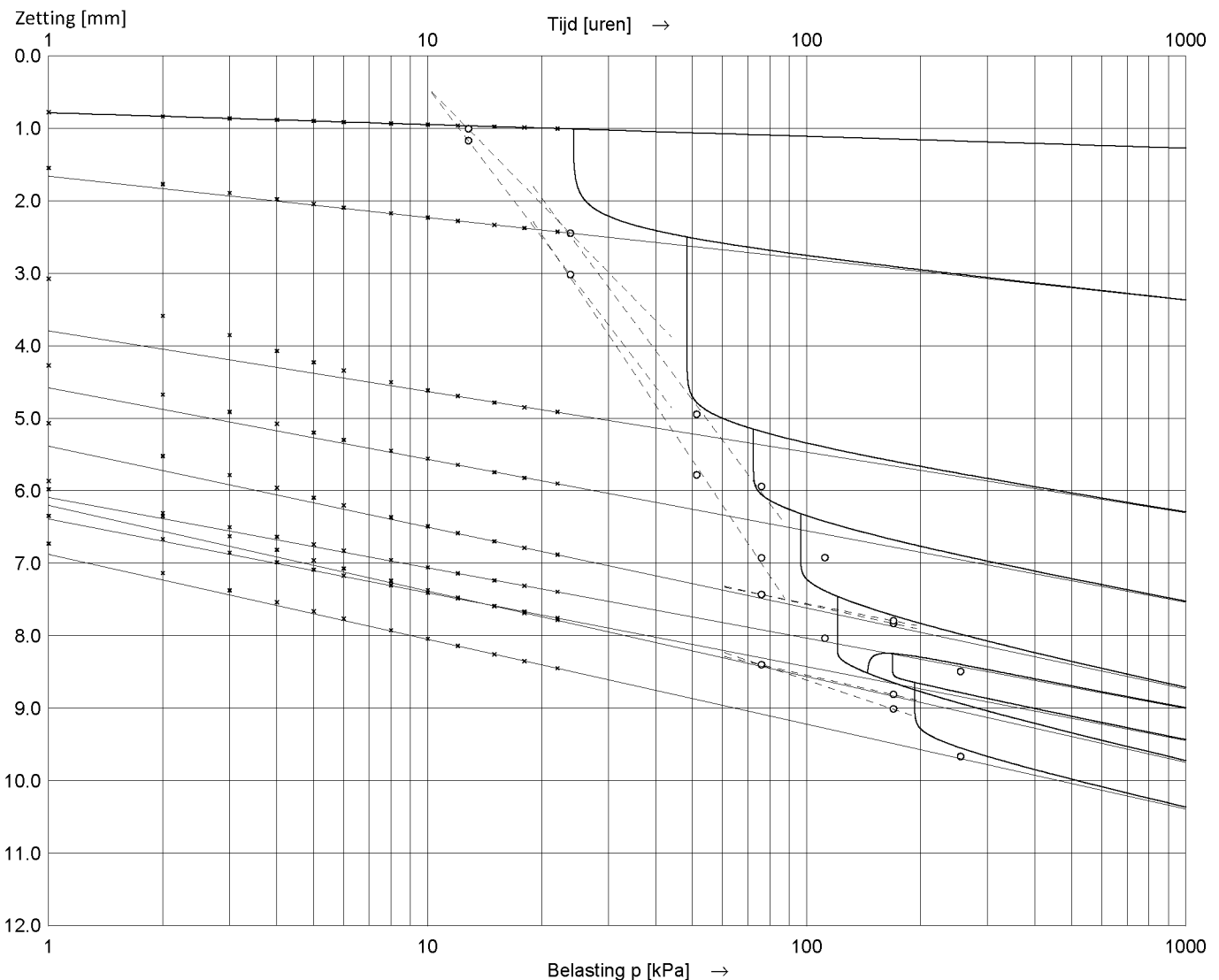
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 2 - 3	Trap 6 - 7	Trap 6, 9
$P_g = 23.5$	$C_r = 0.1745$	$C_c = 1.0538$	$C_{sw} = 0.1118$	$C_{\alpha} = 0.0185$
KoppeJan	Trap 1 - 2	Trap 3 - 4	Trap 6 - 7	Trap 7 - 8
$P_g = 21.4$	$C_p = 13.3$ $C_s = 53.0$ $C_{10^4} = 6.6$	$C_p' = 8.4$ $C_s' = 49.4$ $C_{10^4}' = 5.0$	$A_p = 47.0$ $A_s = 87.7$ $A_{10^4} = 15.0$	$C_{p(r)} = 49.3$ $C_{s(r)} = 311.9$ $C_{10^4(r)} = 30.2$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = 29.3$	a = 0.0313	b = 0.1697	c = --	

Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 2 Einddatum : 25-02-2019 Diepte : 4.79 - 4.84 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 12.62 kN/m³
 Apparaat : 5 Zetting (24u) : 1.011 mm Droog vol. gewicht γ_{dr} : 5.32 kN/m³
 Soort monster : Ongeroerd h (24u) : 18.989 mm Watergehalte W : 137 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	51.28	76.01	111.73	169.44	76.01	169.44	254.63
C _p	8.1	5.8	7.5	7.4	8.7	38.0	41.8	11.0	
C _s	28.7	54.6	49.4	56.2	119.7	71.7	312.1	50.4	
C _{10⁴}	3.8	4.1	4.7	4.9	6.7	12.2	27.2	5.9	

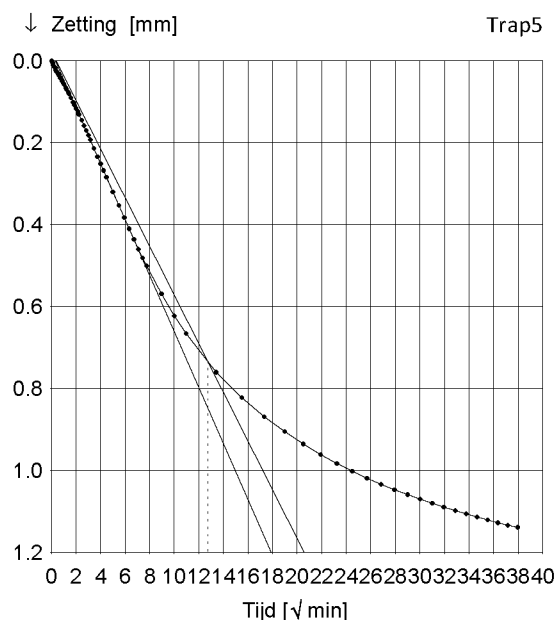
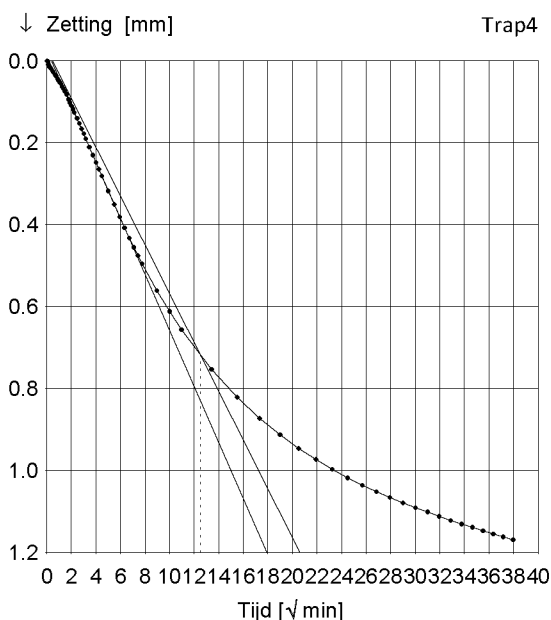
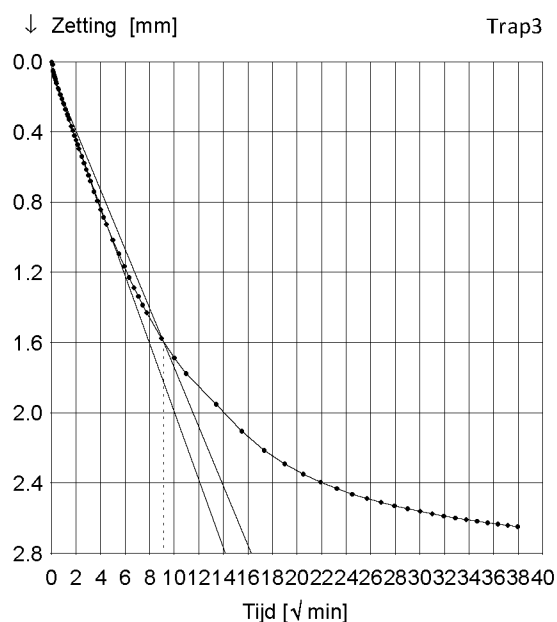
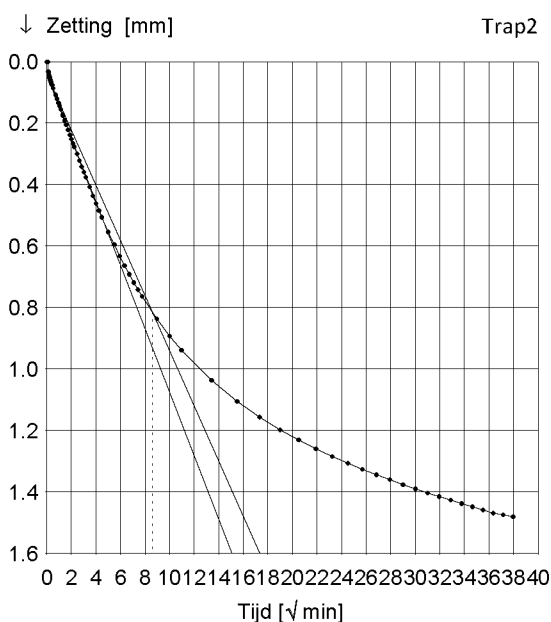
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
22 [kN/m ²]	C _p = 8.1	C _p ' = 6.2	C _p = 38.0	C _p = 41.8		
	C _s = 28.7	C _s ' = 53.0	C _s = 71.7	C _s = 312.1		
	C _{10⁴} = 3.8	C _{10⁴} ' = 4.2	C _{10⁴} = 12.2	C _{10⁴} = 27.2		



Asymptoot tijdinterval : 12 - 48 uur.

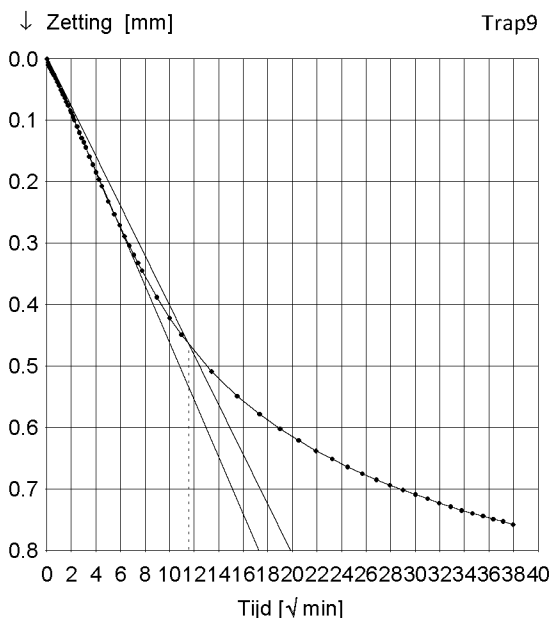
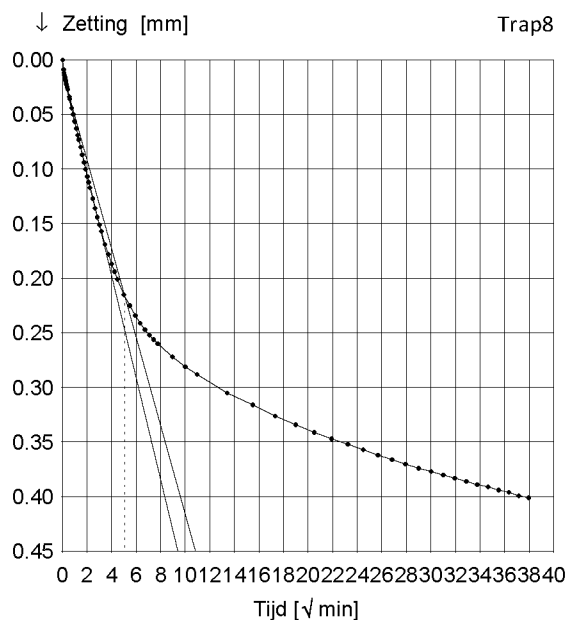
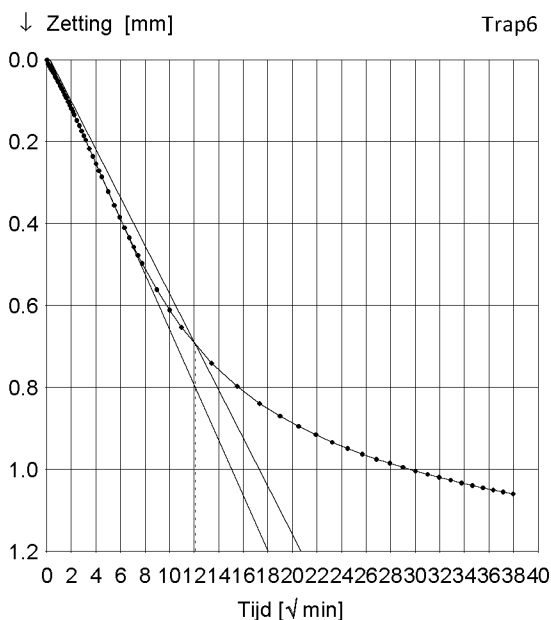
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 2	Einddatum	: 25-02-2019	Diepte	: 4.79 - 4.84 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.62 kN/m ³
Apparaat	: 5	Zetting (24u)	: 1.011 mm	Droog vol. gewicht γ_{dr}	: 5.32 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 18.989 mm	Watergehalte W	: 137 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	51.28	76.01	111.73	169.44	76.01	169.44	254.63
Δp [kN/m ²]	12.81	10.99	27.48	24.73	35.72	57.71	-93.43	93.43	85.19
c_v [10^{-8} m ² /s] (wortel-t)		1.19	0.81	0.34	0.28	0.26		1.40	0.24
m_v [1/MPa]		4.11	3.56	2.24	1.71	1.09		0.21	0.54
k_{10} [10^{-11} m/s]		48.17	28.36	7.54	4.66	2.74		2.84	1.25
c_v [10^{-8} m ² /s] (log-t)		0.71	0.41	0.24	0.22	0.21		1.51	0.17
C_α [10^{-3}]		24.88	26.63	26.30	25.92	23.18		8.179	21.62



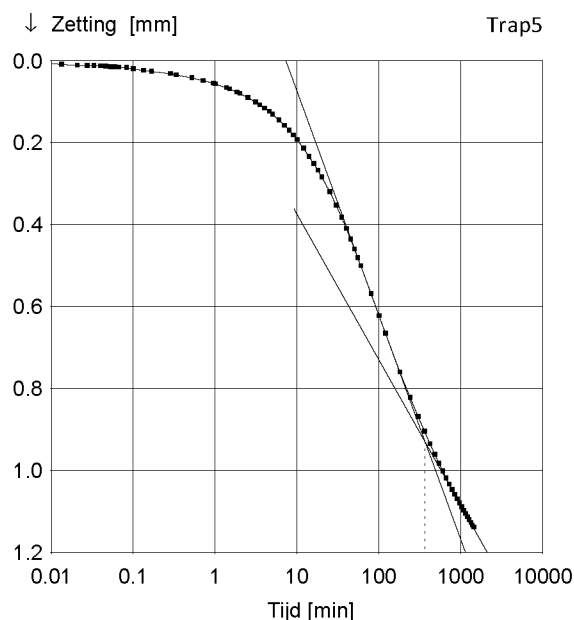
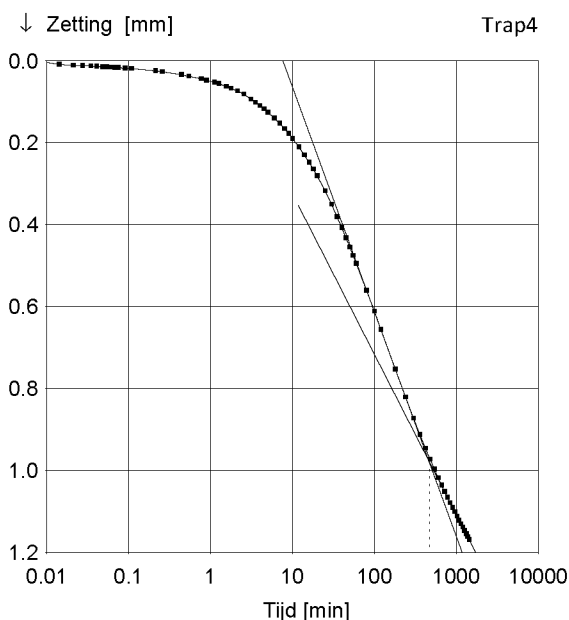
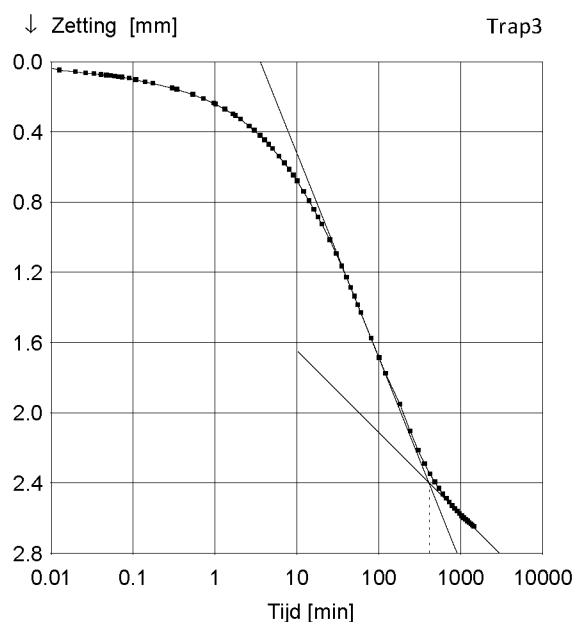
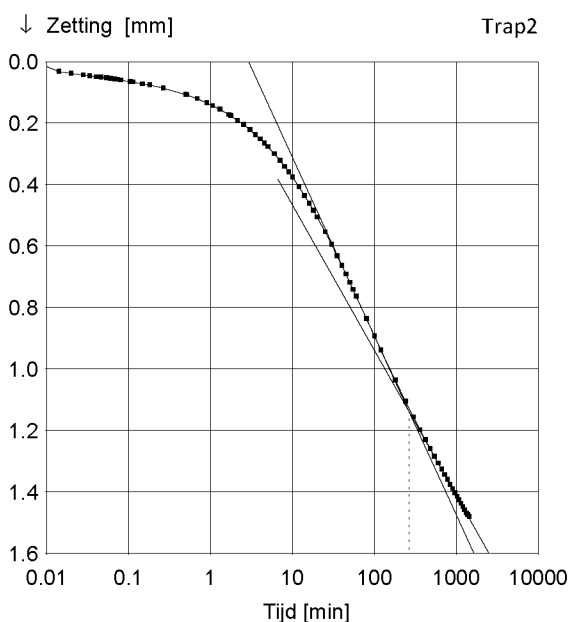
Boring : B01	Startdatum : 16-02-2019	Grondsoort: Klei matig siltig, sterk humeus
Monster : 2	Einddatum : 25-02-2019	Diepte : 4.79 - 4.84 m. -NAP
Bus : .	Hoogte monster : 20.00 mm	Initieel vol. gewicht γ : 12.62 kN/m ³
Apparaat : 5	Zetting (24u) : 1.011 mm	Droog vol. gewicht γ_{dr} : 5.32 kN/m ³
Soort monster : Ongeroid	h (24u) : 18.989 mm	Watergehalte W : 137 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	51.28	76.01	111.73	169.44	76.01	169.44	254.63
Δp [kN/m ²]	12.81	10.99	27.48	24.73	35.72	57.71	-93.43	93.43	85.19
c_v [10^{-8} m ² /s] (wortel-t)		1.19	0.81	0.34	0.28	0.26		1.40	0.24
m_v [1/MPa]		4.11	3.56	2.24	1.71	1.09		0.21	0.54
k_{10} [10^{-11} m/s]		48.17	28.36	7.54	4.66	2.74		2.84	1.25
c_v [10^{-8} m ² /s] (log-t)		0.71	0.41	0.24	0.22	0.21		1.51	0.17
C_α [10^{-3}]		24.88	26.63	26.30	25.92	23.18		8.179	21.62



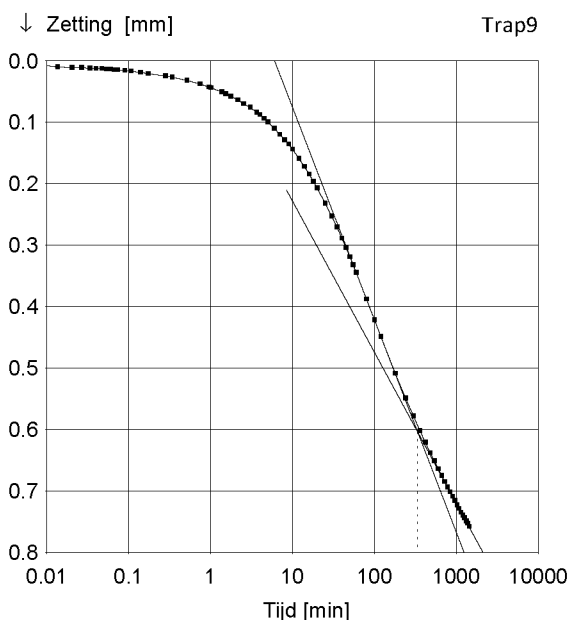
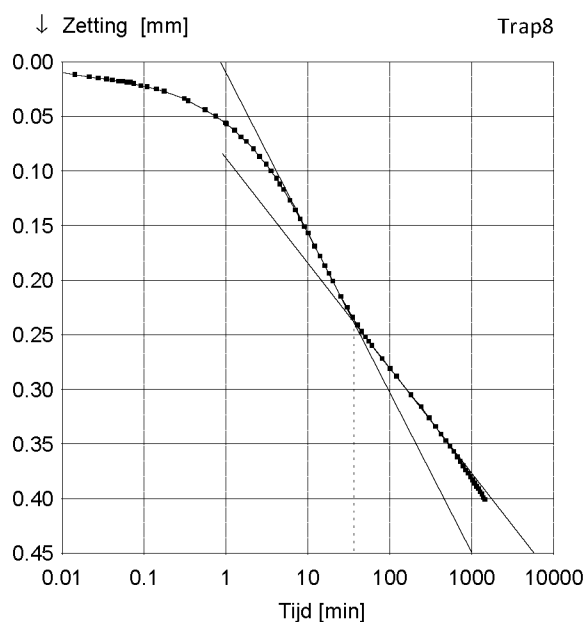
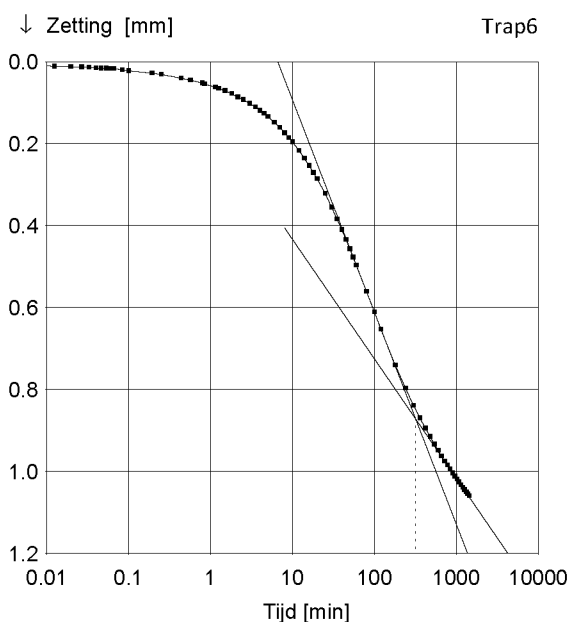
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 2	Einddatum	: 25-02-2019	Diepte	: 4.79 - 4.84 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.62 kN/m ³
Apparaat	: 5	Zetting (24u)	: 1.011 mm	Droog vol. gewicht γ_{dr}	: 5.32 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 18.989 mm	Watergehalte W	: 137 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	51.28	76.01	111.73	169.44	76.01	169.44	254.63
Δp [kN/m ²]	12.81	10.99	27.48	24.73	35.72	57.71	-93.43	93.43	85.19
c_v [10^{-8} m ² /s] (wortel-t)		1.19	0.81	0.34	0.28	0.26		1.40	0.24
m_v [1/MPa]		4.11	3.56	2.24	1.71	1.09		0.21	0.54
k_{10} [10^{-11} m/s]		48.17	28.36	7.54	4.66	2.74		2.84	1.25
c_v [10^{-8} m ² /s] (log-t)		0.71	0.41	0.24	0.22	0.21		1.51	0.17
C_α [10^{-3}]		24.88	26.63	26.30	25.92	23.18		8.179	21.62



Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 2	Einddatum	: 25-02-2019	Diepte	: 4.79 - 4.84 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.62 kN/m ³
Apparaat	: 5	Zetting (24u)	: 1.011 mm	Droog vol. gewicht γ_{dr}	: 5.32 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 18.989 mm	Watergehalte W	: 137 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	51.28	76.01	111.73	169.44	76.01	169.44	254.63
Δp [kN/m ²]	12.81	10.99	27.48	24.73	35.72	57.71	-93.43	93.43	85.19
c_v [10^{-8} m ² /s] (wortel-t)		1.19	0.81	0.34	0.28	0.26		1.40	0.24
m_v [1/MPa]		4.11	3.56	2.24	1.71	1.09		0.21	0.54
k_{10} [10^{-11} m/s]		48.17	28.36	7.54	4.66	2.74		2.84	1.25
c_v [10^{-8} m ² /s] (log-t)		0.71	0.41	0.24	0.22	0.21		1.51	0.17
C_α [10^{-3}]		24.88	26.63	26.30	25.92	23.18		8.179	21.62



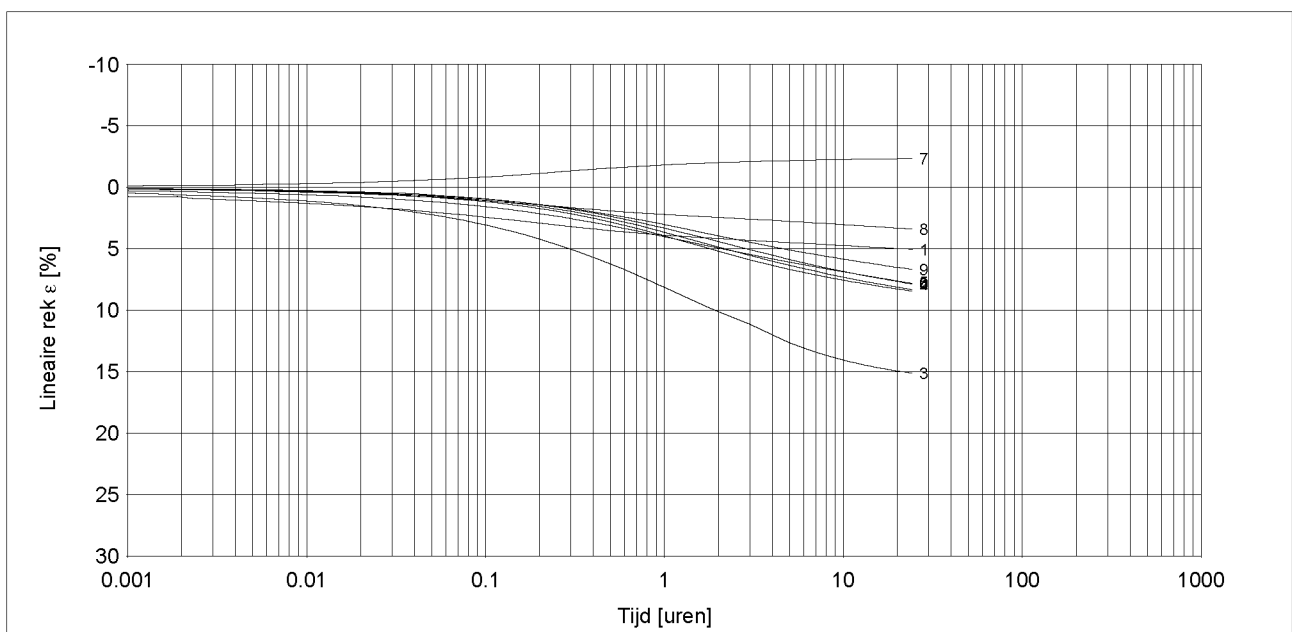
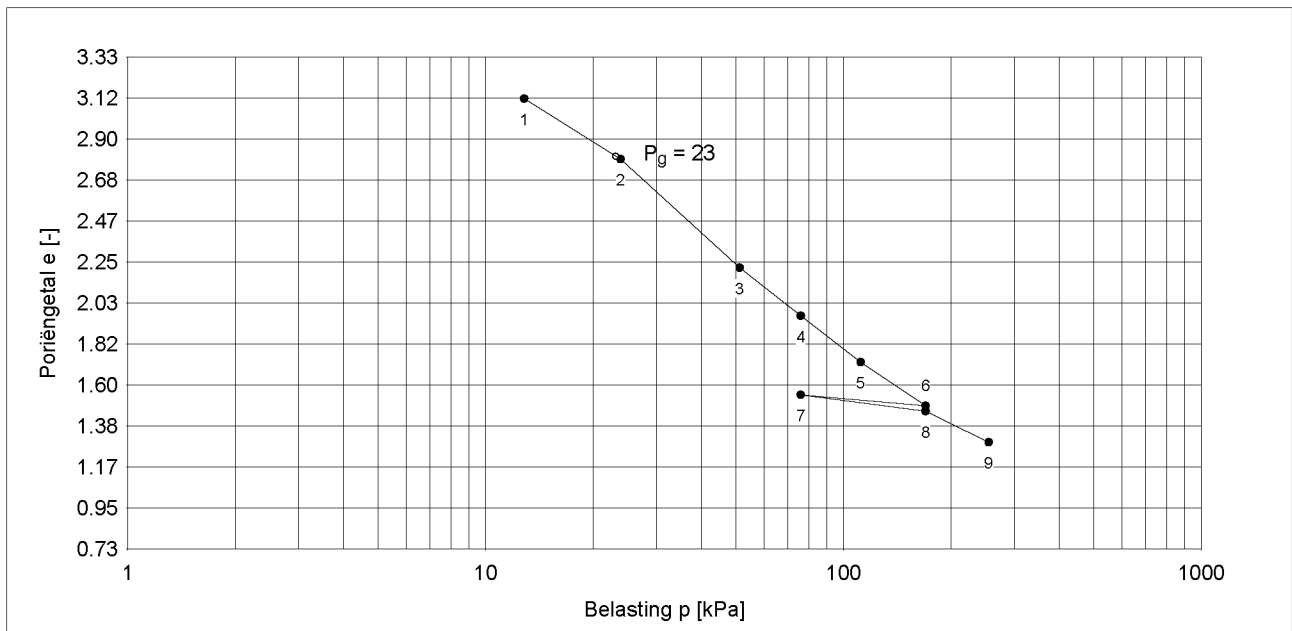
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 2	Einddatum	: 25-02-2019	Diepte	: 4.79 - 4.84 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.62 kN/m ³
Apparaat	: 5	Zetting (24u)	: 1.011 mm	Droog vol. gewicht γ_{dr}	: 5.32 kN/m ³
Soort monster	: Ongeroerd	e_0	: 3.33	Watergehalte W	: 137 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9	
Belasting	12.81	23.8	51.28	76.01	111.73	169.44	76.01	169.44	254.63	
$C_{c/r/sw} = \Delta e / \Delta \log p$		1.193	1.721	1.482	1.475	1.270	0.166	0.250	0.928	
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$			0.0249	0.0266	0.0263	0.0259	0.0232		0.0082	0.0216

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.250$	$C_c = 1.721$	$C_{sw} = 0.166$
Trap 7 - 8	Trap 2 - 3	Trap 6 - 7

$C_{\alpha} = 0.0259$
Trap 2 - 4



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 2	Einddatum	: 25-02-2019	Diepte	: 4.79 - 4.84 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.62 kN/m ³
Apparaat	: 5	Zetting (24u)	: 1.011 mm	Droog vol. gewicht γ_{dr}	: 5.32 kN/m ³
Soort monster	: Ongeroid	e_0	: 3.33	Watergehalte	W : 137 %

Bepaling parameters per trap

Belasting p [kPa]		13	24	51	76	112	169	76	169	255
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c(r)/sw} = \Delta e / \Delta \log p$		1.1926	1.7207	1.4816	1.4749	1.2698	0.1661	0.2495	0.9283	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0249	0.0266	0.0263	0.0259	0.0232		0.0082	0.0216
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		8.1	5.8	7.5	7.4	8.7	38.0	41.8	11.0	
C_s		28.7	54.6	49.4	56.2	119.7	71.7	312.1	50.4	
C_{10^4}		3.8	4.1	4.7	4.9	6.7	12.2	27.2	5.9	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			1.19	0.81	0.34	0.28	0.26		1.40	0.24
$m_v [1/MPa]$			4.11	3.56	2.24	1.71	1.09		0.21	0.54
$k_{10} [10^{-11} m/s]$			48.17	28.36	7.54	4.66	2.74		2.84	1.25
$c_v [10^{-8} m^2/s]$ (Casagrande)			0.71	0.41	0.24	0.22	0.21		1.51	0.17
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.1311	0.2136	0.2082	0.2255	0.2119	0.0287	0.0433	0.1696	
c							0.0104			0.0097

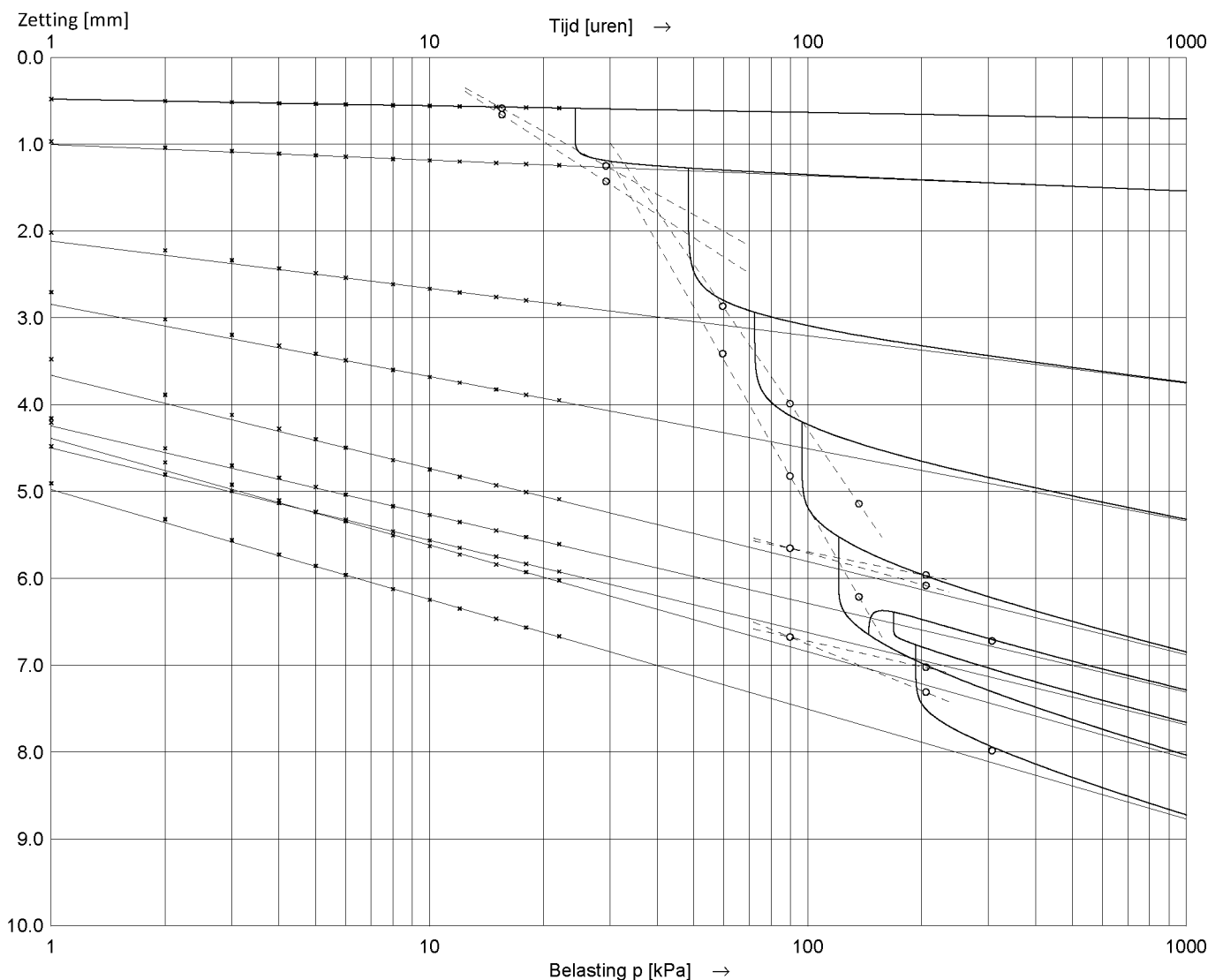
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 2 - 3	Trap 6 - 7	Trap 6, 9
$P_g = 23.1$	$C_r = 0.2495$	$C_c = 1.7207$	$C_{sw} = 0.1661$	$C_{\alpha} = 0.0259$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 22.1$	$C_p = 8.1$ $C_s = 28.7$ $C_{10^4} = 3.8$	$C_p' = 6.2$ $C_s' = 53.0$ $C_{10^4}' = 4.2$	$A_p = 38.0$ $A_s = 71.7$ $A_{10^4} = 12.2$	$C_{p(r)} = 41.8$ $C_{s(r)} = 312.1$ $C_{10^4(r)} = 27.2$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0433	b = 0.2255	c = --	

Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei zwak siltig, sterk humeus
 Monster : 3 Einddatum : 25-02-2019 Diepte : 6.64 - 6.69 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.19 kN/m³
 Apparaat : 6 Zetting (24u) : 0.586 mm Droog vol. gewicht γ_{dr} : 5.85 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.414 mm Watergehalte W : 126 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	29.29	59.52	89.75	136.46	205.16	89.75	205.16	306.83
C _p	18.4	8.5	7.1	7.0	8.4	37.1	51.3	10.3	
C _s	120.2	37.2	27.8	33.7	50.4	77.4	400.3	38.5	
C _{10⁴}	11.4	4.4	3.5	3.8	5.0	12.7	33.9	5.0	

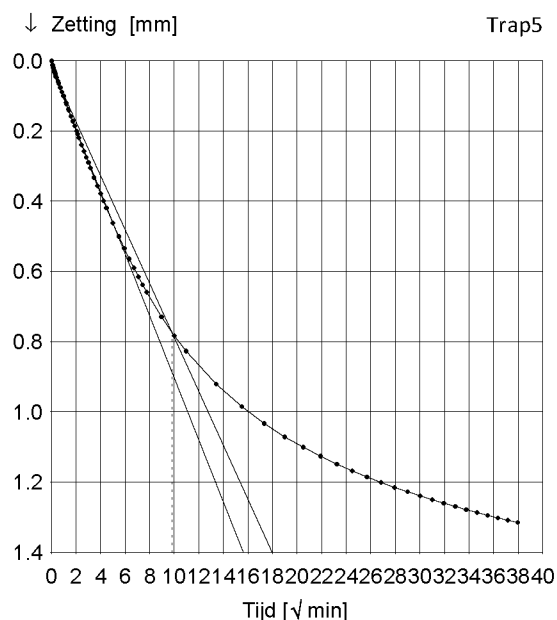
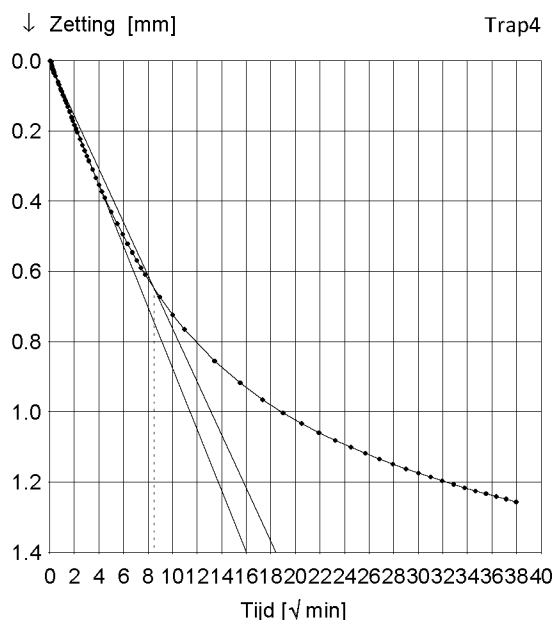
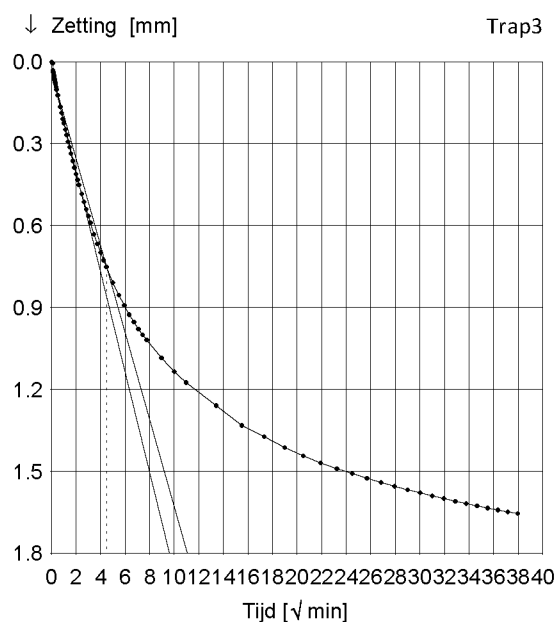
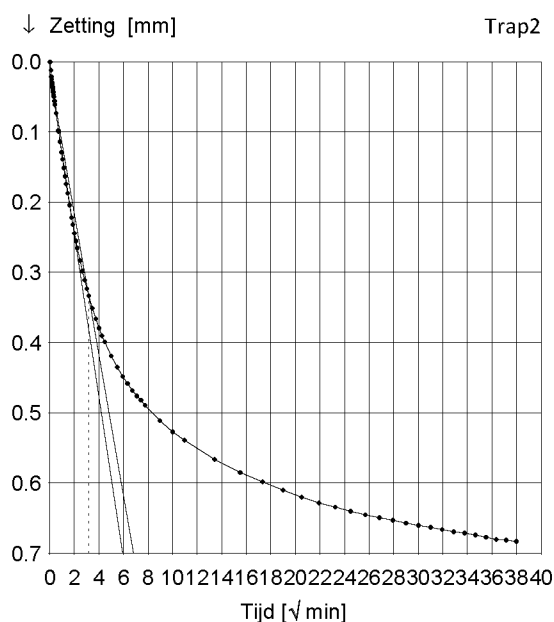
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
35 [kN/m ²]	C _p = 18.4	C _p ' = 7.0	C _p = 37.1	C _p = 51.3		
	C _s = 120.2	C _s ' = 33.7	C _s = 77.4	C _s = 400.3		
	C _{10⁴} = 11.4	C _{10⁴} ' = 3.8	C _{10⁴} = 12.7	C _{10⁴} = 33.9		



Asymptoot tijdinterval : 5 - 48 uur.

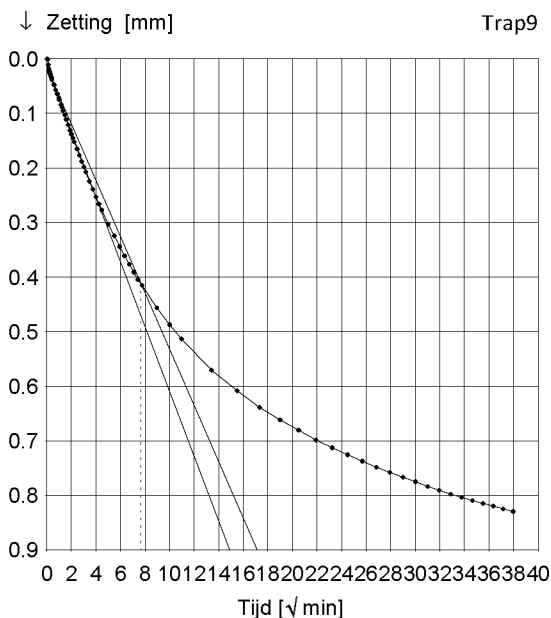
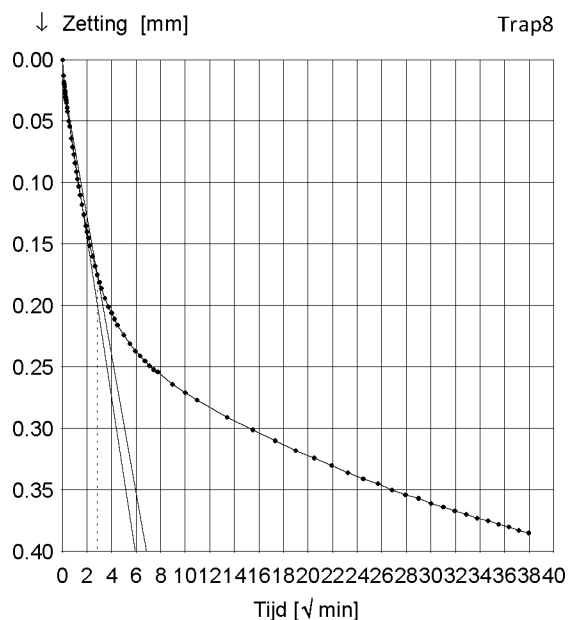
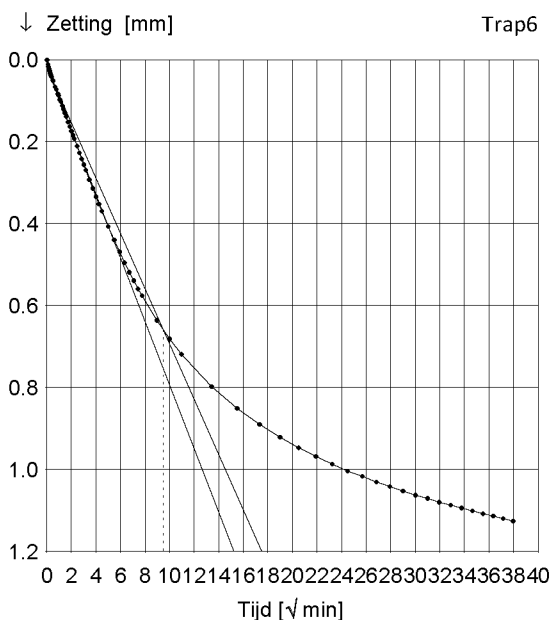
Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei zwak siltig, sterk humeus
 Monster : 3 Einddatum : 25-02-2019 Diepte : 6.64 - 6.69 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.19 kN/m³
 Apparaat : 6 Zetting (24u) : 0.586 mm Droog vol. gewicht γ_{dr} : 5.85 kN/m³
 Soort monster : Ongeroid h (24u) : 19.414 mm Watergehalte W : 126 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	29.29	59.52	89.75	136.46	205.16	89.75	205.16	306.83
Δp [kN/m ²]	15.55	13.74	30.23	30.23	46.71	68.7	-115.41	115.41	101.67
c_v [10^{-8} m ² /s] (wortel-t)		9.91	4.31	1.00	0.63	0.57		6.05	0.75
m_v [1/MPa]		1.31	1.40	1.38	1.13	0.71		0.11	0.33
k_{10} [10^{-11} m/s]		126.94	59.27	13.57	7.00	3.98		6.66	2.40
c_v [10^{-8} m ² /s] (log-t)		3.87	1.33	0.45	0.41	0.35		5.28	0.33
C_α [10^{-3}]		5.936	20.83	24.13	24.82	21.86		5.706	21.07



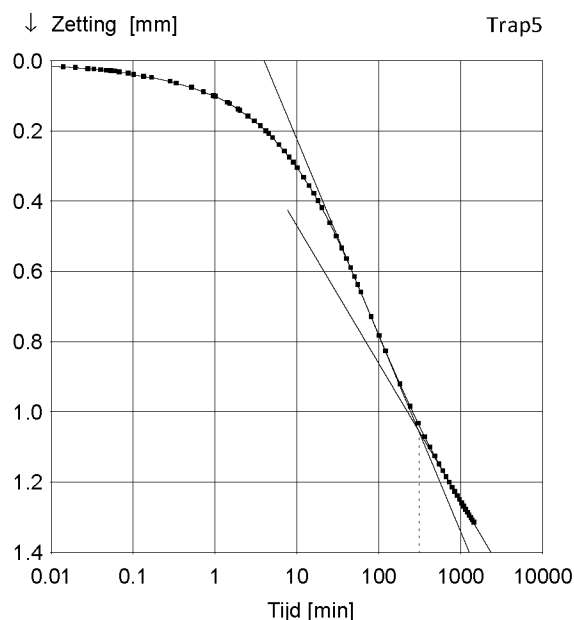
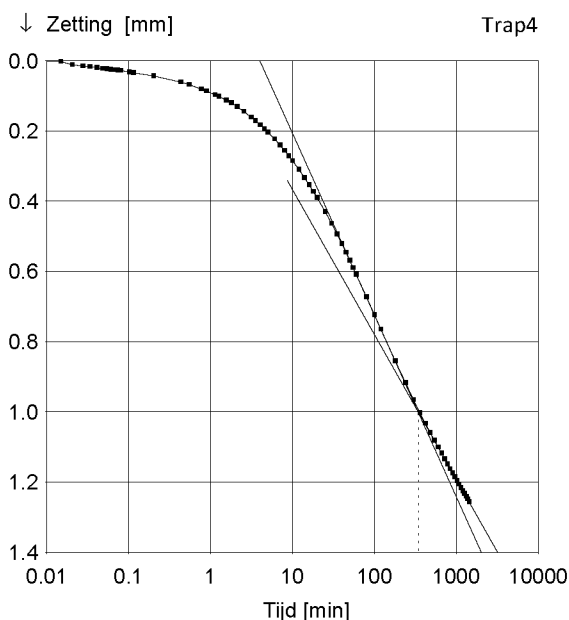
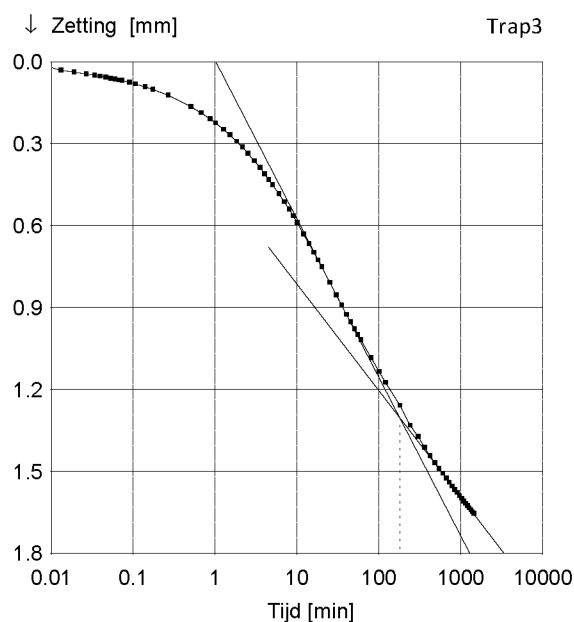
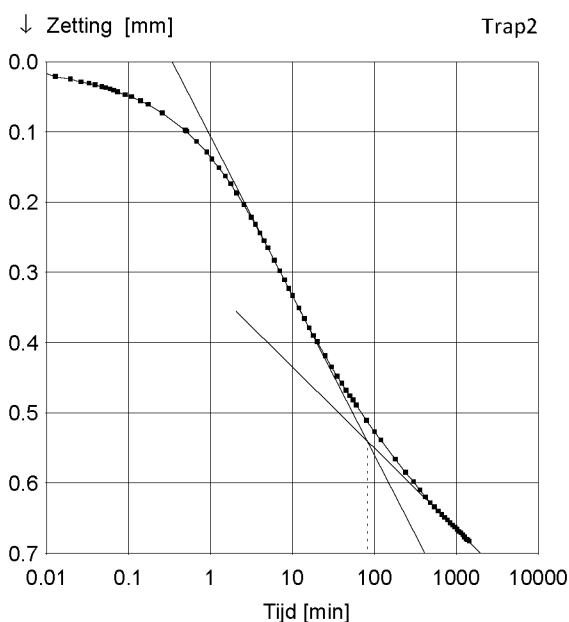
Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei zwak siltig, sterk humeus
 Monster : 3 Einddatum : 25-02-2019 Diepte : 6.64 - 6.69 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.19 kN/m³
 Apparaat : 6 Zetting (24u) : 0.586 mm Droog vol. gewicht γ_{dr} : 5.85 kN/m³
 Soort monster : Ongeroid h (24u) : 19.414 mm Watergehalte W : 126 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	29.29	59.52	89.75	136.46	205.16	89.75	205.16	306.83
Δp [kN/m ²]	15.55	13.74	30.23	30.23	46.71	68.7	-115.41	115.41	101.67
c_v [10^{-8} m ² /s] (wortel-t)		9.91	4.31	1.00	0.63	0.57		6.05	0.75
m_v [1/MPa]		1.31	1.40	1.38	1.13	0.71		0.11	0.33
k_{10} [10^{-11} m/s]		126.94	59.27	13.57	7.00	3.98		6.66	2.40
c_v [10^{-8} m ² /s] (log-t)		3.87	1.33	0.45	0.41	0.35		5.28	0.33
C_α [10^{-3}]		5.936	20.83	24.13	24.82	21.86		5.706	21.07



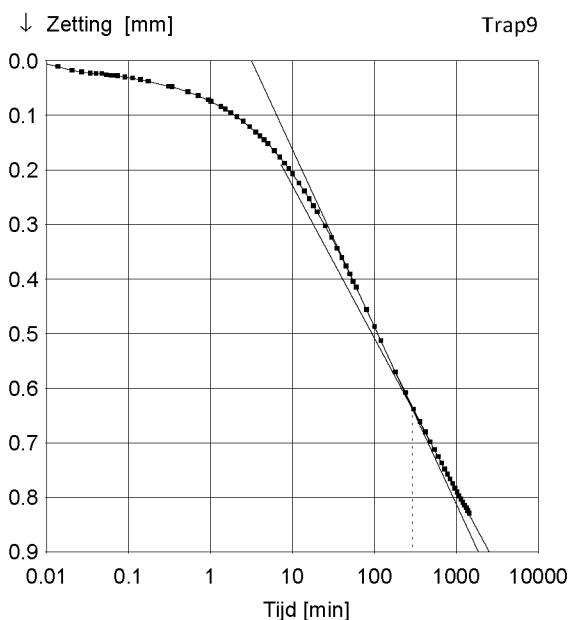
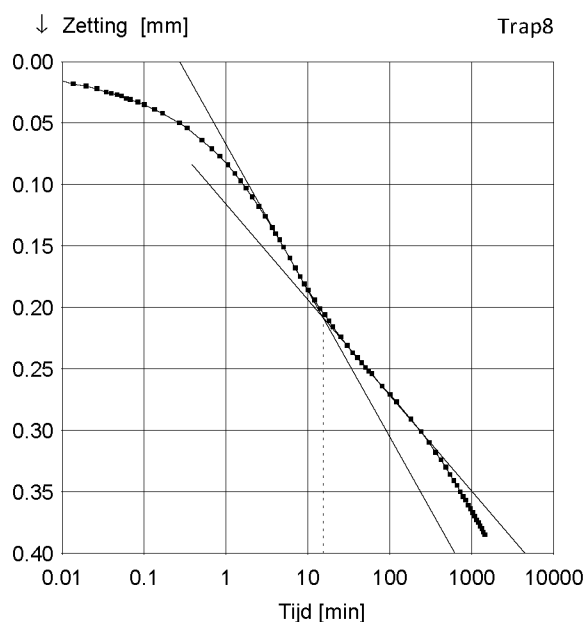
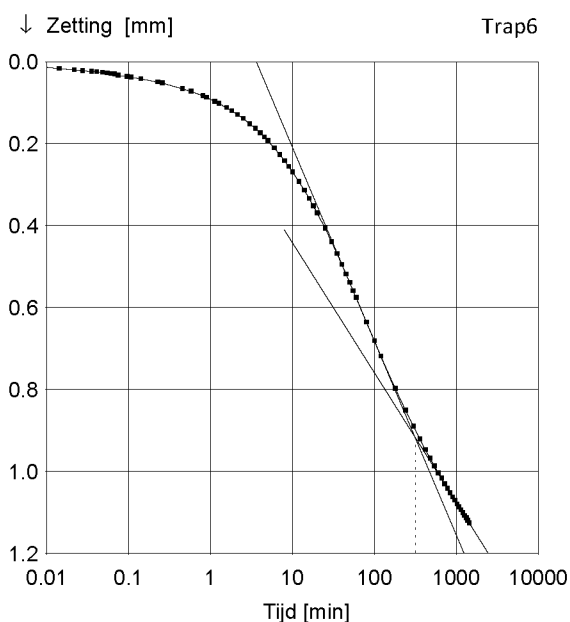
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei zwak siltig, sterk humeus
Monster	: 3	Einddatum	: 25-02-2019	Diepte	: 6.64 - 6.69 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.19 kN/m ³
Apparaat	: 6	Zetting (24u)	: 0.586 mm	Droog vol. gewicht γ_{dr}	: 5.85 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.414 mm	Watergehalte W	: 126 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	29.29	59.52	89.75	136.46	205.16	89.75	205.16	306.83
Δp [kN/m ²]	15.55	13.74	30.23	30.23	46.71	68.7	-115.41	115.41	101.67
c_v [10^{-8} m ² /s] (wortel-t)		9.91	4.31	1.00	0.63	0.57		6.05	0.75
m_v [1/MPa]		1.31	1.40	1.38	1.13	0.71		0.11	0.33
k_{10} [10^{-11} m/s]		126.94	59.27	13.57	7.00	3.98		6.66	2.40
c_v [10^{-8} m ² /s] (log-t)		3.87	1.33	0.45	0.41	0.35		5.28	0.33
C_α [10^{-3}]		5.936	20.83	24.13	24.82	21.86		5.706	21.07



Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei zwak siltig, sterk humeus
Monster	: 3	Einddatum	: 25-02-2019	Diepte	: 6.64 - 6.69 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.19 kN/m ³
Apparaat	: 6	Zetting (24u)	: 0.586 mm	Droog vol. gewicht γ_{dr}	: 5.85 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.414 mm	Watergehalte W	: 126 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	29.29	59.52	89.75	136.46	205.16	89.75	205.16	306.83
Δp [kN/m ²]	15.55	13.74	30.23	30.23	46.71	68.7	-115.41	115.41	101.67
c_v [10^{-8} m ² /s] (wortel-t)		9.91	4.31	1.00	0.63	0.57		6.05	0.75
m_v [1/MPa]		1.31	1.40	1.38	1.13	0.71		0.11	0.33
k_{10} [10^{-11} m/s]		126.94	59.27	13.57	7.00	3.98		6.66	2.40
c_v [10^{-8} m ² /s] (log-t)		3.87	1.33	0.45	0.41	0.35		5.28	0.33
C_α [10^{-3}]		5.936	20.83	24.13	24.82	21.86		5.706	21.07



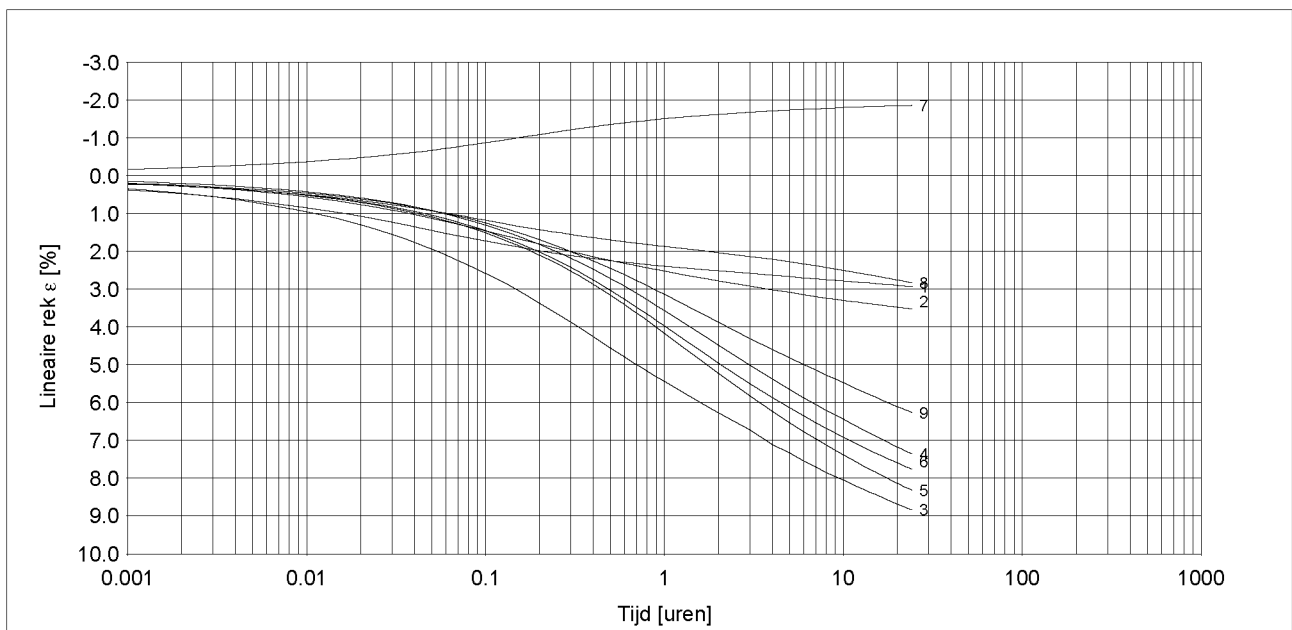
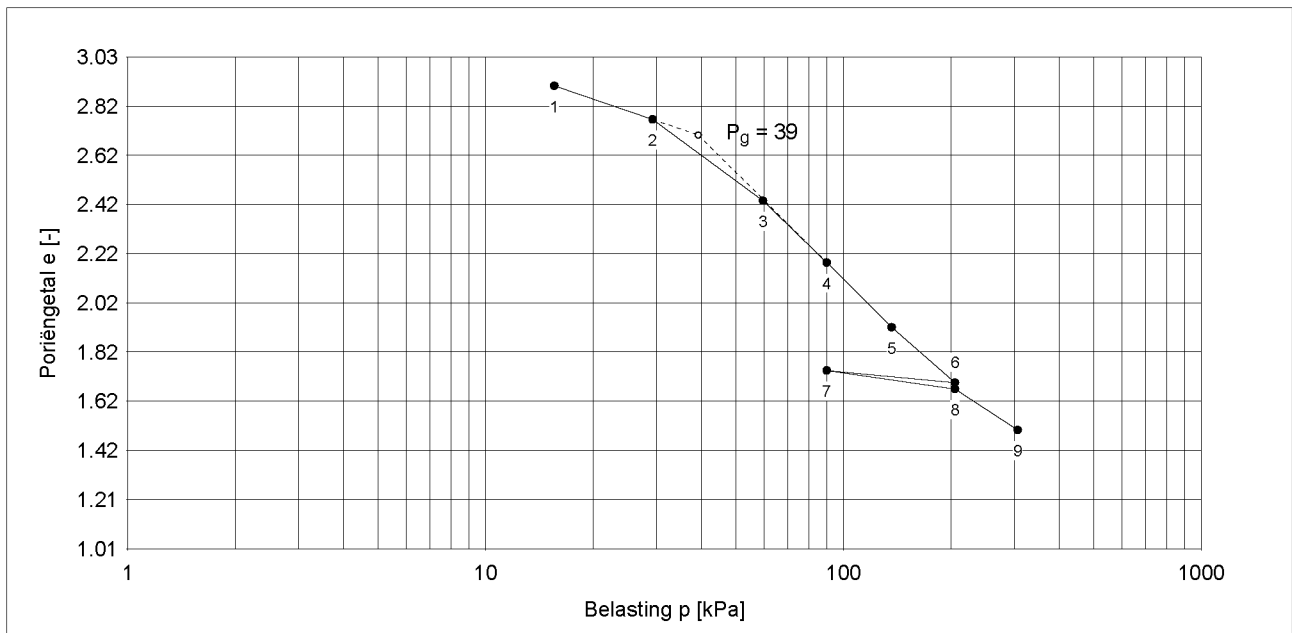
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei zwak siltig, sterk humeus
Monster	: 3	Einddatum	: 25-02-2019	Diepte	: 6.64 - 6.69 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.19 kN/m ³
Apparaat	: 6	Zetting (24u)	: 0.586 mm	Droog vol. gewicht γ_{dr}	: 5.85 kN/m ³
Soort monster	: Ongeroerd	e_0	: 3.03	Watergehalte W	: 126 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9	
Belasting	15.55	29.29	59.52	89.75	136.46	205.16	89.75	205.16	306.83	
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.500	1.081	1.417	1.455	1.280	0.140	0.216	0.955	
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$			0.0059	0.0208	0.0241	0.0248	0.0219		0.0057	0.0211

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.216$	$C_c = 1.455$	$C_{sw} = 0.140$
Trap 7 - 8	Trap 4 - 5	Trap 6 - 7

$C_{\alpha} = 0.0245$
Trap 4 - 5



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei zwak siltig, sterk humeus
Monster	: 3	Einddatum	: 25-02-2019	Diepte	: 6.64 - 6.69 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.19 kN/m ³
Apparaat	: 6	Zetting (24u)	: 0.586 mm	Droog vol. gewicht γ_{dr}	: 5.85 kN/m ³
Soort monster	: Ongeroerd	e_0	: 3.03	Watergehalte	W : 126 %

Bepaling parameters per trap

Belasting p [kPa]		16	29	60	90	136	205	90	205	307
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.5000	1.0812	1.4174	1.4547	1.2799	0.1396	0.2158	0.9546	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$		0.0059	0.0208	0.0241	0.0248	0.0219		0.0057	0.0211	
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		18.4	8.5	7.1	7.0	8.4	37.1	51.3	10.3	
C_s		120.2	37.2	27.8	33.7	50.4	77.4	400.3	38.5	
C_{10^4}		11.4	4.4	3.5	3.8	5.0	12.7	33.9	5.0	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)		9.91	4.31	1.00	0.63	0.57		6.05	0.75	
$m_v [1/MPa]$		1.31	1.40	1.38	1.13	0.71		0.11	0.33	
$k_{10} [10^{-11} m/s]$		126.94	59.27	13.57	7.00	3.98		6.66	2.40	
$c_v [10^{-8} m^2/s]$ (Casagrande)		3.87	1.33	0.45	0.41	0.35		5.28	0.33	
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0566	0.1304	0.1860	0.2071	0.1982	0.0223	0.0347	0.1606	
c							0.0100			0.0093

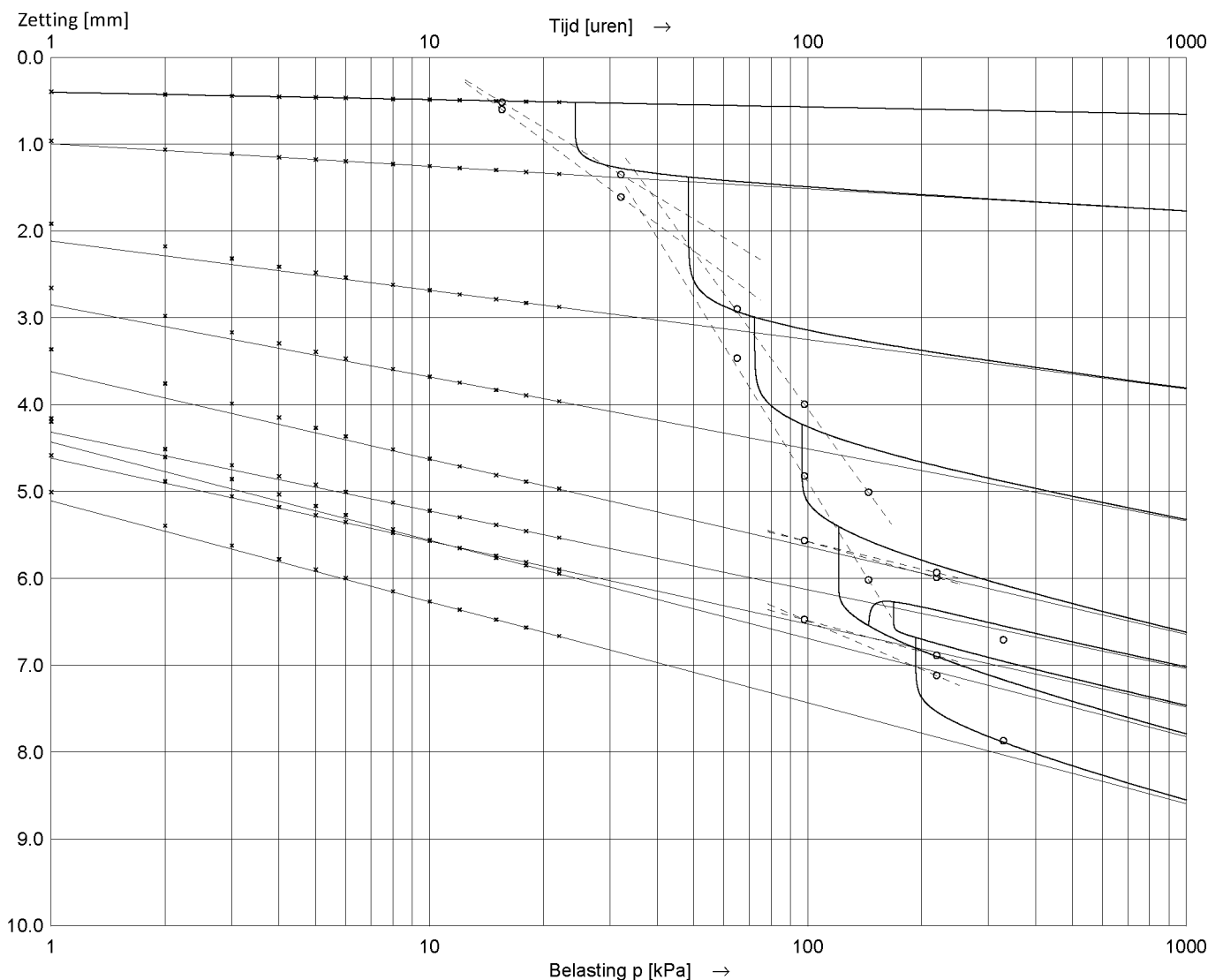
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 39.3$	$C_r = 0.2158$	$C_c = 1.4547$	$C_{sw} = 0.1396$	$C_{\alpha} = 0.0245$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 35.0$	$C_p = 18.4$ $C_s = 120.2$ $C_{10^4} = 11.4$	$C_p' = 7.0$ $C_s' = 33.7$ $C_{10^4}' = 3.8$	$A_p = 37.1$ $A_s = 77.4$ $A_{10^4} = 12.7$	$C_{p(r)} = 51.3$ $C_{s(r)} = 400.3$ $C_{10^4(r)} = 33.9$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0347	b = 0.2071	c = --	

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.483 mm	Watergehalte W	: 107 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	218.88	97.97	218.88	328.8
C _p	16.8	8.9	7.2	7.5	8.2	36.9	42.5	10.2	
C _s	80.4	44.5	30.4	42.0	65.9	69.8	322.4	38.2	
C _{10⁴}	9.2	4.9	3.7	4.4	5.5	11.8	27.8	4.9	

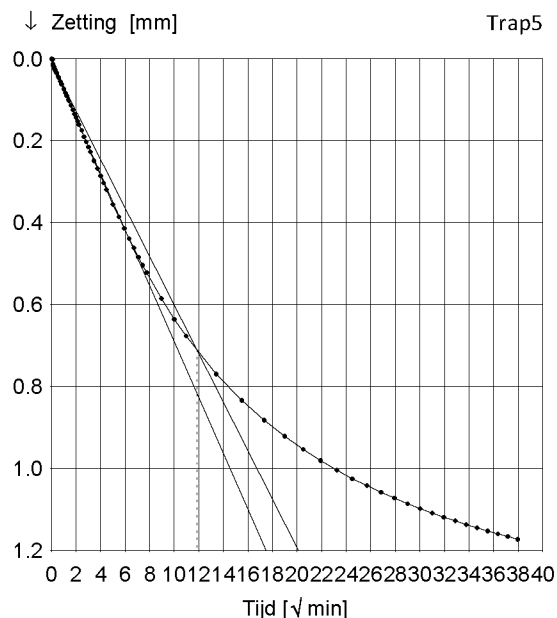
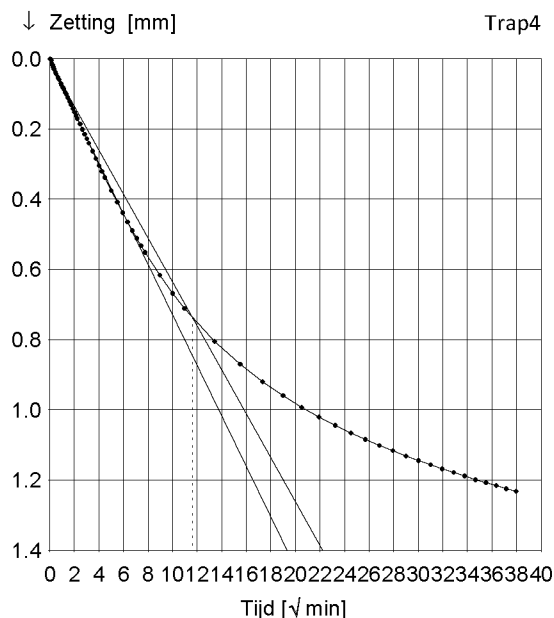
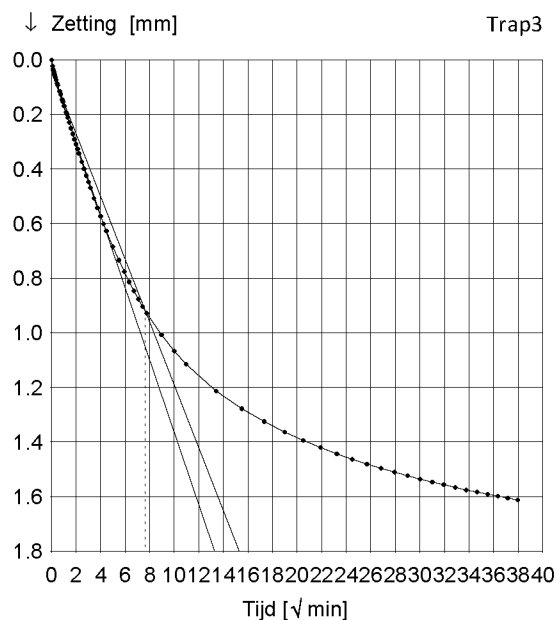
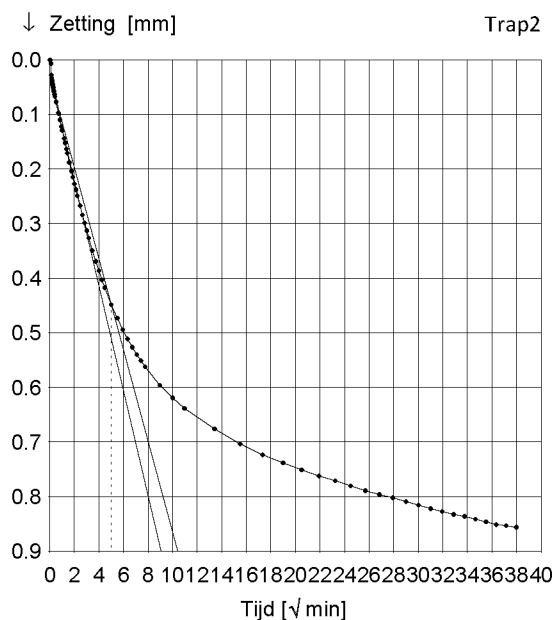
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
37 [kN/m ²]	C _p = 16.8	C _p ' = 7.5	C _p = 36.9	C _p = 42.5		
	C _s = 80.4	C _s ' = 42.0	C _s = 69.8	C _s = 322.4		
	C _{10⁴} = 9.2	C _{10⁴} ' = 4.4	C _{10⁴} = 11.8	C _{10⁴} = 27.8		



Asymptoot tijdinterval : 10 - 48 uur.

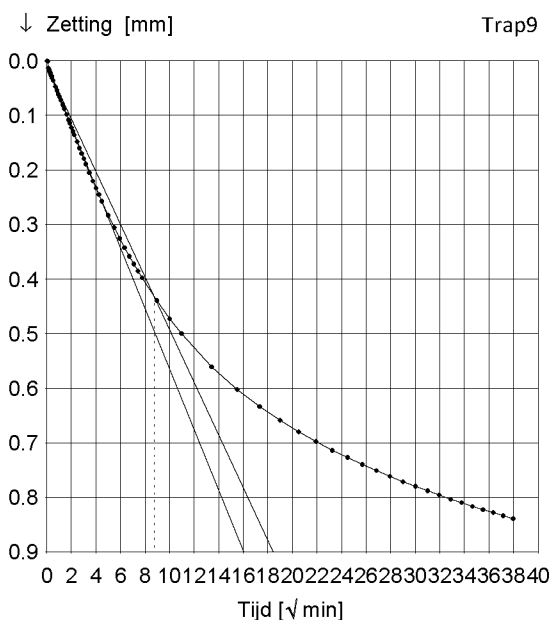
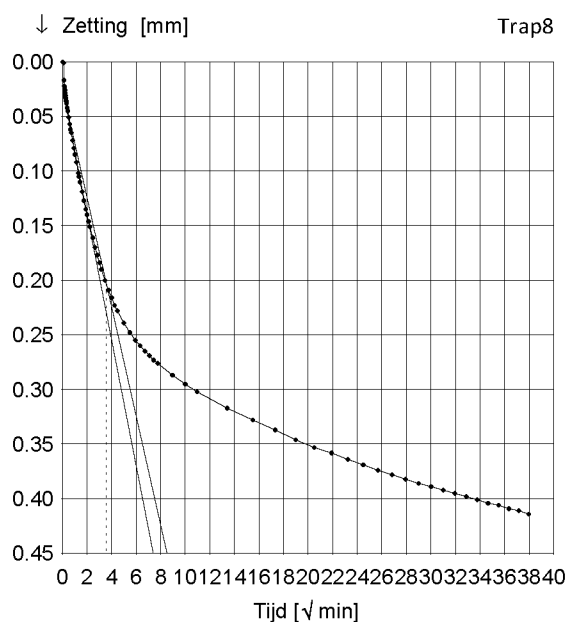
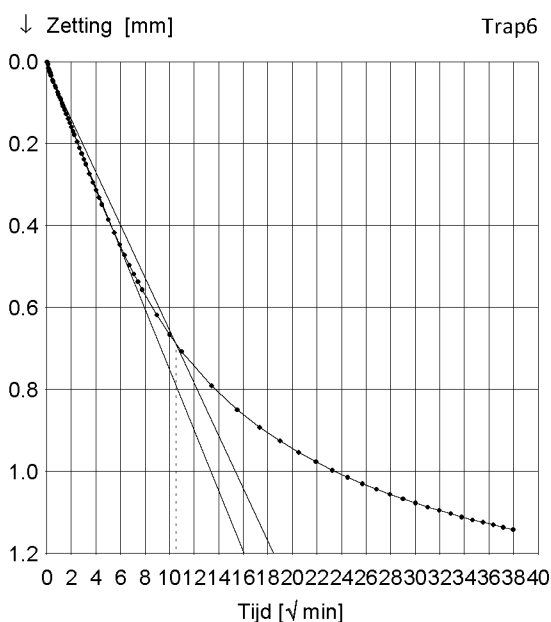
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.483 mm	Watergehalte W	: 107 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	218.88	97.97	218.88	328.8
Δp [kN/m ²]	15.55	16.49	32.97	32.97	46.71	74.19	-120.91	120.91	109.92
c_v [10^{-8} m ² /s] (wortel-t)		3.93	1.44	0.53	0.43	0.47		3.86	0.58
m_v [1/MPa]		1.43	1.59	1.43	1.05	0.69		0.12	0.32
k_{10} [10^{-11} m/s]		55.20	22.50	7.42	4.49	3.19		4.52	1.83
c_v [10^{-8} m ² /s] (log-t)		2.37	0.87	0.37	0.28	0.30		3.54	0.27
C_α [10^{-3}]		10.19	21.41	25.87	25.36	22.52		6.441	22.16



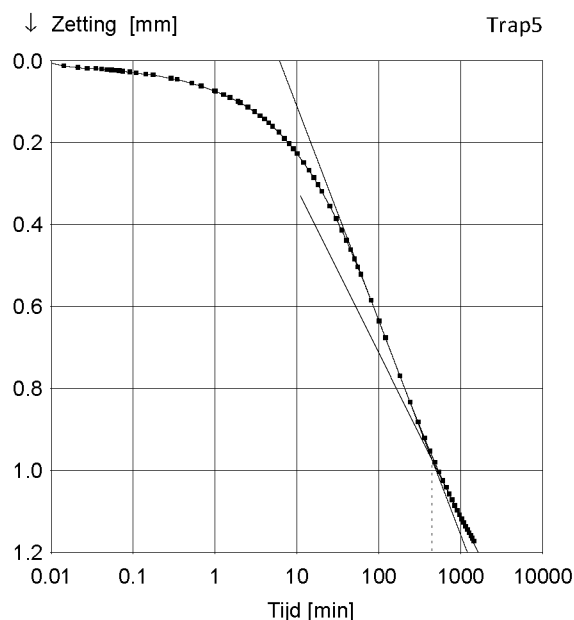
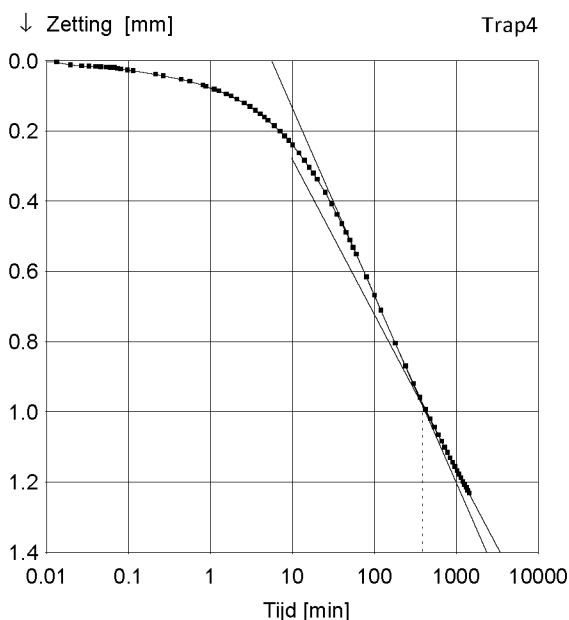
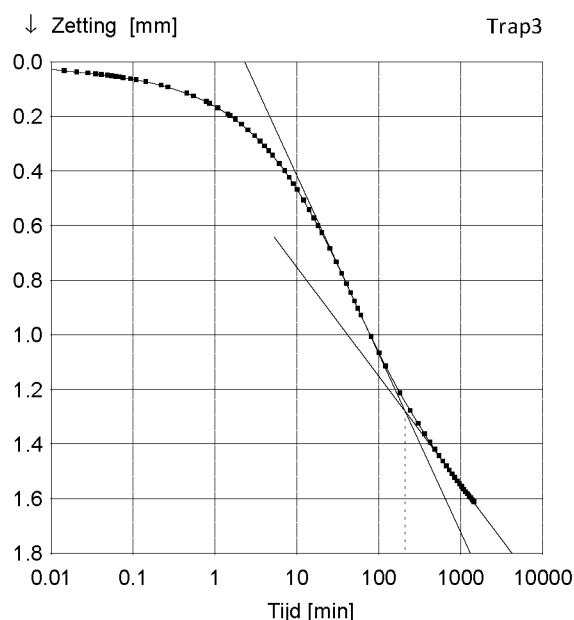
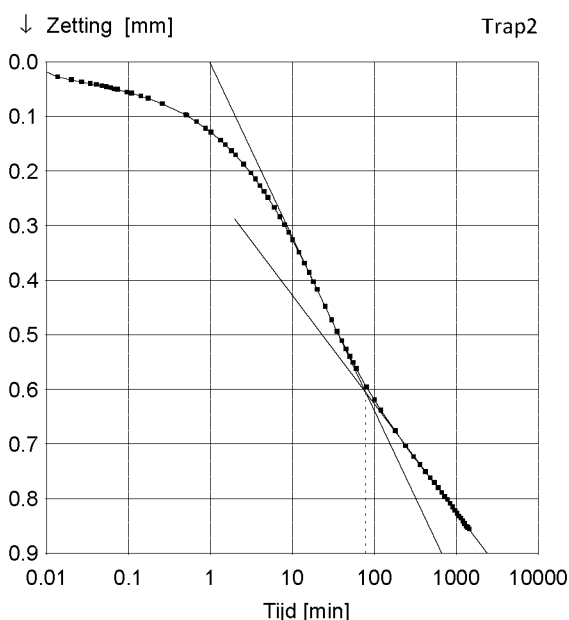
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.483 mm	Watergehalte W	: 107 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	218.88	97.97	218.88	328.8
Δp [kN/m ²]	15.55	16.49	32.97	32.97	46.71	74.19	-120.91	120.91	109.92
c_v [10^{-8} m ² /s] (wortel-t)		3.93	1.44	0.53	0.43	0.47		3.86	0.58
m_v [1/MPa]		1.43	1.59	1.43	1.05	0.69		0.12	0.32
k_{10} [10^{-11} m/s]		55.20	22.50	7.42	4.49	3.19		4.52	1.83
c_v [10^{-8} m ² /s] (log-t)		2.37	0.87	0.37	0.28	0.30		3.54	0.27
C_α [10^{-3}]		10.19	21.41	25.87	25.36	22.52		6.441	22.16



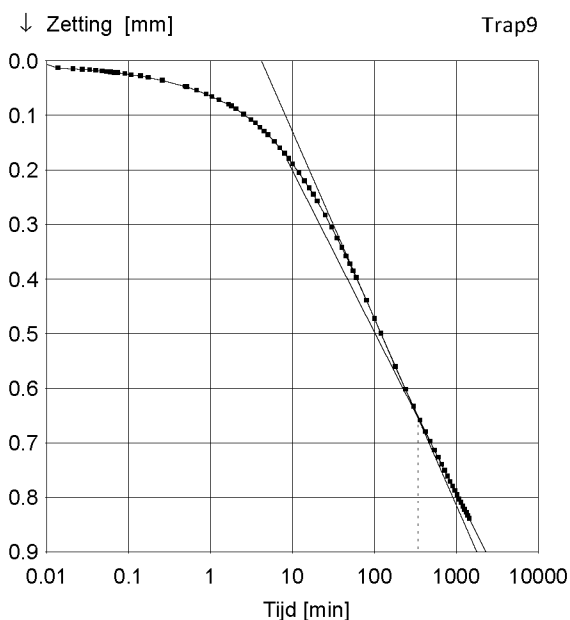
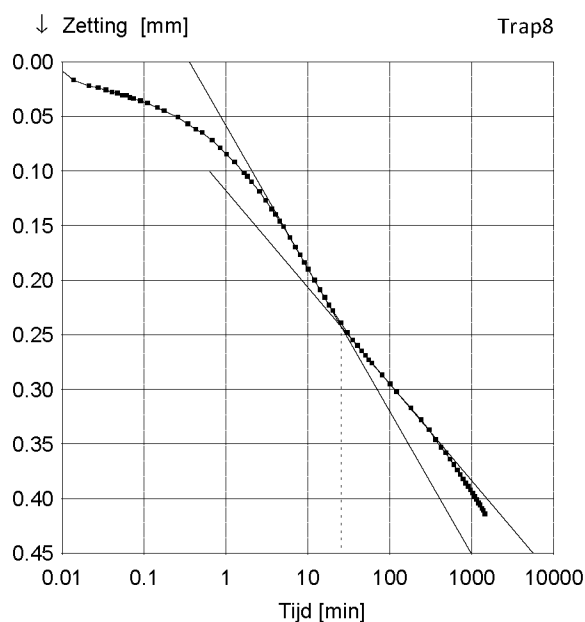
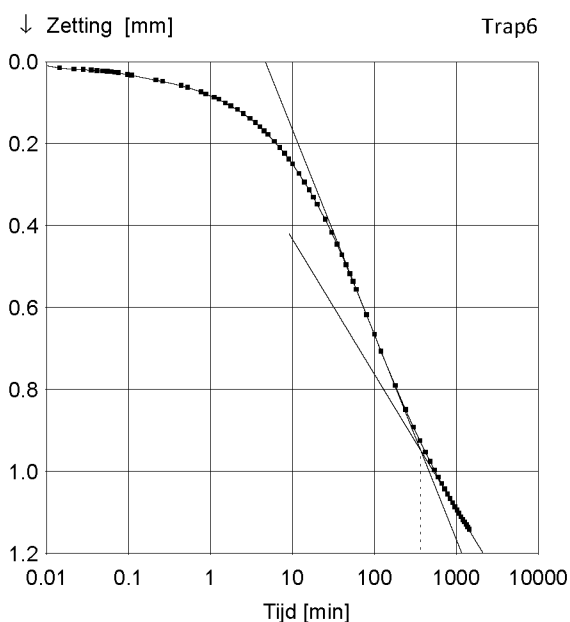
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.483 mm	Watergehalte W	: 107 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	218.88	97.97	218.88	328.8
Δp [kN/m ²]	15.55	16.49	32.97	32.97	46.71	74.19	-120.91	120.91	109.92
c_v [10^{-8} m ² /s] (wortel-t)		3.93	1.44	0.53	0.43	0.47		3.86	0.58
m_v [1/MPa]		1.43	1.59	1.43	1.05	0.69		0.12	0.32
k_{10} [10^{-11} m/s]		55.20	22.50	7.42	4.49	3.19		4.52	1.83
c_v [10^{-8} m ² /s] (log-t)		2.37	0.87	0.37	0.28	0.30		3.54	0.27
C_α [10^{-3}]		10.19	21.41	25.87	25.36	22.52		6.441	22.16



Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.483 mm	Watergehalte W	: 107 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	218.88	97.97	218.88	328.8
Δp [kN/m ²]	15.55	16.49	32.97	32.97	46.71	74.19	-120.91	120.91	109.92
c_v [10^{-8} m ² /s] (wortel-t)		3.93	1.44	0.53	0.43	0.47		3.86	0.58
m_v [1/MPa]		1.43	1.59	1.43	1.05	0.69		0.12	0.32
k_{10} [10^{-11} m/s]		55.20	22.50	7.42	4.49	3.19		4.52	1.83
c_v [10^{-8} m ² /s] (log-t)		2.37	0.87	0.37	0.28	0.30		3.54	0.27
C_α [10^{-3}]		10.19	21.41	25.87	25.36	22.52		6.441	22.16



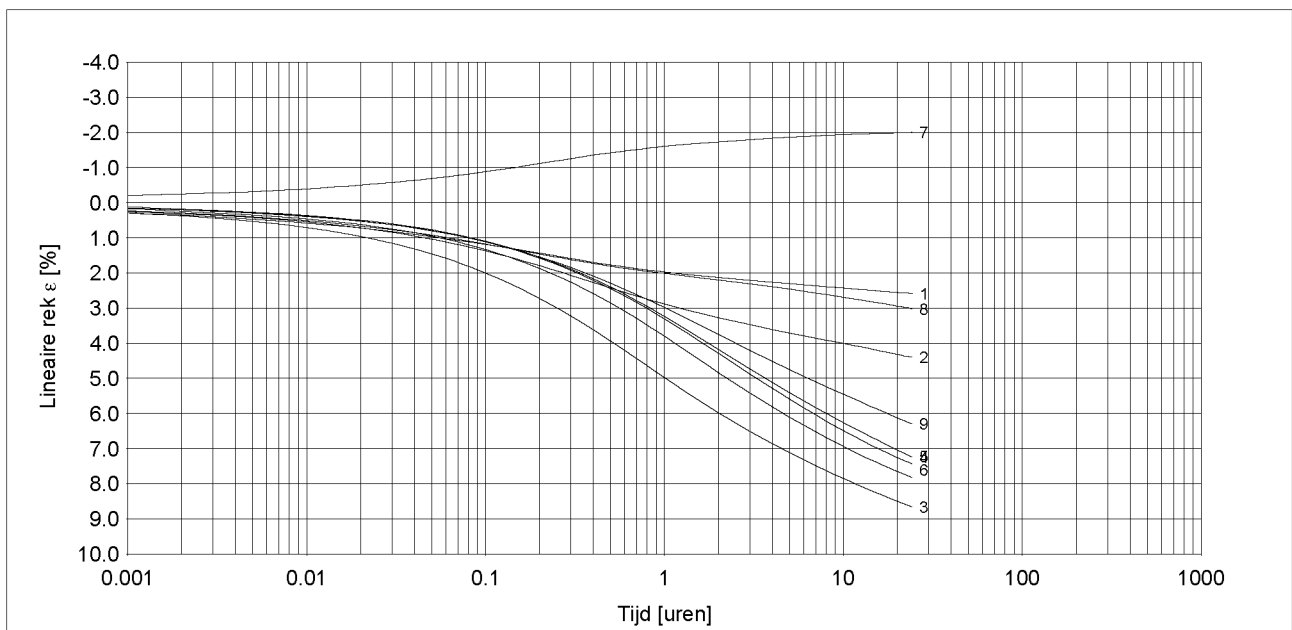
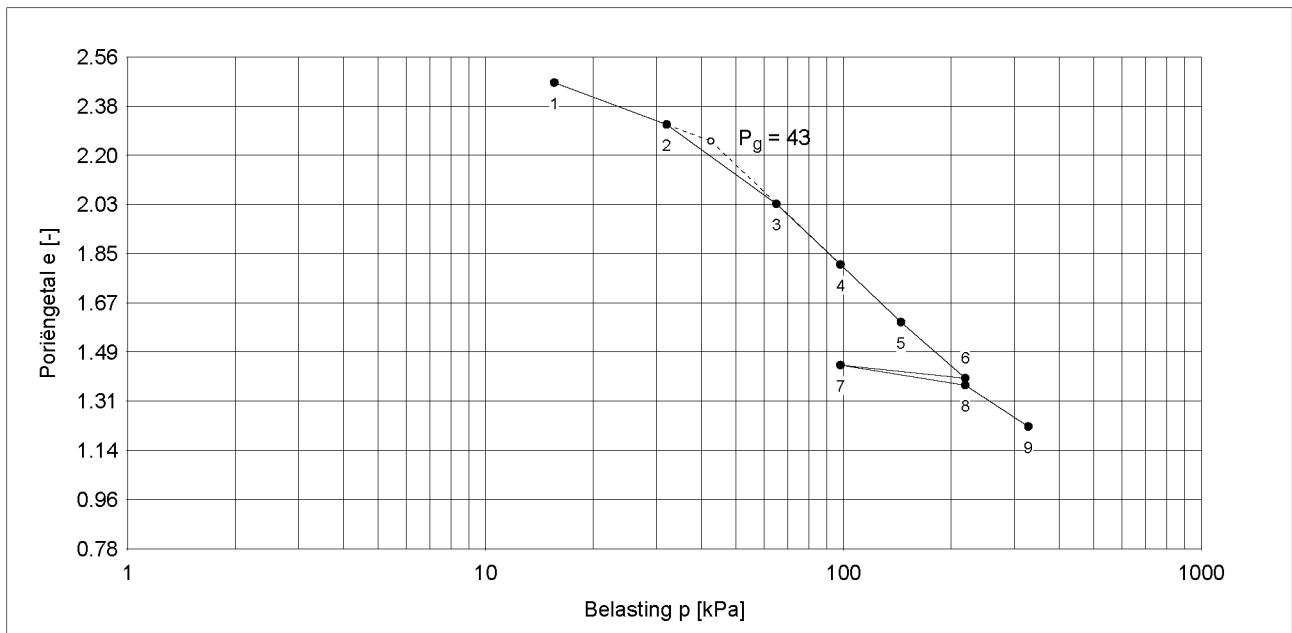
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.56	Watergehalte W	: 107 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	15.55	32.04	65.01	97.98	144.69	218.88	97.97	218.88	328.8
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.485	0.934	1.231	1.233	1.131	0.138	0.211	0.844
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$			0.0102	0.0214	0.0259	0.0254	0.0225	0.0064	0.0222

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.211$	$C_c = 1.233$	$C_{sw} = 0.138$
Trap 7 - 8	Trap 4 - 5	Trap 6 - 7

$C_{\alpha} = 0.0256$
Trap 4 - 5



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei, zwak siltig, sterk humeus
Monster	: 4	Einddatum	: 25-02-2019	Diepte	: 7.59 - 7.64 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.41 kN/m ³
Apparaat	: 7	Zetting (24u)	: 0.517 mm	Droog vol. gewicht γ_{dr}	: 6.48 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.56	Watergehalte	W : 107 %

Bepaling parameters per trap

Belasting p [kPa]		16	32	65	98	145	219	98	219	329
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c(r)/sw} = \Delta e / \Delta \log p$		0.4853	0.9337	1.2308	1.2332	1.1307	0.1377	0.2111	0.8440	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$		0.0102	0.0214	0.0259	0.0254	0.0225		0.0064	0.0222	
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		16.8	8.9	7.2	7.5	8.2	36.9	42.5	10.2	
C_s		80.4	44.5	30.4	42.0	65.9	69.8	322.4	38.2	
C_{10^4}		9.2	4.9	3.7	4.4	5.5	11.8	27.8	4.9	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)		3.93	1.44	0.53	0.43	0.47		3.86	0.58	
$m_v [1/MPa]$		1.43	1.59	1.43	1.05	0.69		0.12	0.32	
$k_{10} [10^{-11} m/s]$		55.20	22.50	7.42	4.49	3.19		4.52	1.83	
$c_v [10^{-8} m^2/s]$ (Casagrande)		2.37	0.87	0.37	0.28	0.30		3.54	0.27	
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0622	0.1279	0.1832	0.1981	0.1966	0.0247	0.0381	0.1596	
c							0.0102			0.0100

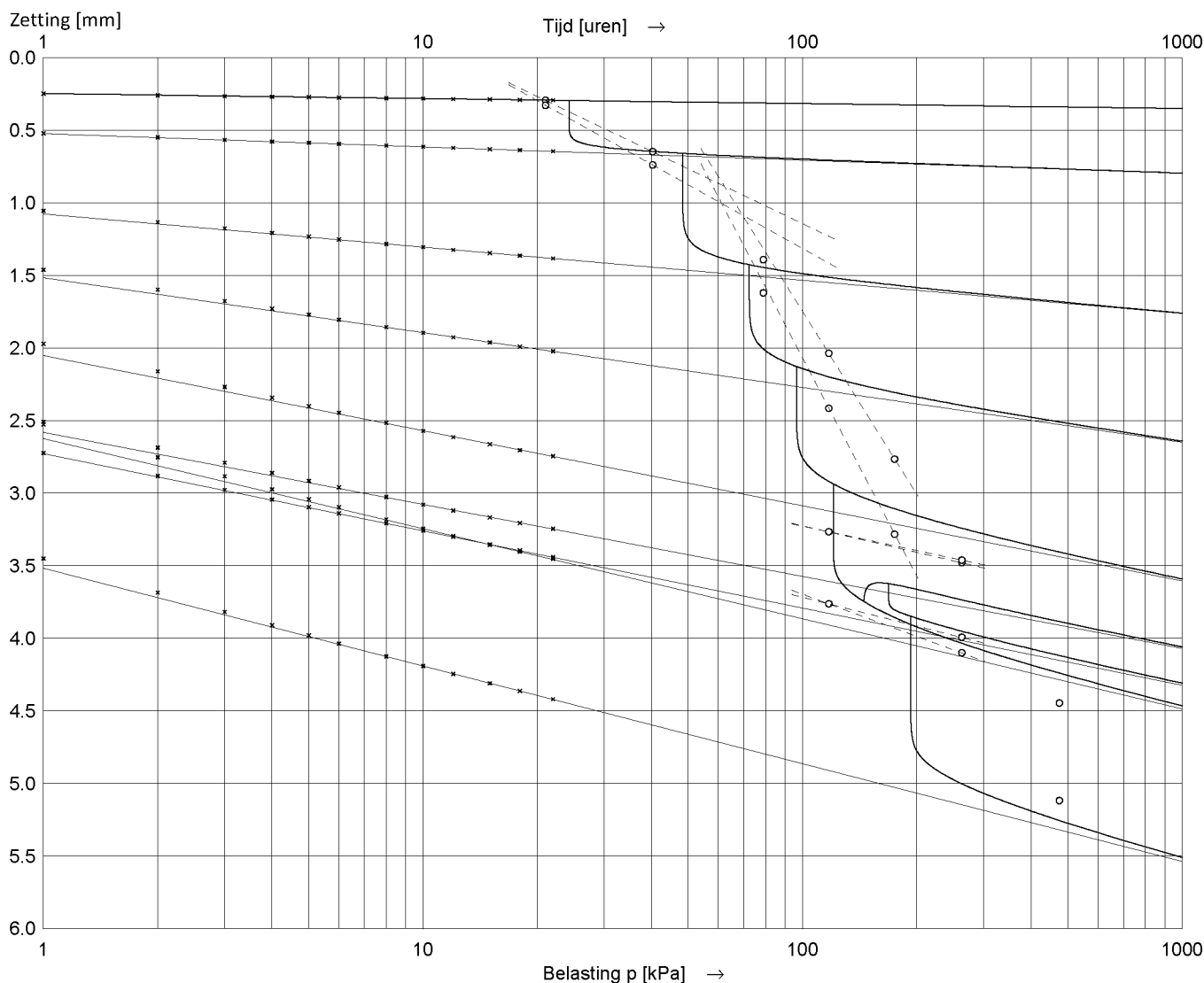
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 42.6$	$C_r = 0.2111$	$C_c = 1.2332$	$C_{sw} = 0.1377$	$C_{\alpha} = 0.0256$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 37.4$	$C_p = 16.8$ $C_s = 80.4$ $C_{10^4} = 9.2$	$C_p' = 7.5$ $C_s' = 42.0$ $C_{10^4}' = 4.4$	$A_p = 36.9$ $A_s = 69.8$ $A_{10^4} = 11.8$	$C_{p(r)} = 42.5$ $C_{s(r)} = 322.4$ $C_{10^4(r)} = 27.8$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0381	b = 0.1981	c = --	

Boring : B01	Startdatum : 16-02-2019	Grondsoort: Klei matig siltig, matig humeus
Monster : 5	Einddatum : 25-02-2019	Diepte : 9.49 - 9.54 m. -NAP
Bus : .	Hoogte monster : 20.00 mm	Initieel vol. gewicht γ : 15.64 kN/m ³
Apparaat : 8	Zetting (24u) : 0.295 mm	Droog vol. gewicht γ_{dr} : 9.82 kN/m ³
Soort monster : Ongeroerd	h (24u) : 19.705 mm	Watergehalte W : 59 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	40.29	78.76	117.23	174.94	262.87	117.23	262.87	474.46
C _p	36.0	17.7	12.1	10.8	11.2	74.2	81.4	11.8	
C _s	224.4	95.4	52.5	56.0	77.7	127.4	438.7	82.3	
C _{10⁴}	21.9	10.2	6.3	6.1	7.1	22.3	46.7	7.5	

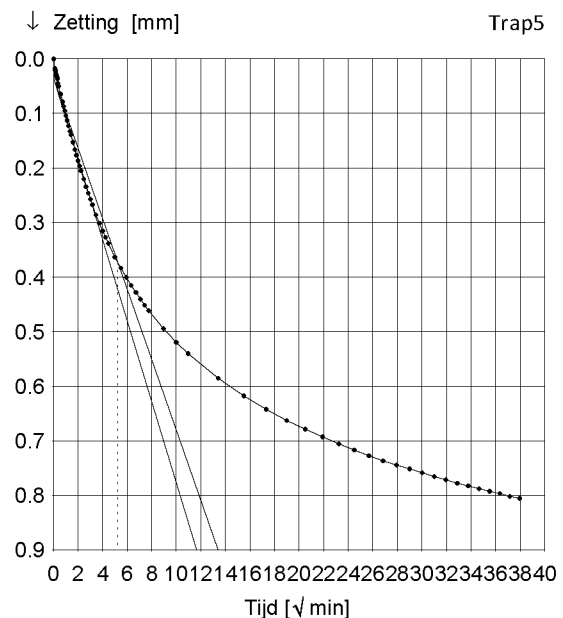
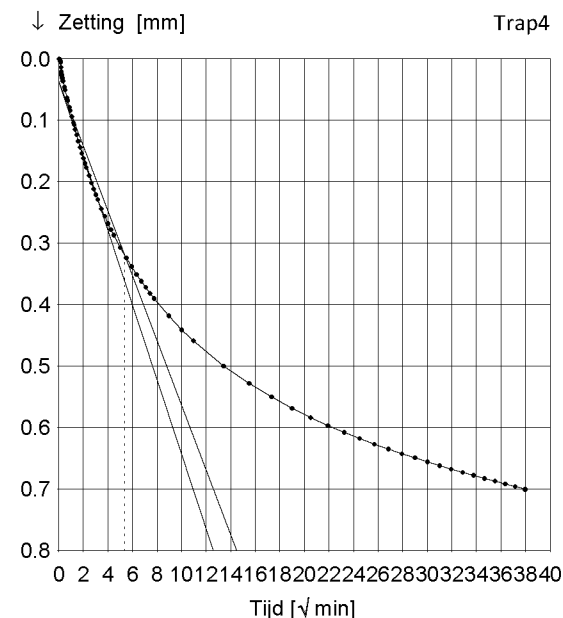
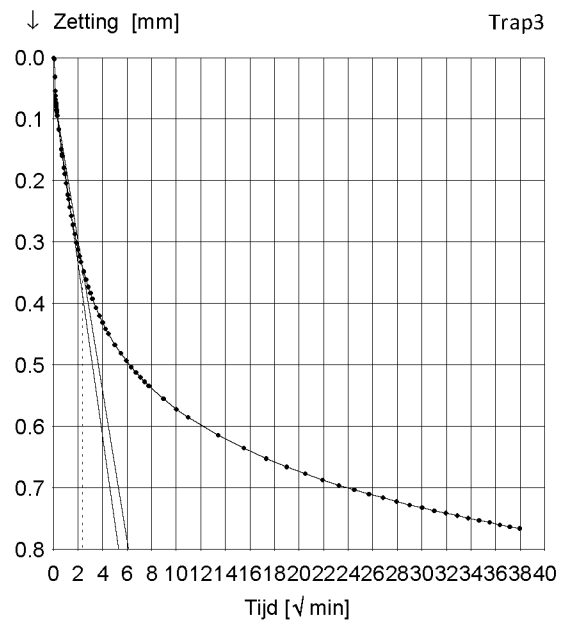
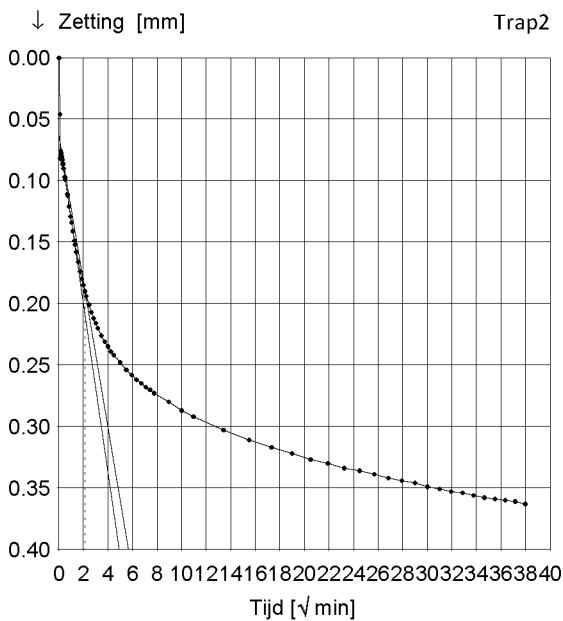
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
62 [kN/m ²]	C _p = 36.0	C _p ' = 10.8	C _p = 74.2	C _p = 81.4		
	C _s = 224.4	C _s ' = 56.0	C _s = 127.4	C _s = 438.7		
	C _{10⁴} = 21.9	C _{10⁴} ' = 6.1	C _{10⁴} = 22.3	C _{10⁴} = 46.7		



Asymptoot tijdinterval : 8 - 48 uur.

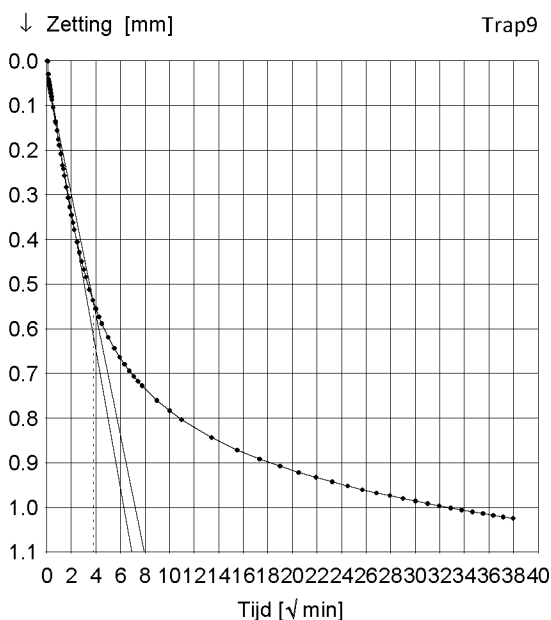
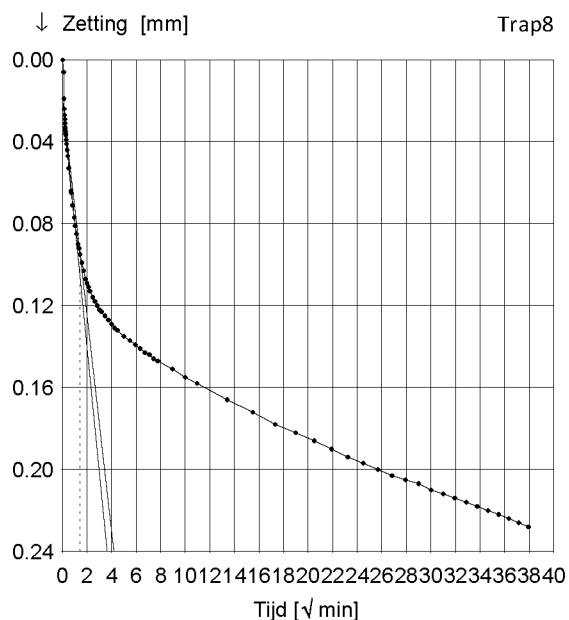
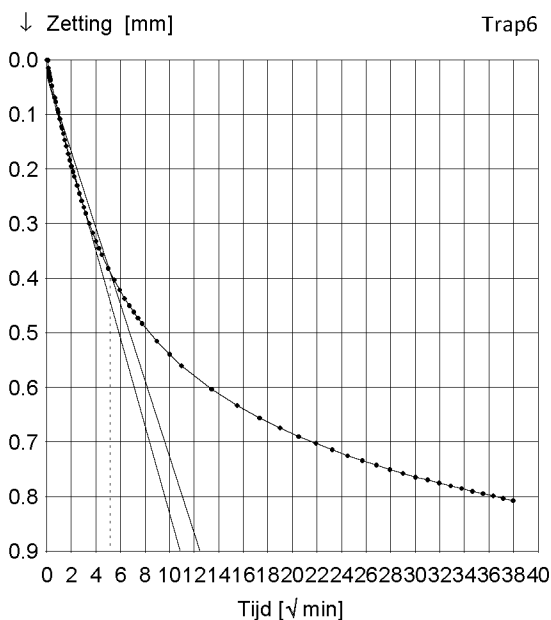
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 5	Einddatum	: 25-02-2019	Diepte	: 9.49 - 9.54 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 15.64 kN/m ³
Apparaat	: 8	Zetting (24u)	: 0.295 mm	Droog vol. gewicht γ_{dr}	: 9.82 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.705 mm	Watergehalte W	: 59 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	40.29	78.76	117.23	174.94	262.87	117.23	262.87	474.46
Δp [kN/m ²]	21.05	19.24	38.47	38.47	57.71	87.93	-145.64	145.64	211.59
c_v [10^{-8} m ² /s] (wortel-t)		22.54	17.91	3.11	2.99	2.83		34.73	4.61
m_v [1/MPa]		0.37	0.42	0.44	0.36	0.26		0.04	0.16
k_{10} [10^{-11} m/s]		82.00	74.44	13.39	10.67	7.35		11.93	7.44
c_v [10^{-8} m ² /s] (log-t)		15.57	11.71	0.82	0.91	1.16		35.01	2.84
C_α [10^{-3}]		3.206	8.741	11.61	13.11	12.54		1.847	11.97



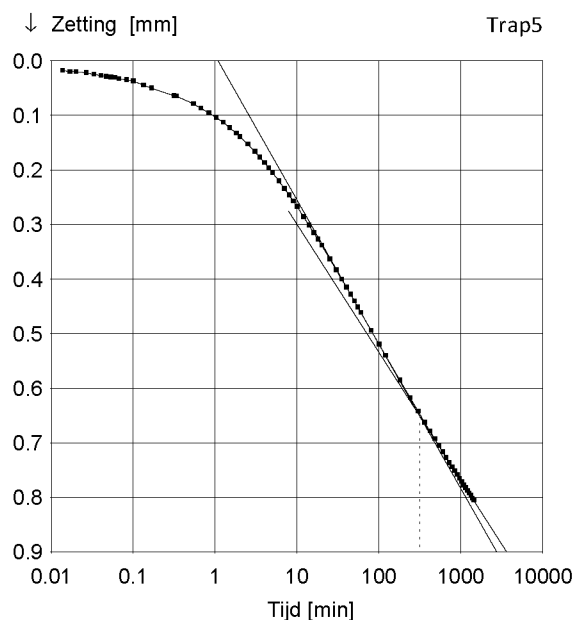
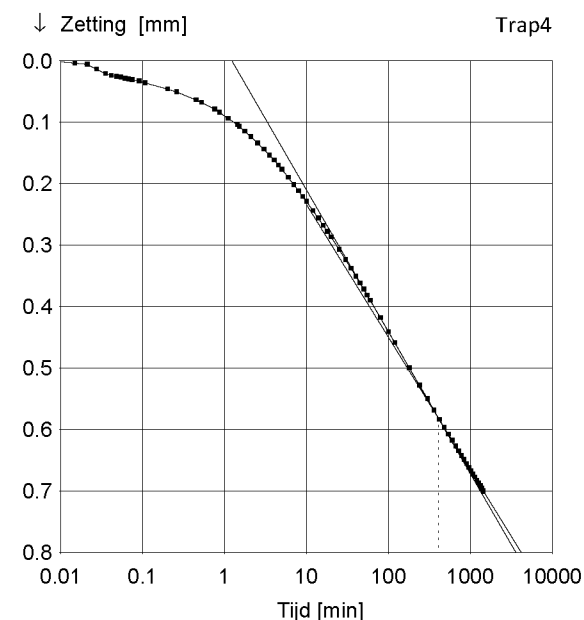
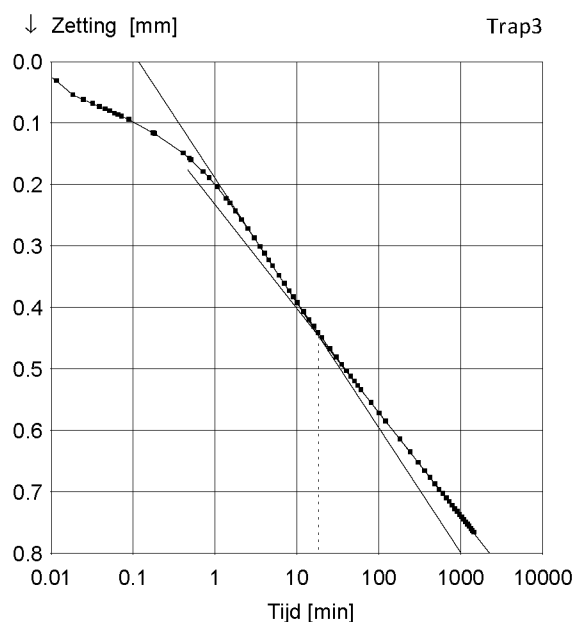
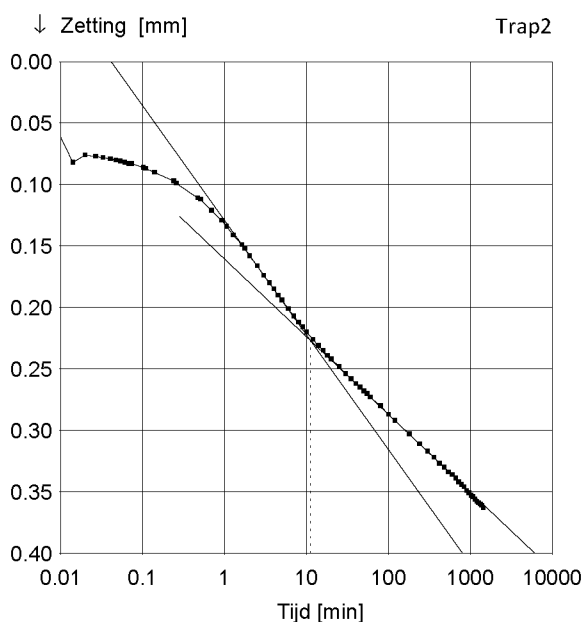
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 5	Einddatum	: 25-02-2019	Diepte	: 9.49 - 9.54 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 15.64 kN/m ³
Apparaat	: 8	Zetting (24u)	: 0.295 mm	Droog vol. gewicht γ_{dr}	: 9.82 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.705 mm	Watergehalte W	: 59 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	40.29	78.76	117.23	174.94	262.87	117.23	262.87	474.46
Δp [kN/m ²]	21.05	19.24	38.47	38.47	57.71	87.93	-145.64	145.64	211.59
c_v [10^{-8} m ² /s] (wortel-t)		22.54	17.91	3.11	2.99	2.83		34.73	4.61
m_v [1/MPa]		0.37	0.42	0.44	0.36	0.26		0.04	0.16
k_{10} [10^{-11} m/s]		82.00	74.44	13.39	10.67	7.35		11.93	7.44
c_v [10^{-8} m ² /s] (log-t)		15.57	11.71	0.82	0.91	1.16		35.01	2.84
C_α [10^{-3}]		3.206	8.741	11.61	13.11	12.54		1.847	11.97



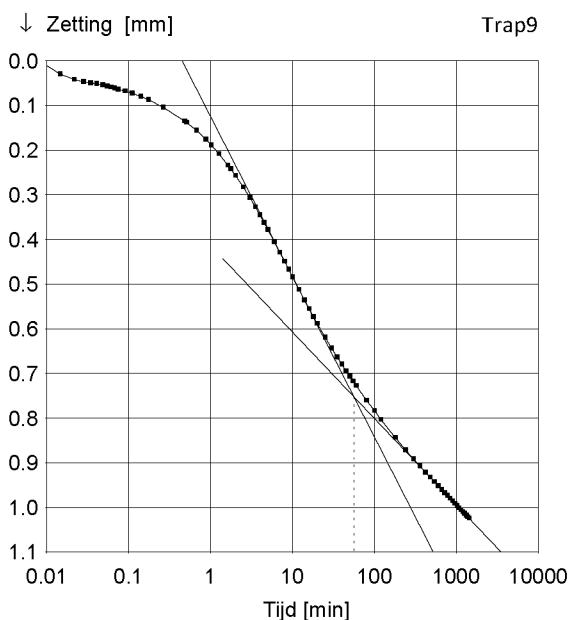
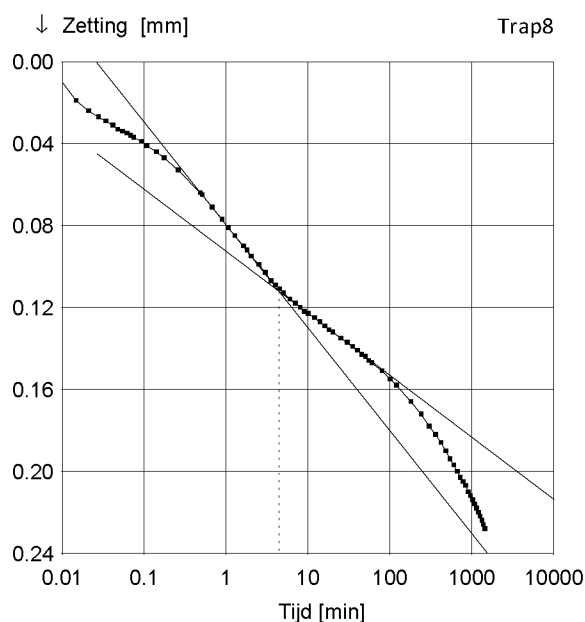
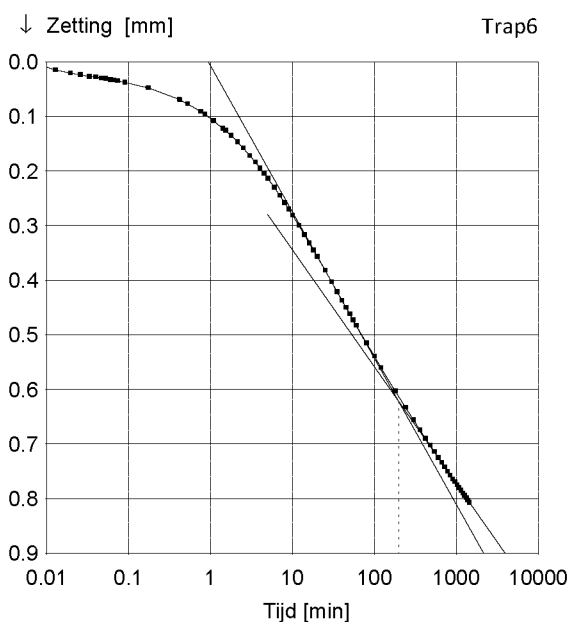
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 5	Einddatum	: 25-02-2019	Diepte	: 9.49 - 9.54 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 15.64 kN/m ³
Apparaat	: 8	Zetting (24u)	: 0.295 mm	Droog vol. gewicht γ_{dr}	: 9.82 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.705 mm	Watergehalte W	: 59 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	40.29	78.76	117.23	174.94	262.87	117.23	262.87	474.46
Δp [kN/m ²]	21.05	19.24	38.47	38.47	57.71	87.93	-145.64	145.64	211.59
c_v [10^{-8} m ² /s] (wortel-t)		22.54	17.91	3.11	2.99	2.83		34.73	4.61
m_v [1/MPa]		0.37	0.42	0.44	0.36	0.26		0.04	0.16
k_{10} [10^{-11} m/s]		82.00	74.44	13.39	10.67	7.35		11.93	7.44
c_v [10^{-8} m ² /s] (log-t)		15.57	11.71	0.82	0.91	1.16		35.01	2.84
C_α [10^{-3}]		3.206	8.741	11.61	13.11	12.54		1.847	11.97



Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 5	Einddatum	: 25-02-2019	Diepte	: 9.49 - 9.54 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 15.64 kN/m ³
Apparaat	: 8	Zetting (24u)	: 0.295 mm	Droog vol. gewicht γ_{dr}	: 9.82 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.705 mm	Watergehalte W	: 59 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	40.29	78.76	117.23	174.94	262.87	117.23	262.87	474.46
Δp [kN/m ²]	21.05	19.24	38.47	38.47	57.71	87.93	-145.64	145.64	211.59
c_v [10 ⁻⁸ m ² /s] (wortel-t)		22.54	17.91	3.11	2.99	2.83		34.73	4.61
m_v [1/MPa]		0.37	0.42	0.44	0.36	0.26		0.04	0.16
k_{10} [10 ⁻¹¹ m/s]		82.00	74.44	13.39	10.67	7.35		11.93	7.44
c_v [10 ⁻⁸ m ² /s] (log-t)		15.57	11.71	0.82	0.91	1.16		35.01	2.84
C_α [10 ⁻³]		3.206	8.741	11.61	13.11	12.54		1.847	11.97



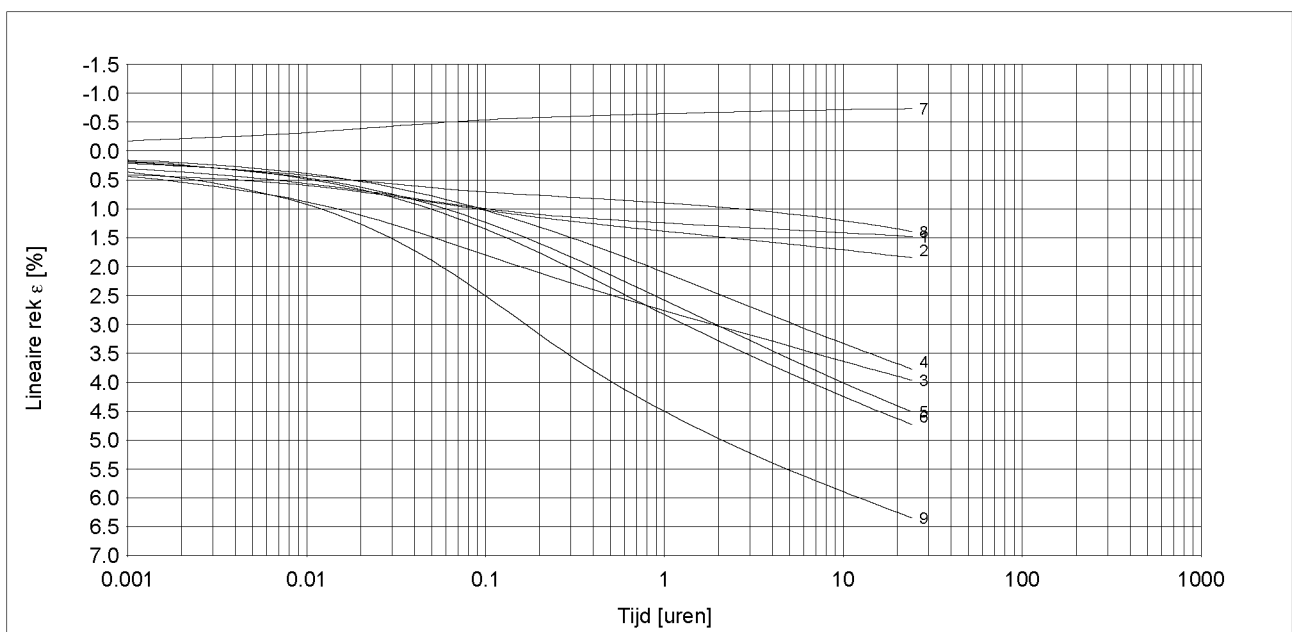
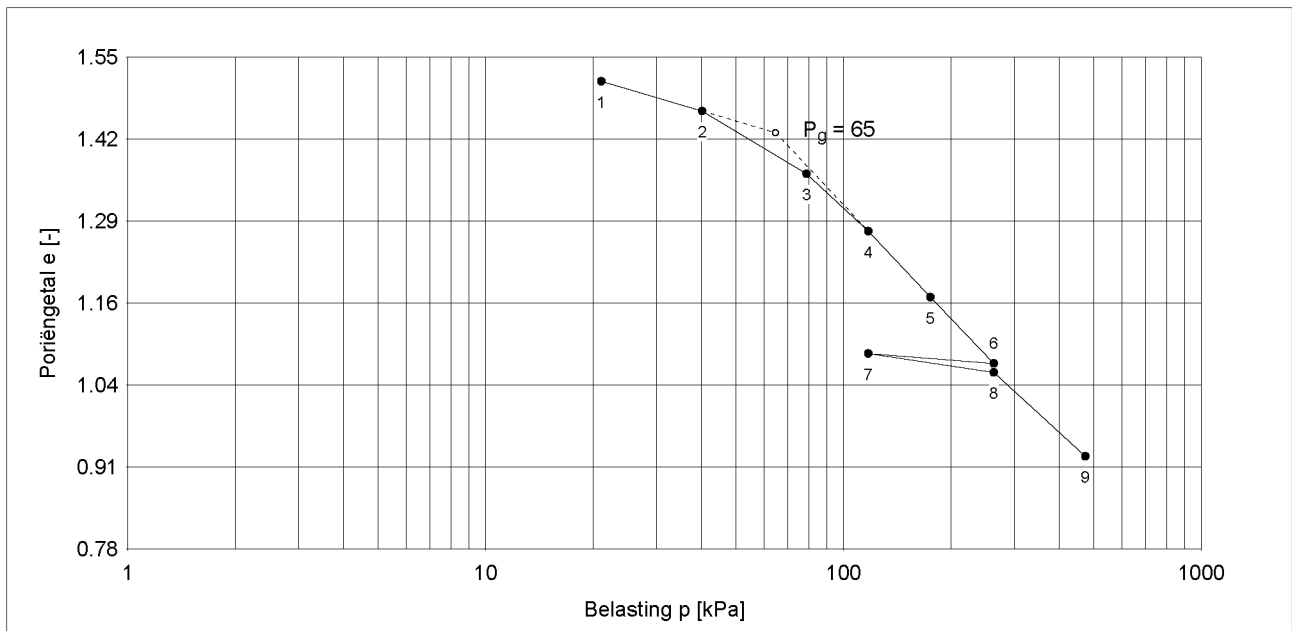
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 5	Einddatum	: 25-02-2019	Diepte	: 9.49 - 9.54 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 15.64 kN/m ³
Apparaat	: 8	Zetting (24u)	: 0.295 mm	Droog vol. gewicht γ_{dr}	: 9.82 kN/m ³
Soort monster	: Ongeroerd	e_0	: 1.55	Watergehalte W	: 59 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	21.05	40.29	78.76	117.23	174.94	262.87	117.23	262.87	474.46
$C_{c/r/sw} = \Delta e / \Delta \log p$	0.164	0.335	0.516	0.590	0.581	0.043	0.083	0.508	
$C_{\alpha}^* = \Delta \varepsilon / \Delta \log t$		0.0032	0.0087	0.0116	0.0131	0.0125		0.0018	0.0120

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.083$	$C_c = 0.590$	$C_{sw} = 0.043$
Trap 7 - 8	Trap 4 - 5	Trap 6 - 7

$C_{\alpha} = 0.0124$
Trap 4 - 5



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 5	Einddatum	: 25-02-2019	Diepte	: 9.49 - 9.54 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 15.64 kN/m ³
Apparaat	: 8	Zetting (24u)	: 0.295 mm	Droog vol. gewicht γ_{dr}	: 9.82 kN/m ³
Soort monster	: Ongeroerd	e_0	: 1.55	Watergehalte	W : 59 %

Bepaling parameters per trap

Belasting p [kPa]		21	40	79	117	175	263	117	263	474
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.1640	0.3351	0.5161	0.5897	0.5811	0.0432	0.0828	0.5085	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$		0.0032	0.0087	0.0116	0.0131	0.0125		0.0018	0.0120	
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		36.0	17.7	12.1	10.8	11.2	74.2	81.4	11.8	
C_s		224.4	95.4	52.5	56.0	77.7	127.4	438.7	82.3	
C_{10^4}		21.9	10.2	6.3	6.1	7.1	22.3	46.7	7.5	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)		22.54	17.91	3.11	2.99	2.83		34.73	4.61	
$m_v [1/MPa]$		0.37	0.42	0.44	0.36	0.26		0.04	0.16	
$k_{10} [10^{-11} m/s]$		82.00	74.44	13.39	10.67	7.35		11.93	7.44	
$c_v [10^{-8} m^2/s]$ (Casagrande)		15.57	11.71	0.82	0.91	1.16		35.01	2.84	
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0286	0.0603	0.0966	0.1151	0.1189	0.0090	0.0174	0.1109	
c							0.0057		0.0055	

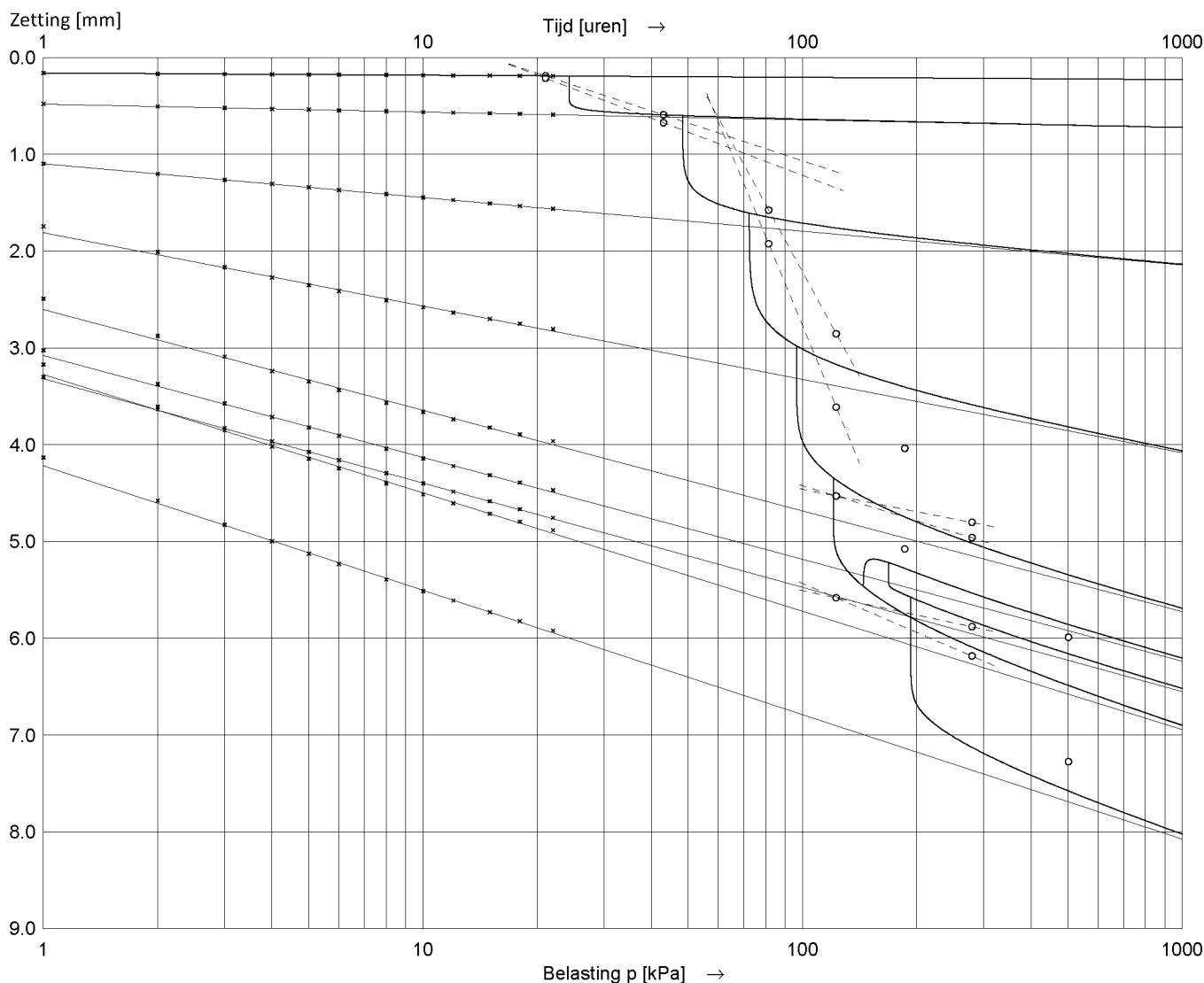
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 64.5$	$C_r = 0.0828$	$C_c = 0.5897$	$C_{sw} = 0.0432$	$C_{\alpha} = 0.0124$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 61.7$	$C_p = 36.0$ $C_s = 224.4$ $C_{10^4} = 21.9$	$C_p' = 10.8$ $C_s' = 56.0$ $C_{10^4}' = 6.1$	$A_p = 74.2$ $A_s = 127.4$ $A_{10^4} = 22.3$	$C_{p(r)} = 81.4$ $C_{s(r)} = 438.7$ $C_{10^4(r)} = 46.7$
Isotachen	Trap 7 - 8	Trap 5 - 6	Trap 6	
$P_g = --$	a = 0.0174	b = 0.1189	c = 0.0057	

Boring : B01	Startdatum : 16-02-2019	Grondsoort: Klei matig siltig, matig humeus
Monster : 6	Einddatum : 25-02-2019	Diepte : 10.34 - 10.39 m. -NAP
Bus : .	Hoogte monster : 20.00 mm	Initieel vol. gewicht γ : 14.46 kN/m ³
Apparaat : 9	Zetting (24u) : 0.191 mm	Droog vol. gewicht γ_{dr} : 7.67 kN/m ³
Soort monster : Ongeroerd	h (24u) : 19.809 mm	Watergehalte W : 89 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	43.03	81.5	122.72	185.92	279.35	122.72	279.35	501.93
C _p	35.1	12.8	6.3	6.9	8.7	37.6	59.2	9.7	
C _s	243.4	47.0	19.7	29.1	43.9	95.6	648.0	55.4	
C _{10⁴}	22.3	6.1	2.8	3.5	4.9	14.6	43.4	5.7	

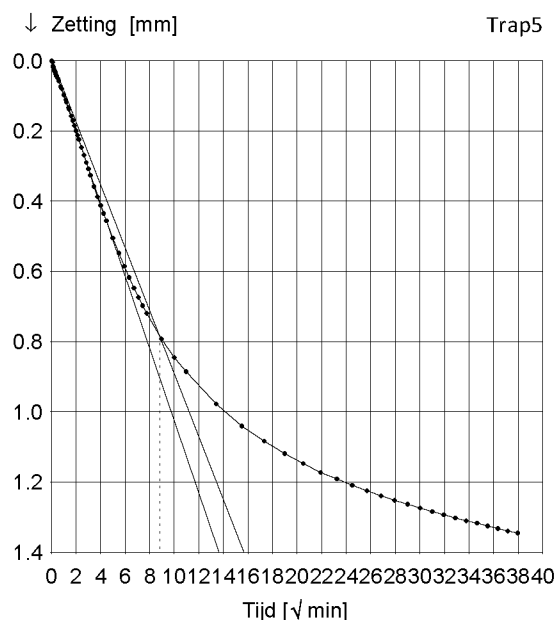
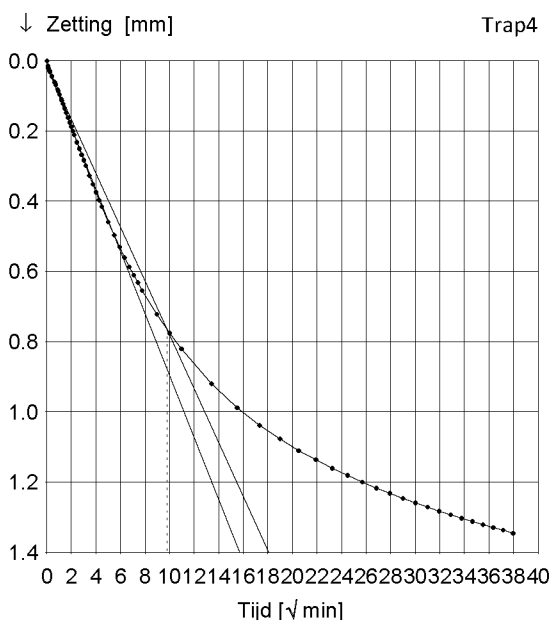
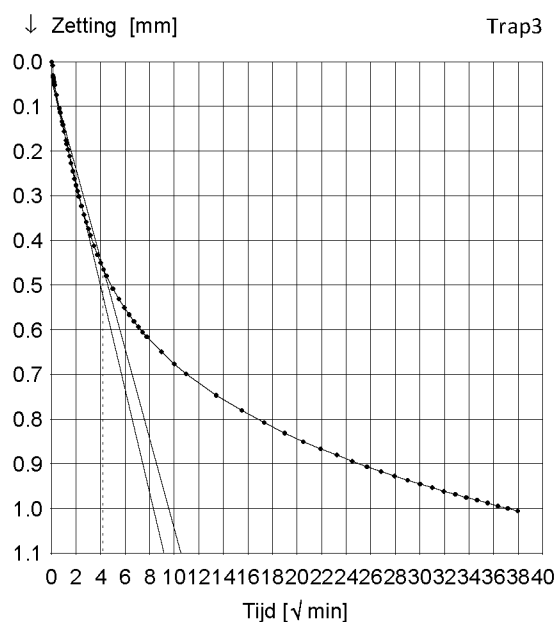
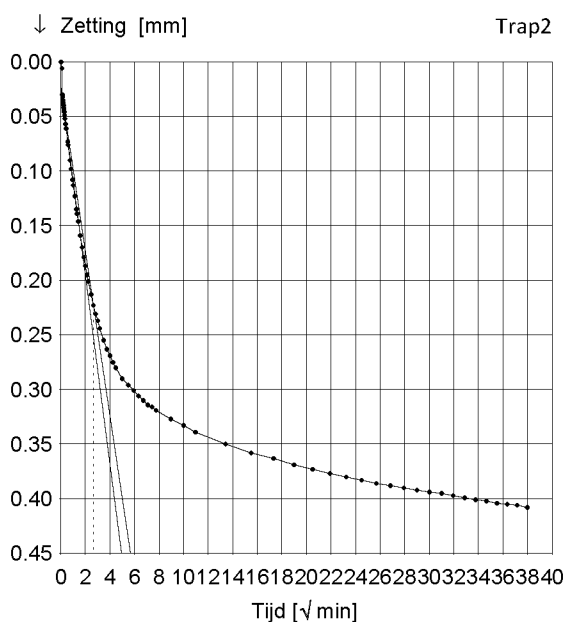
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
64 [kN/m ²]	C _p = 35.1	C _p ' = 6.3	C _p = 37.6	C _p = 59.2		
	C _s = 243.4	C _s ' = 19.7	C _s = 95.6	C _s = 648.0		
	C _{10⁴} = 22.3	C _{10⁴} ' = 2.8	C _{10⁴} = 14.6	C _{10⁴} = 43.4		



Asymptoot tijdinterval : 2 - 48 uur.

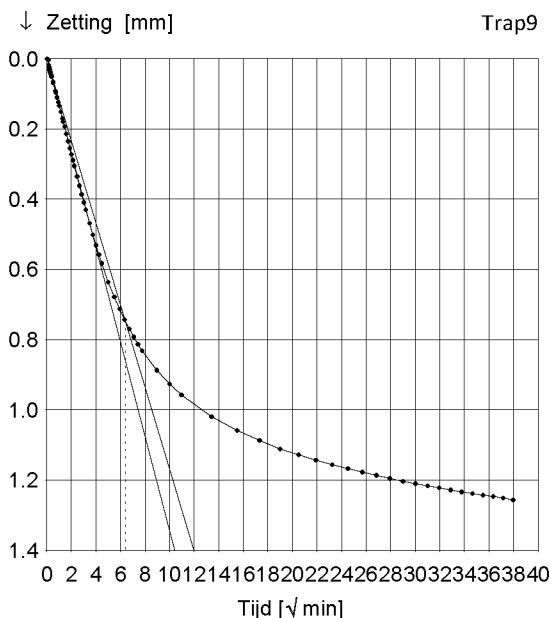
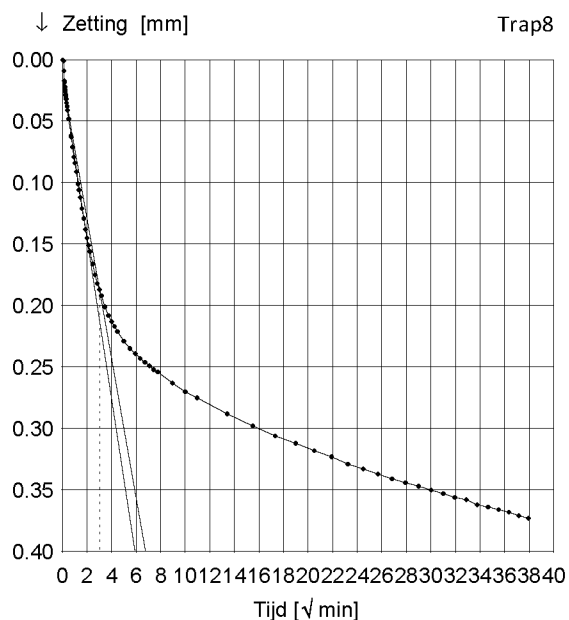
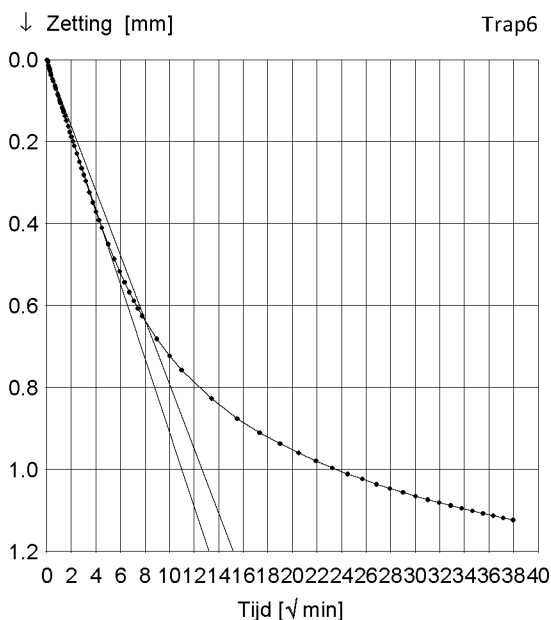
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 6	Einddatum	: 25-02-2019	Diepte	: 10.34 - 10.39 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 14.46 kN/m ³
Apparaat	: 9	Zetting (24u)	: 0.191 mm	Droog vol. gewicht γ_{dr}	: 7.67 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.809 mm	Watergehalte W	: 89 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	43.03	81.5	122.72	185.92	279.35	122.72	279.35	501.93
Δp [kN/m ²]	21.05	21.98	38.47	41.22	63.2	93.43	-156.63	156.63	222.58
c_v [10^{-8} m ² /s] (wortel-t)		14.68	5.44	0.87	0.91	0.94		6.24	1.24
m_v [1/MPa]		0.51	0.63	1.10	0.81	0.48		0.08	0.26
k_{10} [10^{-11} m/s]		73.03	33.55	9.36	7.28	4.41		5.03	3.12
c_v [10^{-8} m ² /s] (log-t)		10.00	6.35	0.52	0.61	0.60		6.79	0.89
C_α [10^{-3}]		3.218	14.39	23.50	20.95	18.66		4.698	16.68



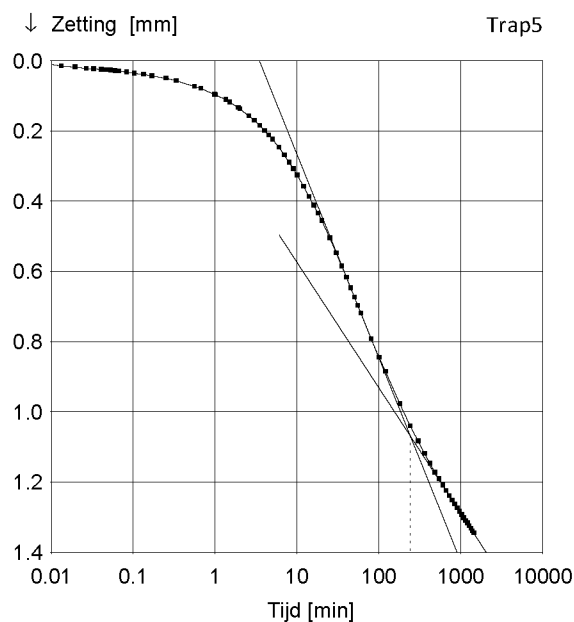
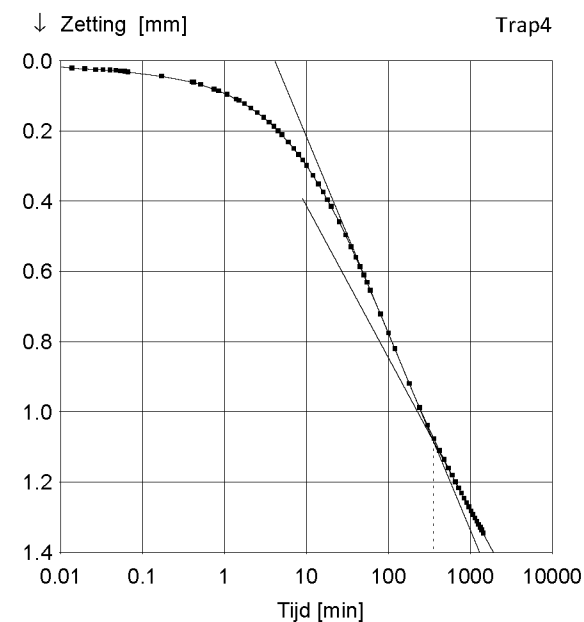
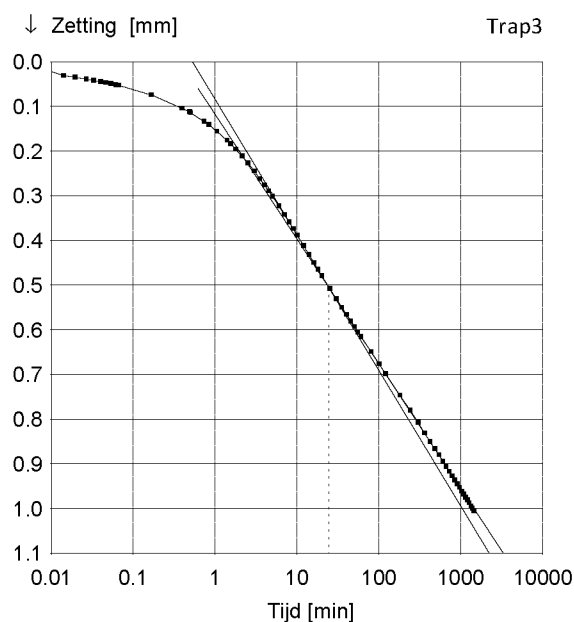
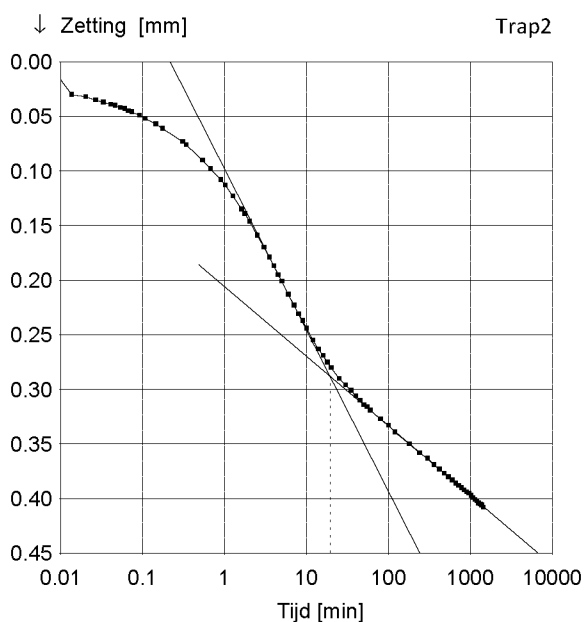
Boring : B01 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, matig humeus
 Monster : 6 Einddatum : 25-02-2019 Diepte : 10.34 - 10.39 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 14.46 kN/m³
 Apparaat : 9 Zetting (24u) : 0.191 mm Droog vol. gewicht γ_{dr} : 7.67 kN/m³
 Soort monster : Ongeroid h (24u) : 19.809 mm Watergehalte W : 89 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	43.03	81.5	122.72	185.92	279.35	122.72	279.35	501.93
Δp [kN/m ²]	21.05	21.98	38.47	41.22	63.2	93.43	-156.63	156.63	222.58
c_v [10 ⁻⁸ m ² /s] (wortel-t)		14.68	5.44	0.87	0.91	0.94		6.24	1.24
m_v [1/MPa]		0.51	0.63	1.10	0.81	0.48		0.08	0.26
k_{10} [10 ⁻¹¹ m/s]		73.03	33.55	9.36	7.28	4.41		5.03	3.12
c_v [10 ⁻⁸ m ² /s] (log-t)		10.00	6.35	0.52	0.61	0.60		6.79	0.89
C_α [10 ⁻³]		3.218	14.39	23.50	20.95	18.66		4.698	16.68



Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 6	Einddatum	: 25-02-2019	Diepte	: 10.34 - 10.39 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 14.46 kN/m ³
Apparaat	: 9	Zetting (24u)	: 0.191 mm	Droog vol. gewicht γ_{dr}	: 7.67 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.809 mm	Watergehalte W	: 89 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	43.03	81.5	122.72	185.92	279.35	122.72	279.35	501.93
Δp [kN/m ²]	21.05	21.98	38.47	41.22	63.2	93.43	-156.63	156.63	222.58
c_v [10^{-8} m ² /s] (wortel-t)		14.68	5.44	0.87	0.91	0.94		6.24	1.24
m_v [1/MPa]		0.51	0.63	1.10	0.81	0.48		0.08	0.26
k_{10} [10^{-11} m/s]		73.03	33.55	9.36	7.28	4.41		5.03	3.12
c_v [10^{-8} m ² /s] (log-t)		10.00	6.35	0.52	0.61	0.60		6.79	0.89
C_α [10^{-3}]		3.218	14.39	23.50	20.95	18.66		4.698	16.68



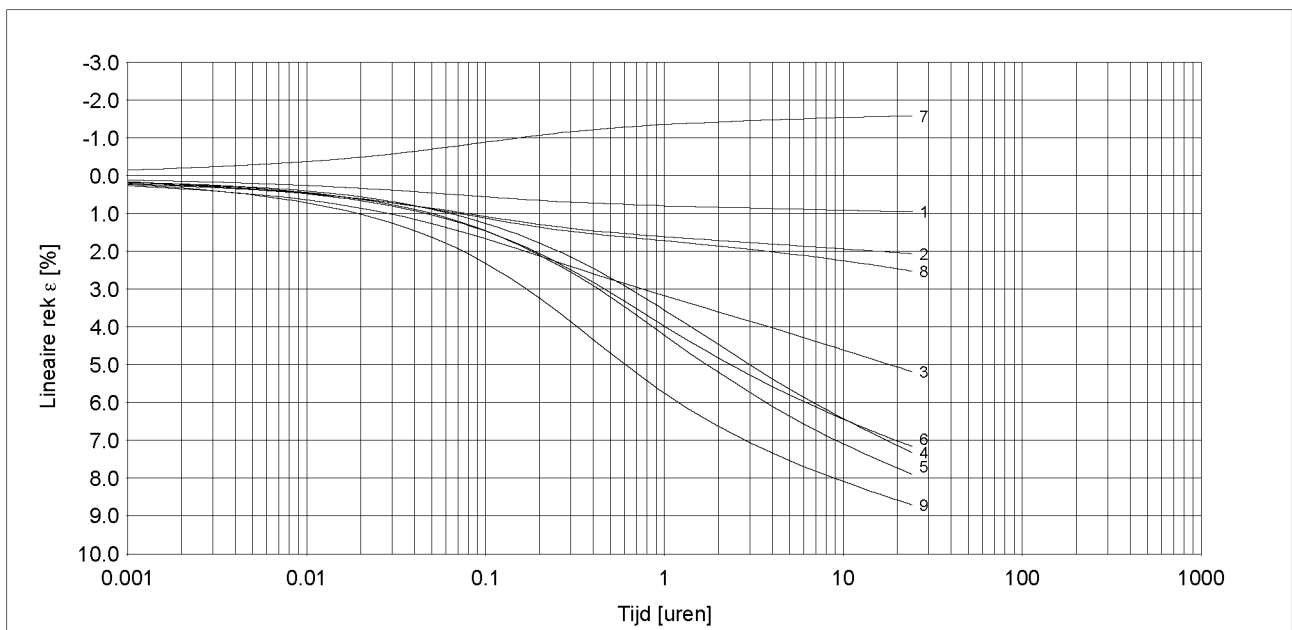
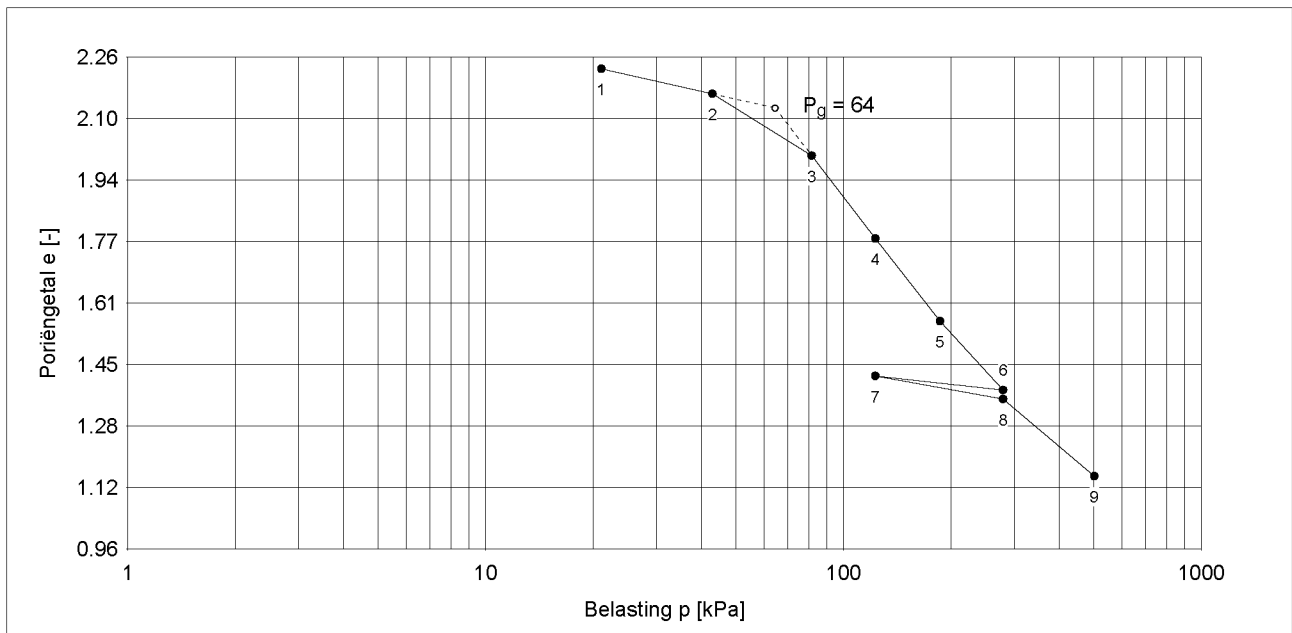
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 6	Einddatum	: 25-02-2019	Diepte	: 10.34 - 10.39 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 14.46 kN/m ³
Apparaat	: 9	Zetting (24u)	: 0.191 mm	Droog vol. gewicht γ_{dr}	: 7.67 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.26	Watergehalte W	: 89 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	21.05	43.03	81.5	122.72	185.92	279.35	122.72	279.35	501.93
$C_{c/r/sw} = \Delta e / \Delta \log p$	0.214	0.591	1.235	1.216	1.036	0.105	0.170	0.805	
$C_{\alpha}^* = \Delta \varepsilon / \Delta \log t$		0.0032	0.0144	0.0235	0.0210	0.0187		0.0047	0.0167

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.170$	$C_c = 1.235$	$C_{sw} = 0.105$
Trap 7 - 8	Trap 3 - 4	Trap 6 - 7

$C_{\alpha} = 0.0189$
Trap 3 - 4



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, matig humeus
Monster	: 6	Einddatum	: 25-02-2019	Diepte	: 10.34 - 10.39 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 14.46 kN/m ³
Apparaat	: 9	Zetting (24u)	: 0.191 mm	Droog vol. gewicht γ_{dr}	: 7.67 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.26	Watergehalte	W : 89 %

Bepaling parameters per trap

Belasting p [kPa]		21	43	82	123	186	279	123	279	502
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.2143	0.5910	1.2352	1.2161	1.0360	0.1050	0.1703	0.8051	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0032	0.0144	0.0235	0.0210	0.0187		0.0047	0.0167
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		35.1	12.8	6.3	6.9	8.7	37.6	59.2	9.7	
C_s		243.4	47.0	19.7	29.1	43.9	95.6	648.0	55.4	
C_{10^4}		22.3	6.1	2.8	3.5	4.9	14.6	43.4	5.7	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			14.68	5.44	0.87	0.91	0.94		6.24	1.24
$m_v [1/MPa]$			0.51	0.63	1.10	0.81	0.48		0.08	0.26
$k_{10} [10^{-11} m/s]$			73.03	33.55	9.36	7.28	4.41		5.03	3.12
$c_v [10^{-8} m^2/s]$ (Casagrande)			10.00	6.35	0.52	0.61	0.60		6.79	0.89
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0291	0.0833	0.1856	0.1978	0.1822	0.0190	0.0310	0.1553	
c							0.0085			0.0073

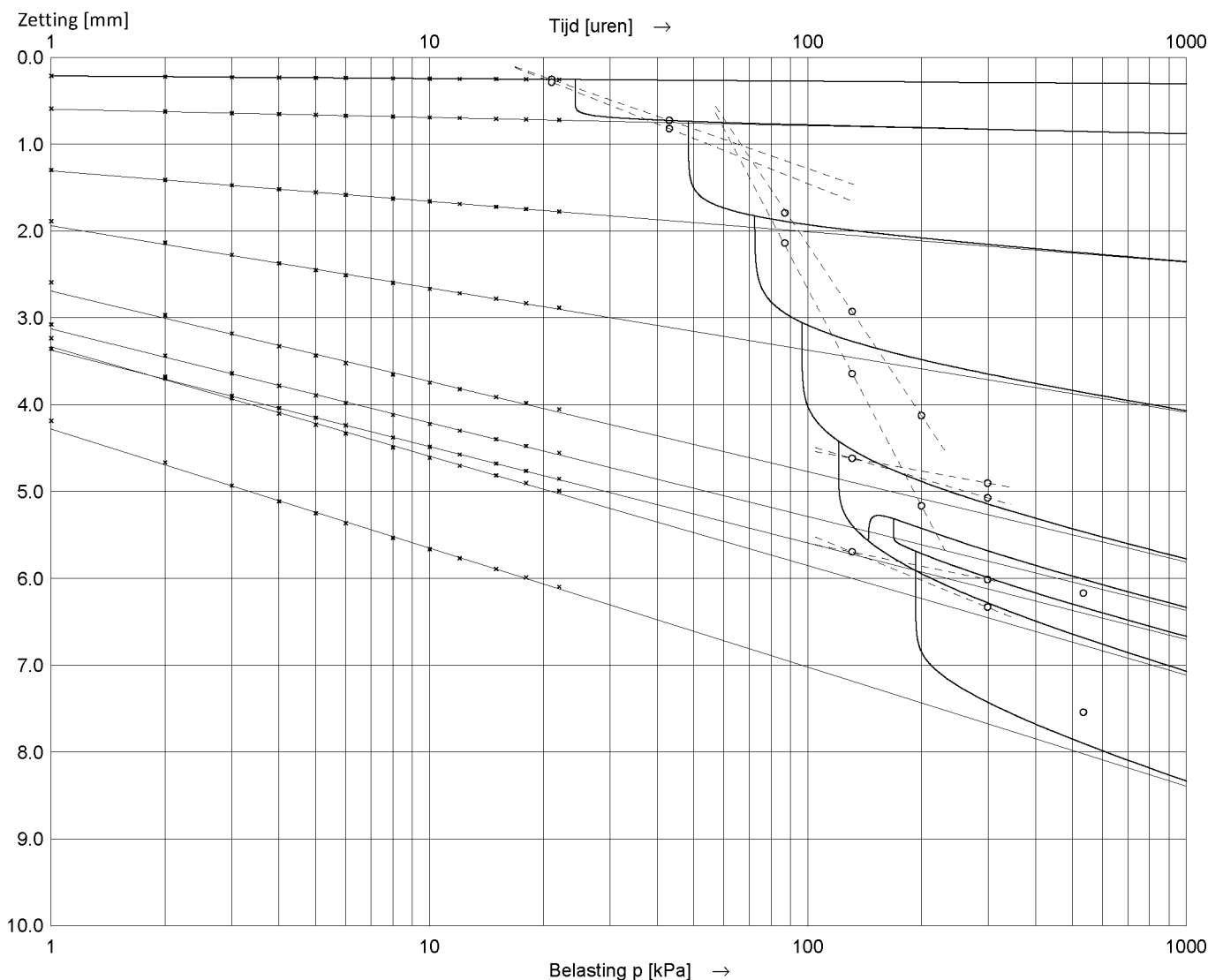
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 3 - 4	Trap 6 - 7	Trap 6, 9
$P_g = 64.4$	$C_r = 0.1703$	$C_c = 1.2352$	$C_{sw} = 0.1050$	$C_{\alpha} = 0.0189$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 63.9$	$C_p = 35.1$ $C_s = 243.4$ $C_{10^4} = 22.3$	$C_p' = 6.3$ $C_s' = 19.7$ $C_{10^4}' = 2.8$	$A_p = 37.6$ $A_s = 95.6$ $A_{10^4} = 14.6$	$C_{p(r)} = 59.2$ $C_{s(r)} = 648.0$ $C_{10^4(r)} = 43.4$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0310	b = 0.1978	c = --	

Boring : B01 Startdatum : 16-02-2019 Grondsoort: klei matig siltig, matig humeus
 Monster : 7 Einddatum : 25-02-2019 Diepte : 10.69 - 10.74 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.99 kN/m³
 Apparaat : 10 Zetting (24u) : 0.255 mm Droog vol. gewicht γ_{dr} : 7.02 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.745 mm Watergehalte W : 99 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	43.03	87	130.97	199.67	298.59	130.97	298.59	534.91
C _p	29.9	13.0	7.1	6.9	8.3	35.6	56.7	9.0	
C _s	217.8	54.1	22.0	25.7	35.8	89.7	516.9	44.1	
C _{10⁴}	19.3	6.6	3.1	3.3	4.3	13.8	39.4	5.0	

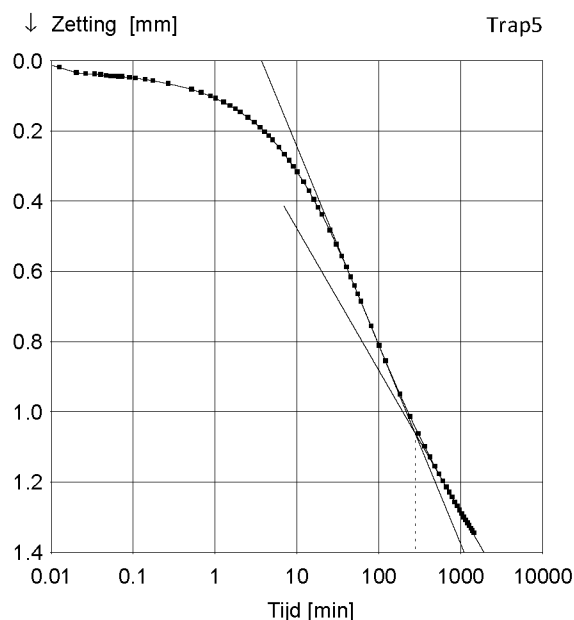
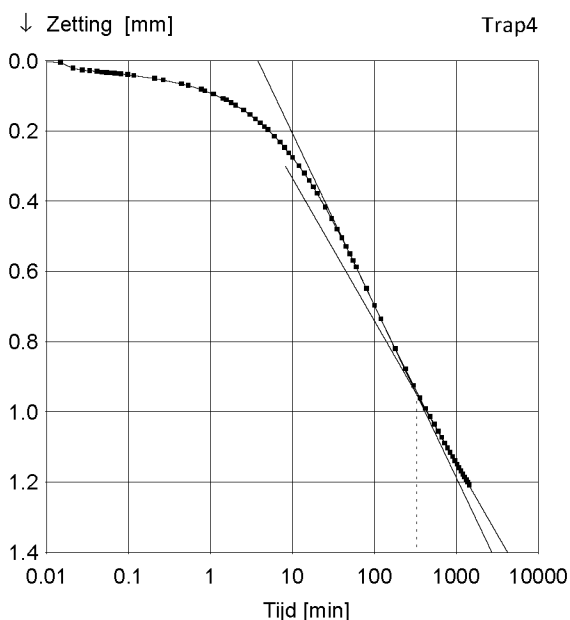
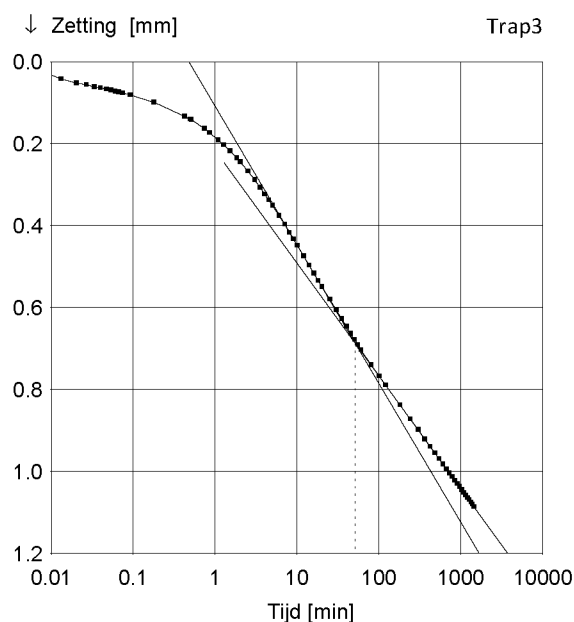
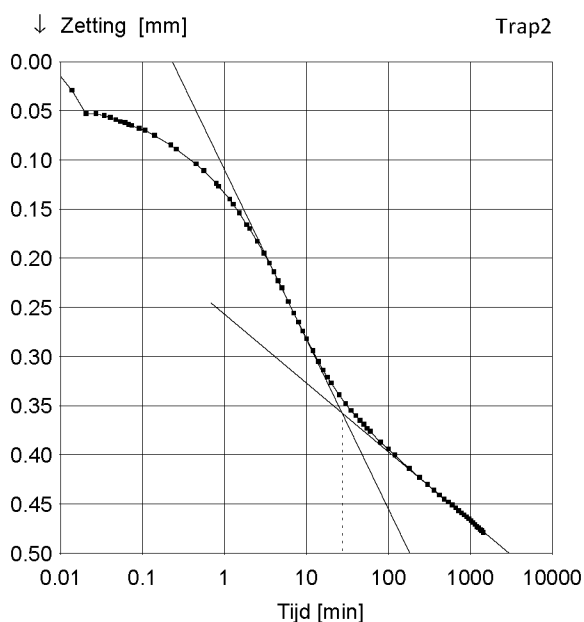
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
66 [kN/m ²]	C _p = 29.9	C _p ' = 6.9	C _p = 35.6	C _p = 56.7		
	C _s = 217.8	C _s ' = 25.7	C _s = 89.7	C _s = 516.9		
	C _{10⁴} = 19.3	C _{10⁴} ' = 3.3	C _{10⁴} = 13.8	C _{10⁴} = 39.4		



Asymptoot tijdinterval : 2 - 48 uur.

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	klei matig siltig, matig humeus
Monster	: 7	Einddatum	: 25-02-2019	Diepte	: 10.69 - 10.74 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.99 kN/m ³
Apparaat	: 10	Zetting (24u)	: 0.255 mm	Droog vol. gewicht γ_{dr}	: 7.02 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.745 mm	Watergehalte W	: 99 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	43.03	87	130.97	199.67	298.59	130.97	298.59	534.91
Δp [kN/m ²]	21.05	21.98	43.97	43.97	68.7	98.92	-167.62	167.62	236.32
c_v [10^{-8} m ² /s] (wortel-t)		13.54	5.55	0.90	0.79	0.69		6.82	0.98
m_v [1/MPa]		0.57	0.62	0.91	0.73	0.47		0.07	0.25
k_{10} [10^{-11} m/s]		75.09	33.58	8.02	5.62	3.16		4.68	2.42
c_v [10^{-8} m ² /s] (log-t)		7.28	3.97	0.55	0.53	0.48		6.63	0.65
C_α [10^{-3}]		3.544	14.29	22.30	23.78	21.85		4.917	19.81



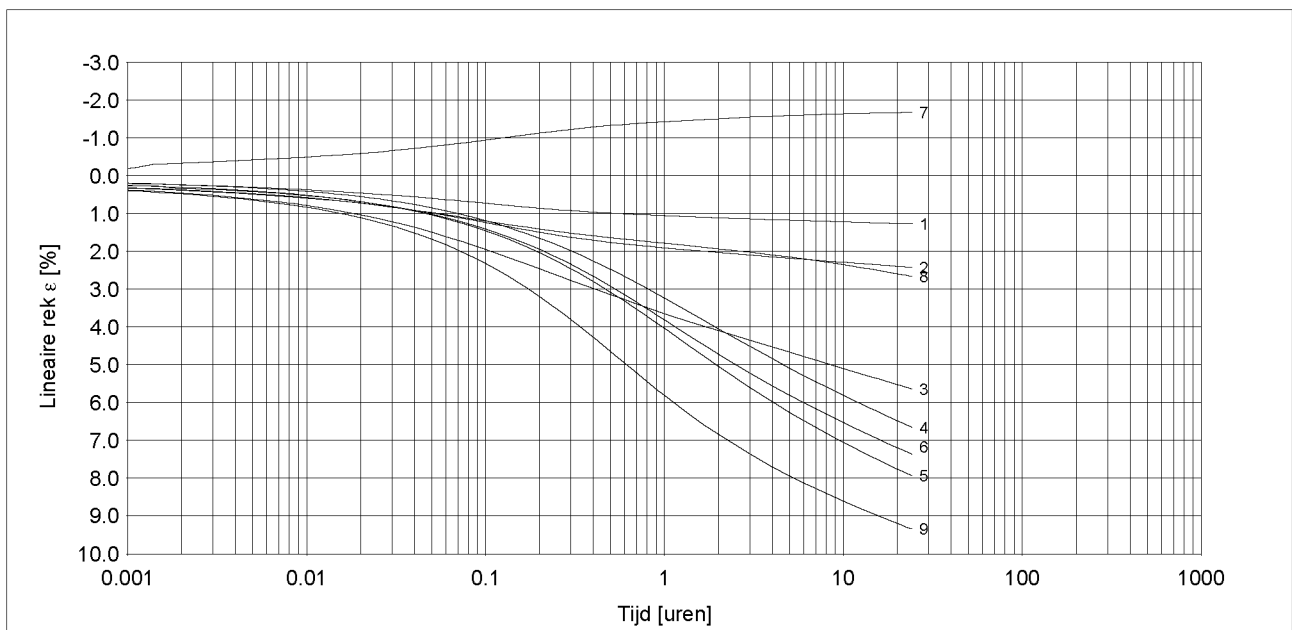
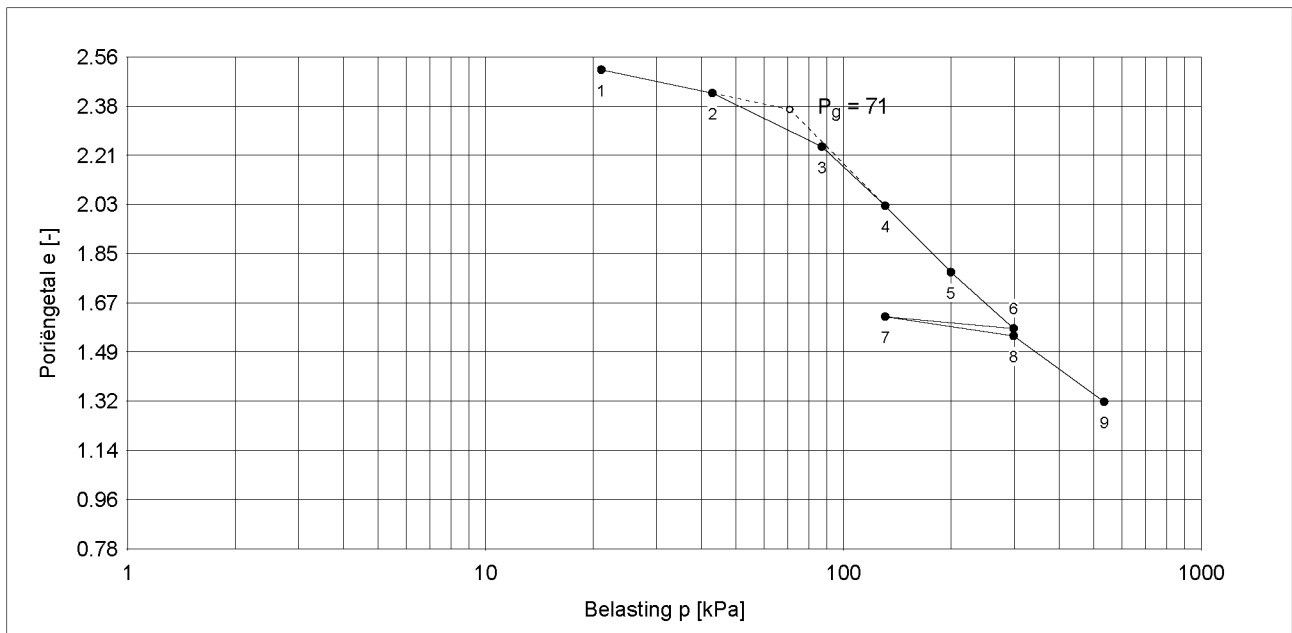
Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	klei matig siltig, matig humeus
Monster	: 7	Einddatum	: 25-02-2019	Diepte	: 10.69 - 10.74 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.99 kN/m ³
Apparaat	: 10	Zetting (24u)	: 0.255 mm	Droog vol. gewicht γ_{dr}	: 7.02 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.56	Watergehalte W	: 99 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	21.05	43.03	87	130.97	199.67	298.59	130.97	298.59	534.91
$C_{c/r/sw} = \Delta e / \Delta \log p$	0.275	0.633	1.212	1.308	1.172	0.121	0.195	0.941	
$C_{\alpha}^* = \Delta \varepsilon / \Delta \log t$		0.0035	0.0143	0.0223	0.0238	0.0218		0.0049	0.0198

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.195$	$C_c = 1.308$	$C_{sw} = 0.121$
Trap 7 - 8	Trap 4 - 5	Trap 6 - 7

$C_{\alpha} = 0.0230$
Trap 4 - 5



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B01	Startdatum	: 16-02-2019	Grondsoort:	klei matig siltig, matig humeus
Monster	: 7	Einddatum	: 25-02-2019	Diepte	: 10.69 - 10.74 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.99 kN/m ³
Apparaat	: 10	Zetting (24u)	: 0.255 mm	Droog vol. gewicht γ_{dr}	: 7.02 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.56	Watergehalte	W : 99 %

Bepaling parameters per trap

Belasting p [kPa]		21	43	87	131	200	299	131	299	535
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.2748	0.6328	1.2124	1.3084	1.1723	0.1210	0.1946	0.9414	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$		0.0035	0.0143	0.0223	0.0238	0.0218		0.0049	0.0198	
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		29.9	13.0	7.1	6.9	8.3	35.6	56.7	9.0	
C_s		217.8	54.1	22.0	25.7	35.8	89.7	516.9	44.1	
C_{10^4}		19.3	6.6	3.1	3.3	4.3	13.8	39.4	5.0	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)		13.54	5.55	0.90	0.79	0.69		6.82	0.98	
$m_v [1/MPa]$		0.57	0.62	0.91	0.73	0.47		0.07	0.25	
$k_{10} [10^{-11} m/s]$		75.09	33.58	8.02	5.62	3.16		4.68	2.42	
$c_v [10^{-8} m^2/s]$ (Casagrande)		7.28	3.97	0.55	0.53	0.48		6.63	0.65	
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0343	0.0824	0.1682	0.1958	0.1900	0.0202	0.0327	0.1681	
c							0.0099			0.0091

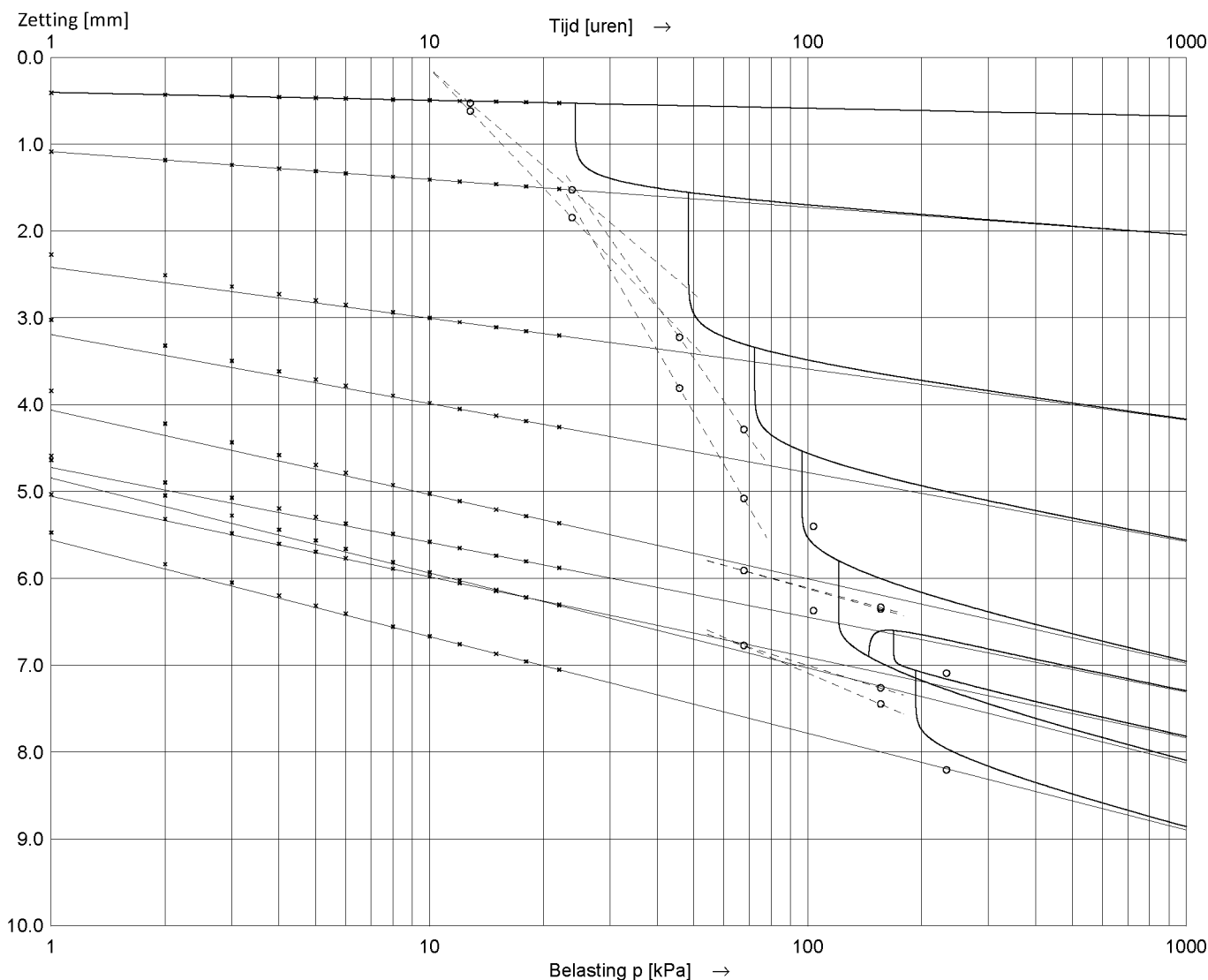
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 70.8$	$C_r = 0.1946$	$C_c = 1.3084$	$C_{sw} = 0.1210$	$C_{\alpha} = 0.0230$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 66.1$	$C_p = 29.9$ $C_s = 217.8$ $C_{10^4} = 19.3$	$C_p' = 6.9$ $C_s' = 25.7$ $C_{10^4}' = 3.3$	$A_p = 35.6$ $A_s = 89.7$ $A_{10^4} = 13.8$	$C_{p(r)} = 56.7$ $C_{s(r)} = 516.9$ $C_{10^4(r)} = 39.4$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0327	b = 0.1958	c = --	

Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei, matig siltig, sterk humeus
 Monster : 8 Einddatum : 25-02-2019 Diepte : 3.43 - 3.48 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 12.79 kN/m³
 Apparaat : 11 Zetting (24u) : 0.529 mm Droog vol. gewicht γ_{dr} : 5.94 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.471 mm Watergehalte W : 115 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
C _p	12.0	7.5	7.2	7.4	8.3	36.5	38.1	10.3	
C _s	52.4	47.8	36.3	46.4	64.4	69.6	249.1	42.0	
C _{10⁴}	6.3	4.6	4.0	4.5	5.5	11.8	23.6	5.2	

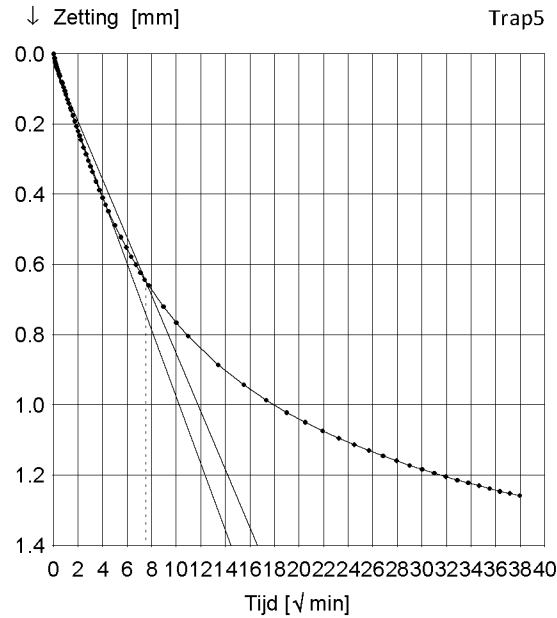
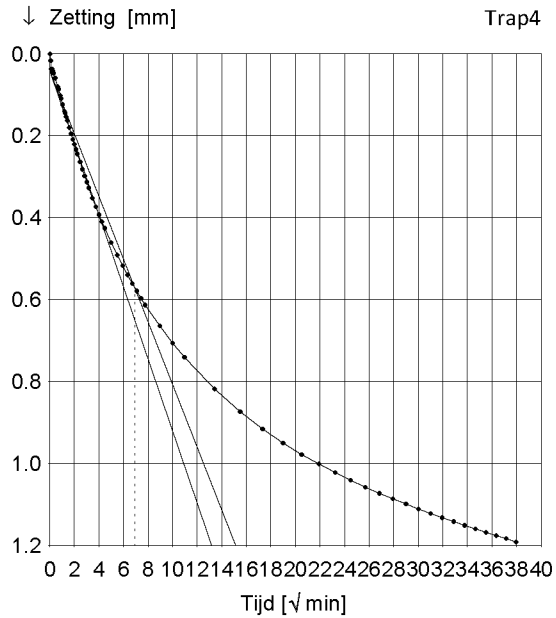
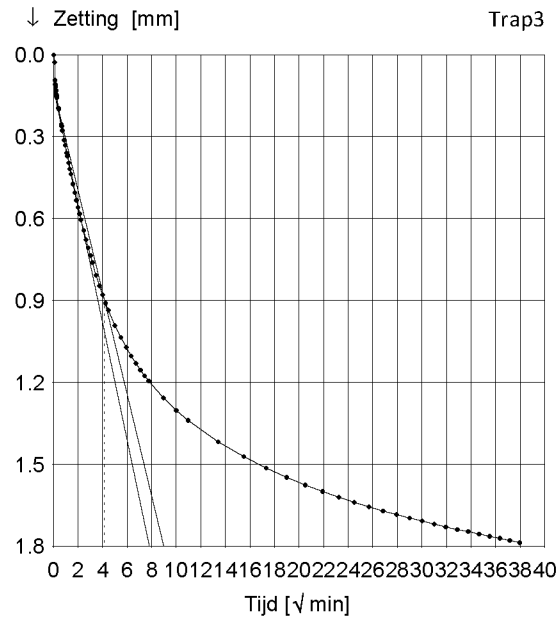
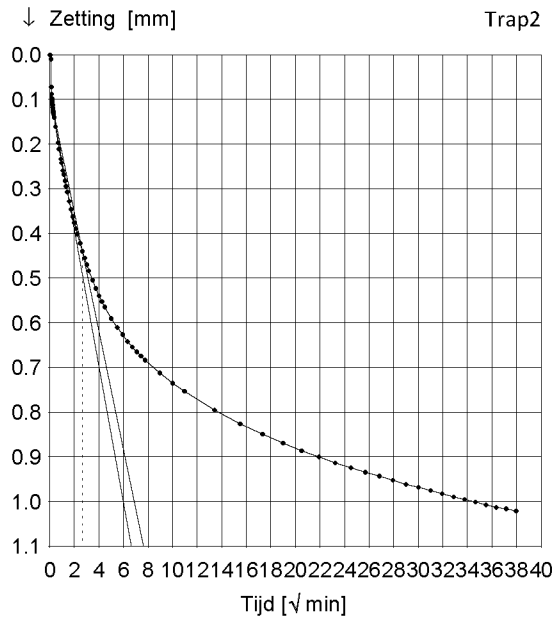
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
26 [kN/m ²]	C _p = 12.0	C _p ' = 7.2	C _p = 36.5	C _p = 38.1		
	C _s = 52.4	C _s ' = 36.3	C _s = 69.6	C _s = 249.1		
	C _{10⁴} = 6.3	C _{10⁴} ' = 4.0	C _{10⁴} = 11.8	C _{10⁴} = 23.6		



Asymptoot tijdinterval : 12 - 48 uur.

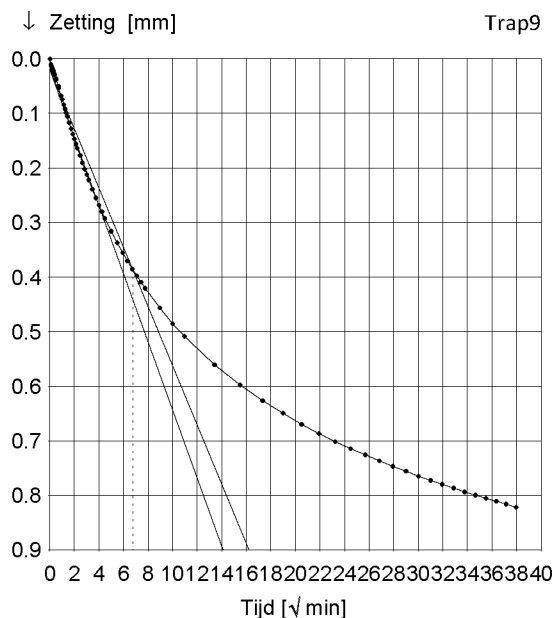
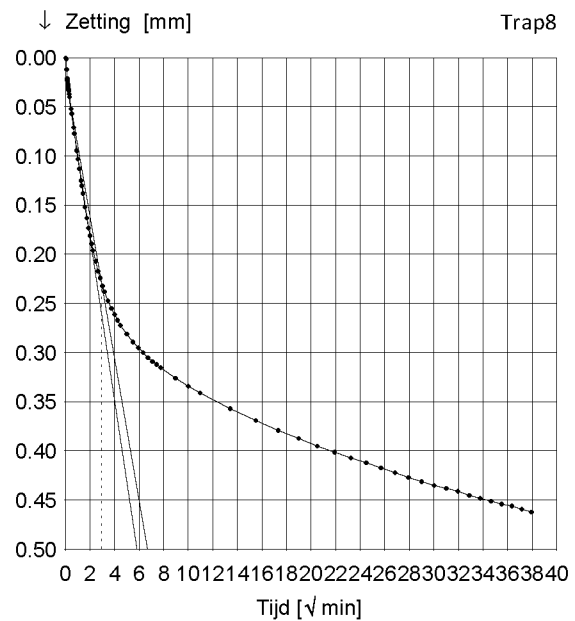
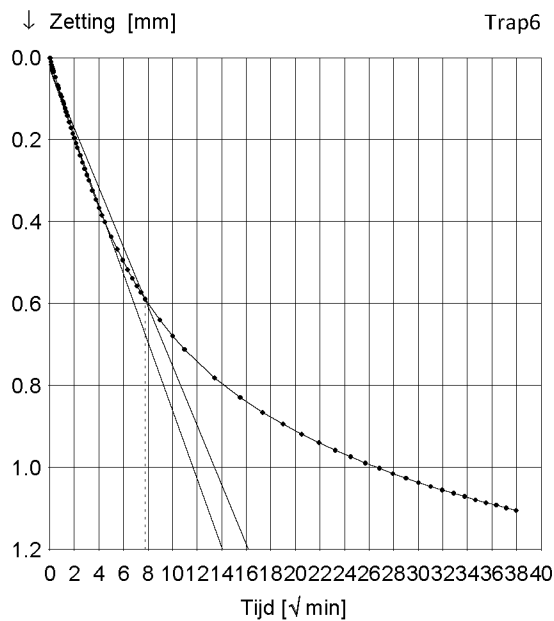
Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei, matig siltig, sterk humeus
 Monster : 8 Einddatum : 25-02-2019 Diepte : 3.43 - 3.48 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 12.79 kN/m³
 Apparaat : 11 Zetting (24u) : 0.529 mm Droog vol. gewicht γ_{dr} : 5.94 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.471 mm Watergehalte W : 115 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		13.89	4.87	1.46	1.05	0.83		5.46	0.93
m_v [1/MPa]		1.82	2.12	1.60	1.24	0.84		0.20	0.41
k_{10} [10^{-11} m/s]		248.15	101.05	22.87	12.78	6.85		10.60	3.71
c_v [10^{-8} m ² /s] (log-t)		12.10	2.21	0.47	0.46	0.49		5.91	0.27
C_α [10^{-3}]		12.71	21.12	23.56	25.10	24.54		6.592	21.93



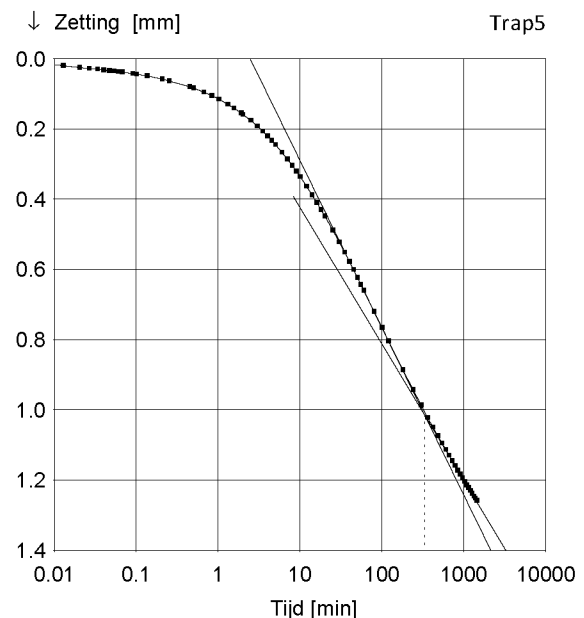
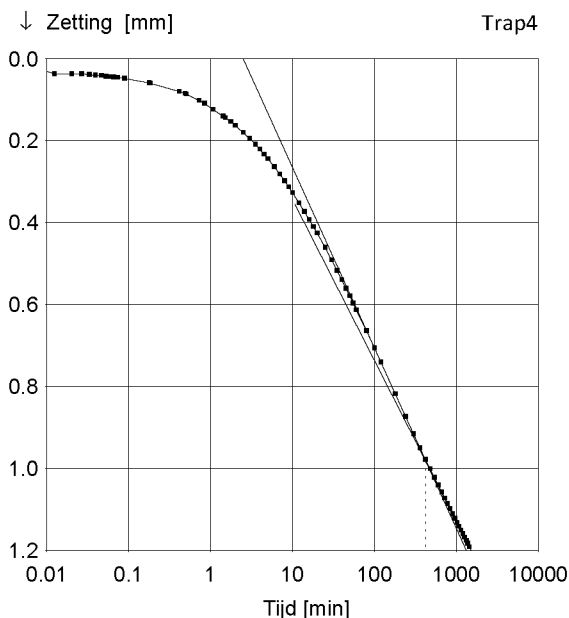
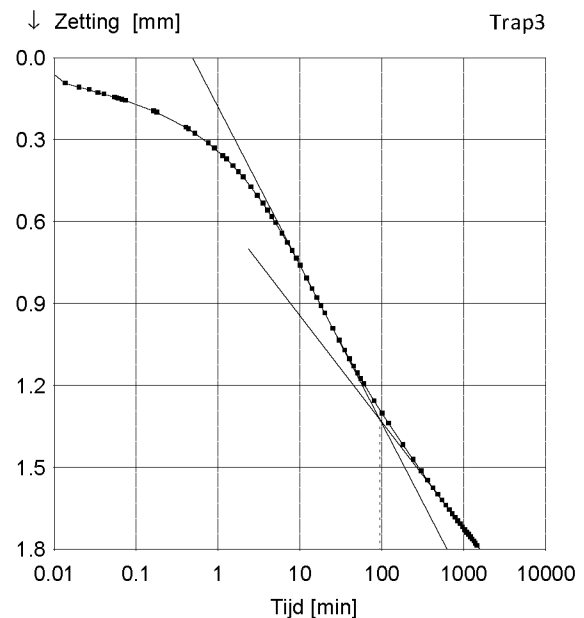
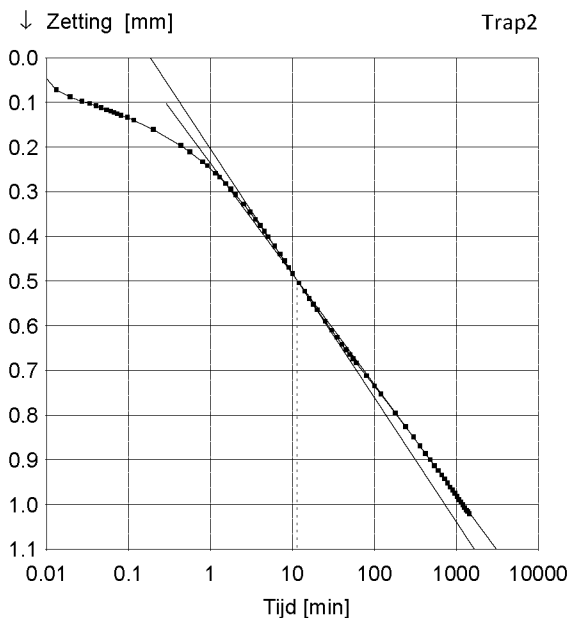
Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei, matig siltig, sterk humeus
 Monster : 8 Einddatum : 25-02-2019 Diepte : 3.43 - 3.48 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 12.79 kN/m³
 Apparaat : 11 Zetting (24u) : 0.529 mm Droog vol. gewicht γ_{dr} : 5.94 kN/m³
 Soort monster : Ongeroid h (24u) : 19.471 mm Watergehalte W : 115 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		13.89	4.87	1.46	1.05	0.83		5.46	0.93
m_v [1/MPa]		1.82	2.12	1.60	1.24	0.84		0.20	0.41
k_{10} [10^{-11} m/s]		248.15	101.05	22.87	12.78	6.85		10.60	3.71
c_v [10^{-8} m ² /s] (log-t)		12.10	2.21	0.47	0.46	0.49		5.91	0.27
C_α [10^{-3}]		12.71	21.12	23.56	25.10	24.54		6.592	21.93



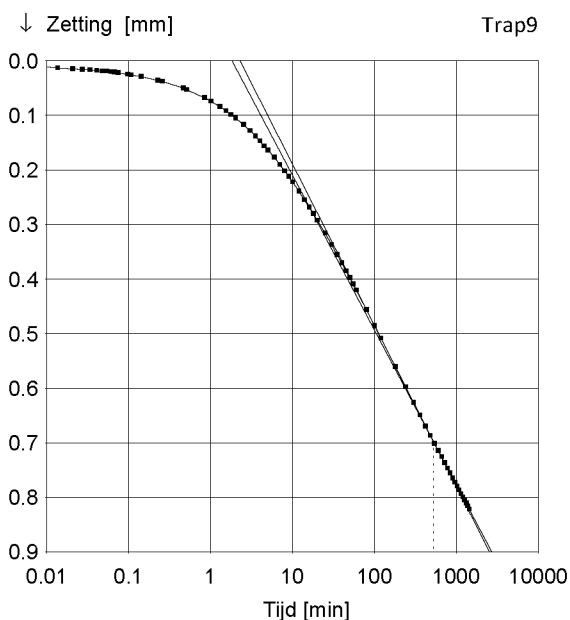
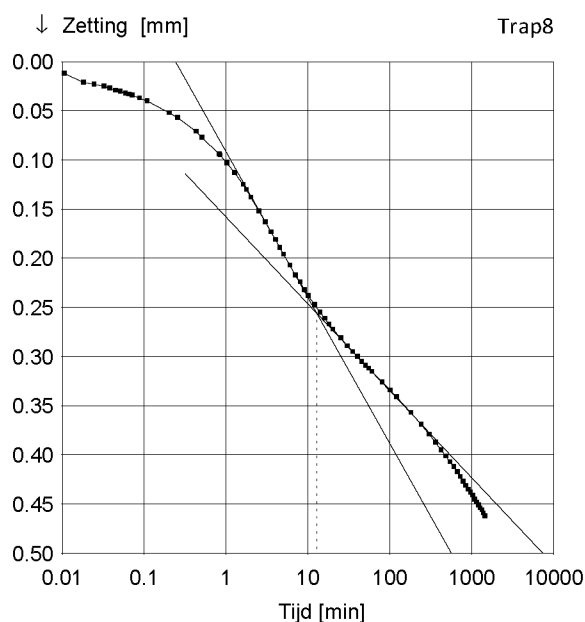
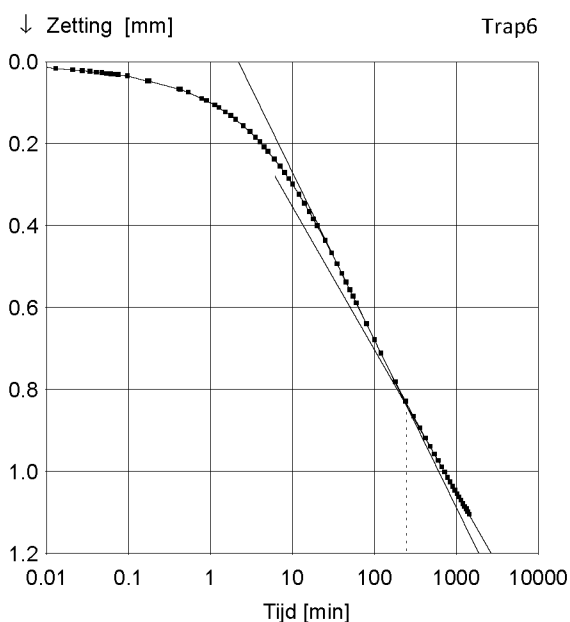
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 8	Einddatum	: 25-02-2019	Diepte	: 3.43 - 3.48 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.79 kN/m ³
Apparaat	: 11	Zetting (24u)	: 0.529 mm	Droog vol. gewicht γ_{dr}	: 5.94 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.471 mm	Watergehalte W	: 115 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		13.89	4.87	1.46	1.05	0.83		5.46	0.93
m_v [1/MPa]		1.82	2.12	1.60	1.24	0.84		0.20	0.41
k_{10} [10^{-11} m/s]		248.15	101.05	22.87	12.78	6.85		10.60	3.71
c_v [10^{-8} m ² /s] (log-t)		12.10	2.21	0.47	0.46	0.49		5.91	0.27
C_α [10^{-3}]		12.71	21.12	23.56	25.10	24.54		6.592	21.93



Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 8	Einddatum	: 25-02-2019	Diepte	: 3.43 - 3.48 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.79 kN/m ³
Apparaat	: 11	Zetting (24u)	: 0.529 mm	Droog vol. gewicht γ_{dr}	: 5.94 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.471 mm	Watergehalte W	: 115 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
Δp [kN/m ²]	12.81	10.99	21.98	21.98	35.72	52.21	-87.93	87.93	76.94
c_v [10^{-8} m ² /s] (wortel-t)		13.89	4.87	1.46	1.05	0.83		5.46	0.93
m_v [1/MPa]		1.82	2.12	1.60	1.24	0.84		0.20	0.41
k_{10} [10^{-11} m/s]		248.15	101.05	22.87	12.78	6.85		10.60	3.71
c_v [10^{-8} m ² /s] (log-t)		12.10	2.21	0.47	0.46	0.49		5.91	0.27
C_α [10^{-3}]		12.71	21.12	23.56	25.10	24.54		6.592	21.93



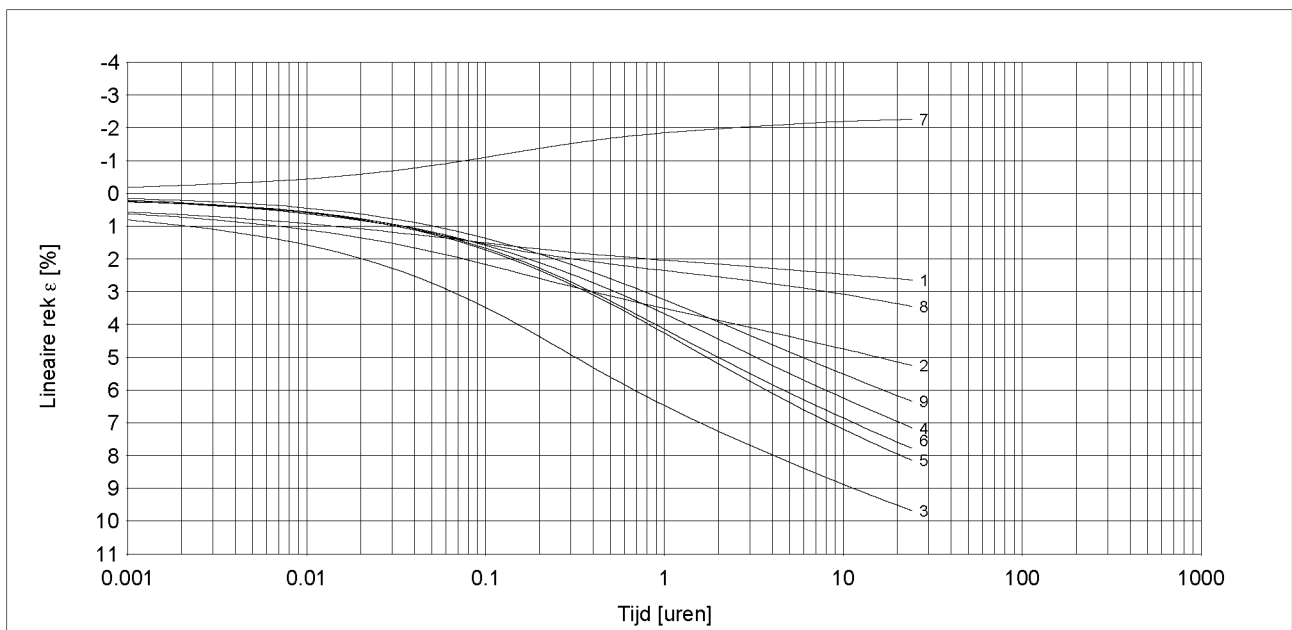
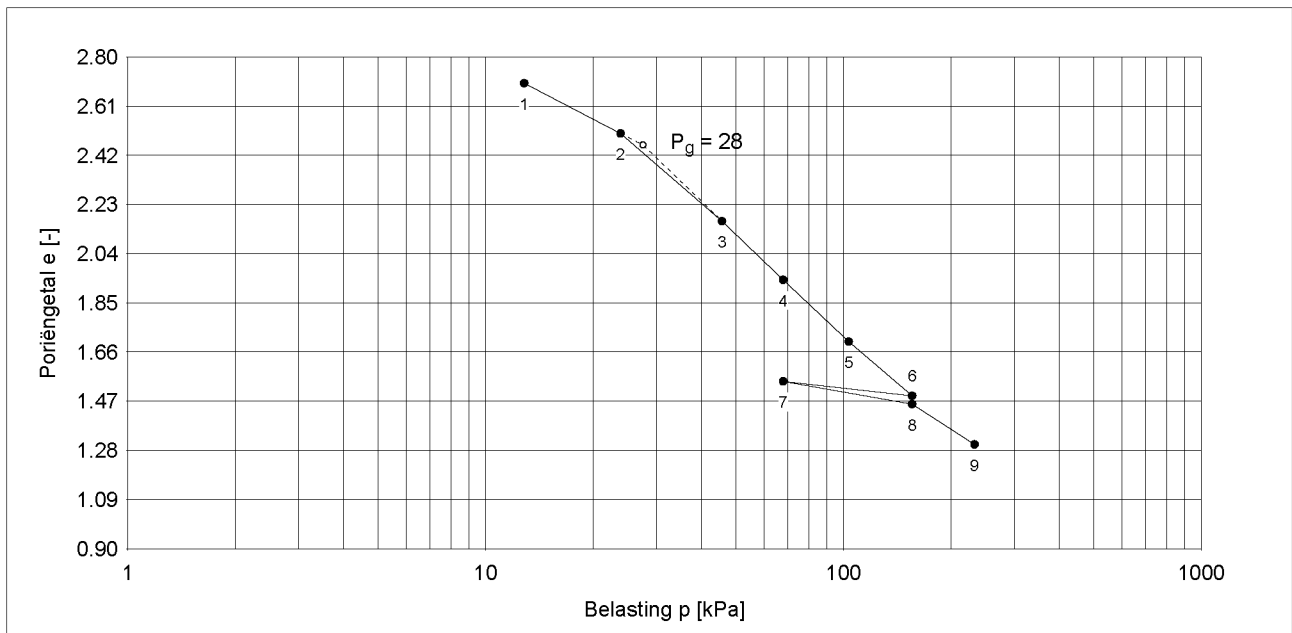
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 8	Einddatum	: 25-02-2019	Diepte	: 3.43 - 3.48 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.79 kN/m ³
Apparaat	: 11	Zetting (24u)	: 0.529 mm	Droog vol. gewicht γ_{dr}	: 5.94 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.80	Watergehalte	W : 115 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	12.81	23.8	45.78	67.76	103.48	155.69	67.76	155.69	232.63
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.721	1.194	1.329	1.299	1.183	0.156	0.243	0.894
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$			0.0127	0.0211	0.0236	0.0251	0.0245		0.0066

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.243$	$C_c = 1.329$	$C_{sw} = 0.156$
Trap 7 - 8	Trap 3 - 4	Trap 6 - 7

$C_{\alpha} = 0.0223$
Trap 3 - 4



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 8	Einddatum	: 25-02-2019	Diepte	: 3.43 - 3.48 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.79 kN/m ³
Apparaat	: 11	Zetting (24u)	: 0.529 mm	Droog vol. gewicht γ_{dr}	: 5.94 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.80	Watergehalte	W : 115 %

Bepaling parameters per trap

Belasting p [kPa]		13	24	46	68	103	156	68	156	233
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.7207	1.1938	1.3292	1.2991	1.1828	0.1561	0.2428	0.8939	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0127	0.0211	0.0236	0.0251	0.0245		0.0066	0.0219
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		12.0	7.5	7.2	7.4	8.3	36.5	38.1	10.3	
C_s		52.4	47.8	36.3	46.4	64.4	69.6	249.1	42.0	
C_{10^4}		6.3	4.6	4.0	4.5	5.5	11.8	23.6	5.2	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			13.89	4.87	1.46	1.05	0.83		5.46	0.93
$m_v [1/MPa]$			1.82	2.12	1.60	1.24	0.84		0.20	0.41
$k_{10} [10^{-11} m/s]$			248.15	101.05	22.87	12.78	6.85		10.60	3.71
$c_v [10^{-8} m^2/s]$ (Casagrande)			12.10	2.21	0.47	0.46	0.49		5.91	0.27
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0870	0.1556	0.1893	0.2003	0.1981	0.0269	0.0422	0.1632	
c							0.0111			0.0100

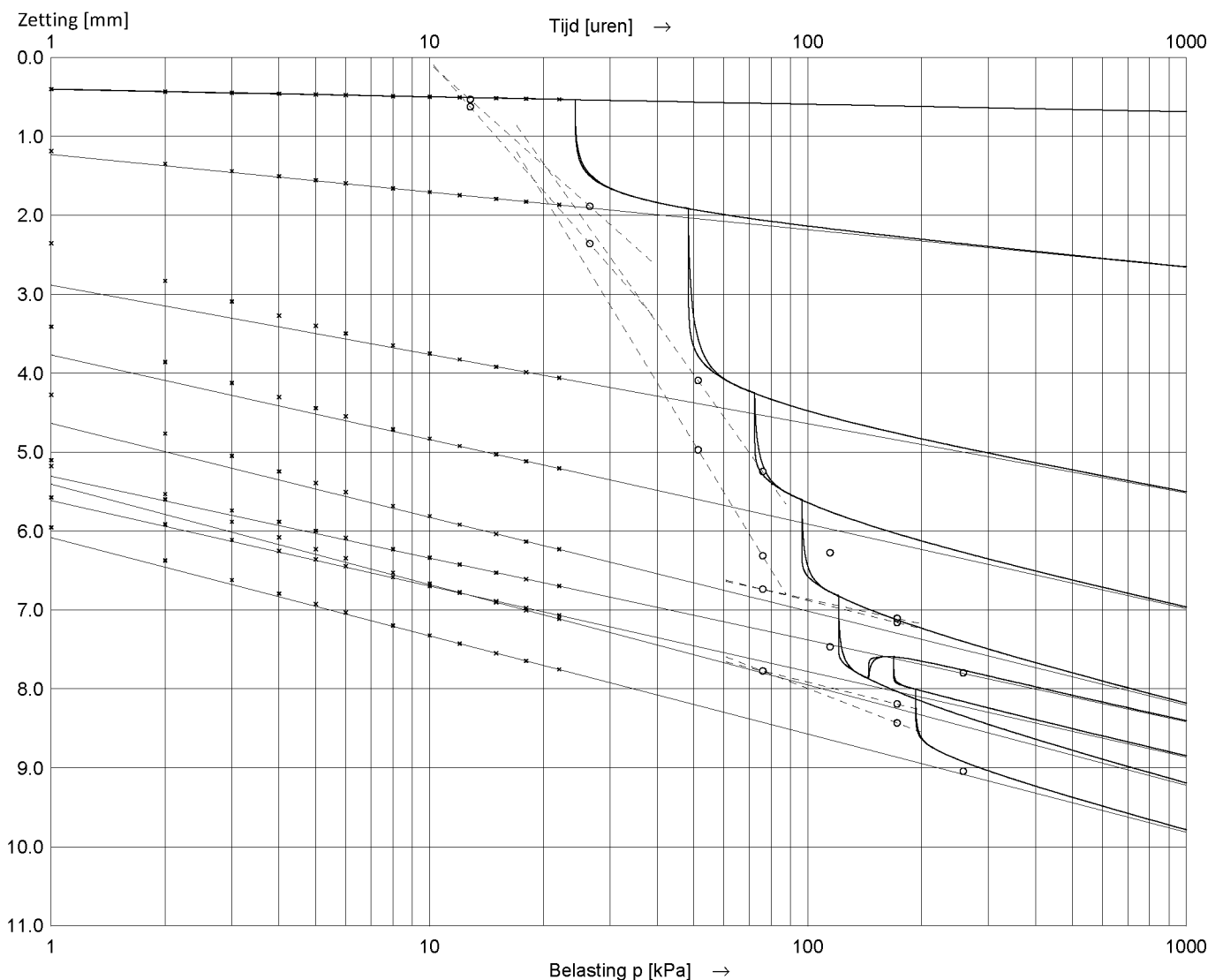
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 3 - 4	Trap 6 - 7	Trap 6, 9
$P_g = 27.5$	$C_r = 0.2428$	$C_c = 1.3292$	$C_{sw} = 0.1561$	$C_{\alpha} = 0.0223$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 26.2$	$C_p = 12.0$ $C_s = 52.4$ $C_{10^4} = 6.3$	$C_p' = 7.2$ $C_s' = 36.3$ $C_{10^4}' = 4.0$	$A_p = 36.5$ $A_s = 69.6$ $A_{10^4} = 11.8$	$C_{p(r)} = 38.1$ $C_{s(r)} = 249.1$ $C_{10^4(r)} = 23.6$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0422	b = 0.2003	c = --	

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 9	Einddatum	: 25-02-2019	Diepte	: 4.63 - 4.68 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.74 kN/m ³
Apparaat	: 12	Zetting (24u)	: 0.535 mm	Droog vol. gewicht γ_{dr}	: 5.47 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.465 mm	Watergehalte W	: 133 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	26.55	51.28	76.01	114.48	172.19	76.01	172.19	257.38
C _p	10.4	5.8	6.6	7.7	9.0	37.5	42.8	11.3	
C _s	37.1	31.8	39.4	66.5	97.1	67.4	338.6	48.5	
C _{10⁴}	4.9	3.3	4.0	5.3	6.5	11.6	28.4	5.8	

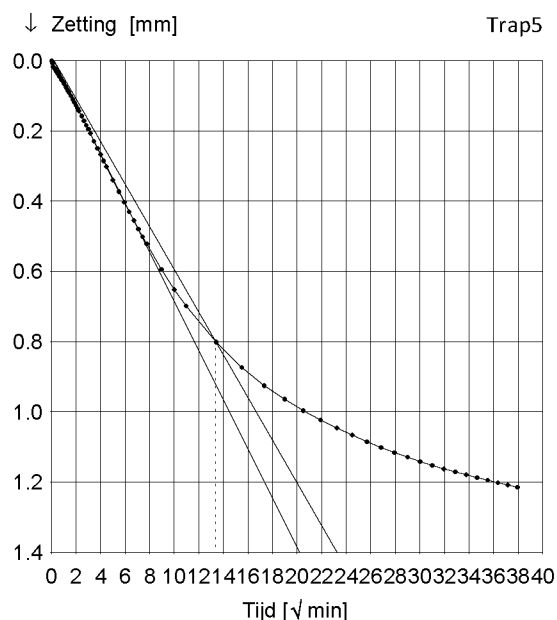
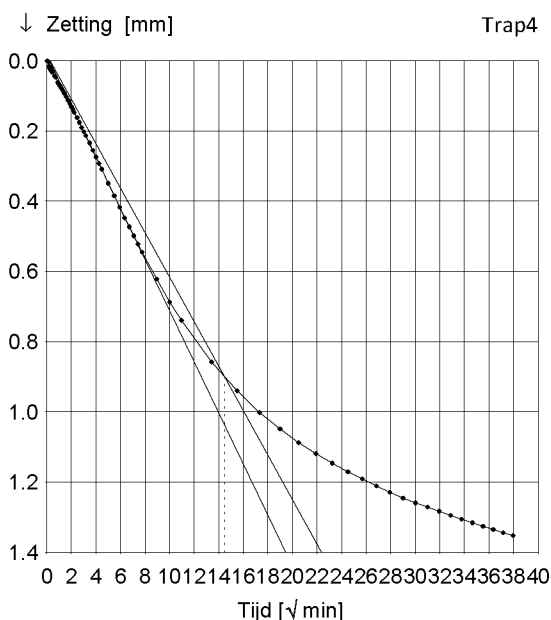
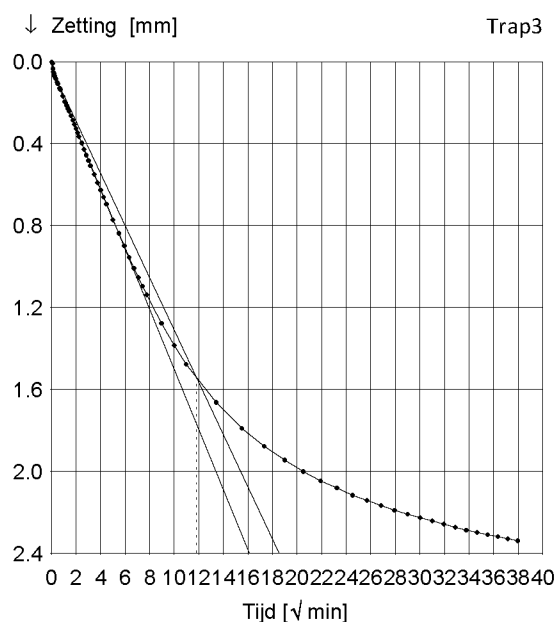
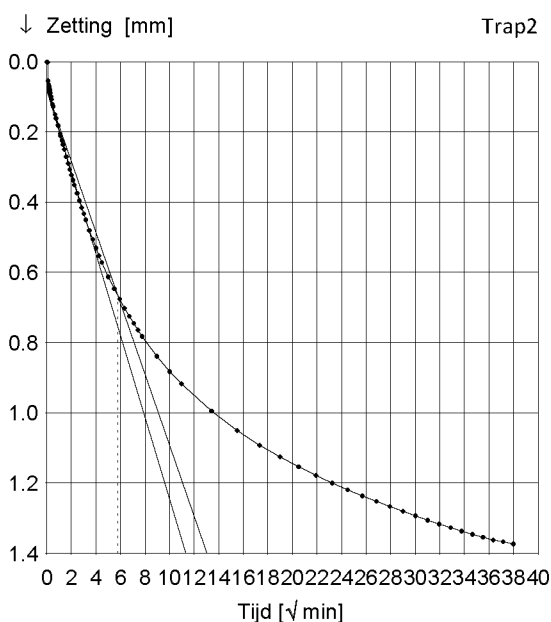
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
20 [kN/m ²]	C _p = 10.4	C _p ' = 6.6	C _p = 37.5	C _p = 42.8		
	C _s = 37.1	C _s ' = 39.4	C _s = 67.4	C _s = 338.6		
	C _{10⁴} = 4.9	C _{10⁴} ' = 4.0	C _{10⁴} = 11.6	C _{10⁴} = 28.4		



Asymptoot tijdinterval : 12 - 48 uur.

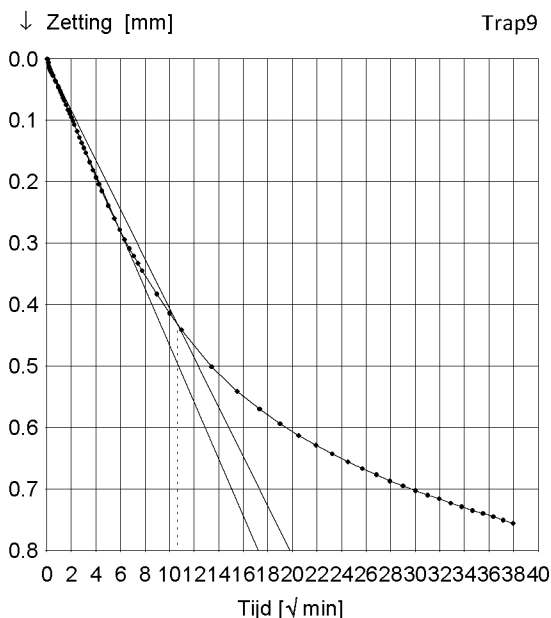
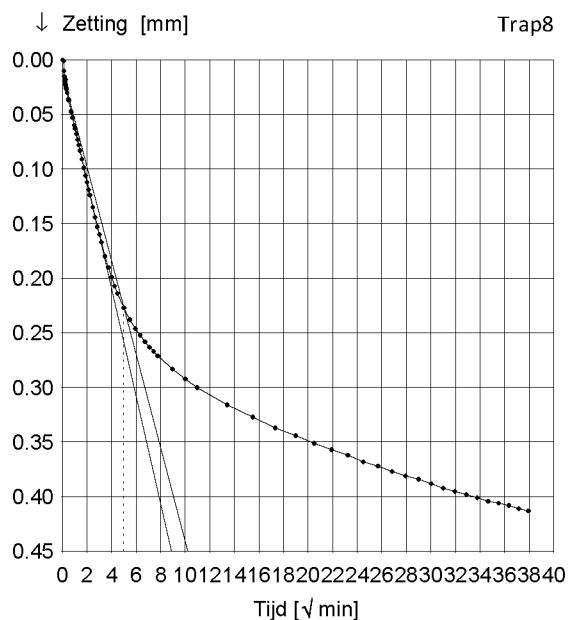
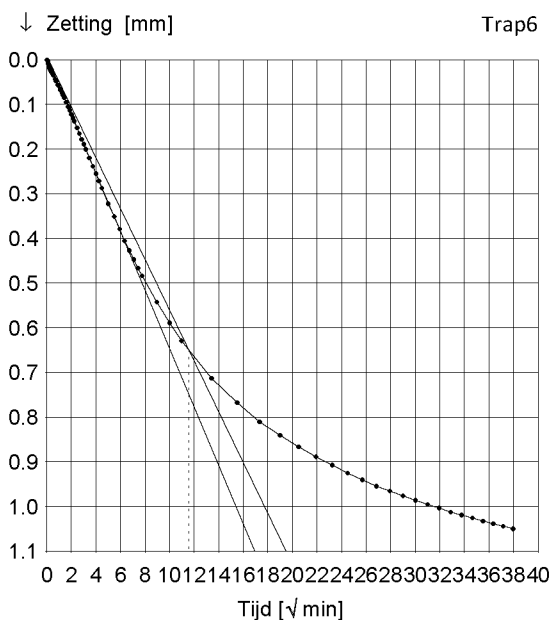
Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 9 Einddatum : 25-02-2019 Diepte : 4.63 - 4.68 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 12.74 kN/m³
 Apparaat : 12 Zetting (24u) : 0.535 mm Droog vol. gewicht γ_{dr} : 5.47 kN/m³
 Soort monster : Ongeroiderd h (24u) : 19.465 mm Watergehalte W : 133 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	26.55	51.28	76.01	114.48	172.19	76.01	172.19	257.38
Δp [kN/m ²]	12.81	13.74	24.73	24.73	38.47	57.71	-96.18	96.18	85.19
c_v [10^{-8} m ² /s] (wortel-t)		2.87	0.53	0.28	0.28	0.31		1.60	0.32
m_v [1/MPa]		2.42	3.74	2.61	1.63	0.96		0.20	0.46
k_{10} [10^{-11} m/s]		68.00	19.32	7.21	4.42	2.96		3.12	1.45
c_v [10^{-8} m ² /s] (log-t)		1.36	0.42	0.25	0.24	0.24		1.87	0.21
C_α [10^{-3}]		21.59	33.44	30.66	27.73	25.32		8.000	22.02



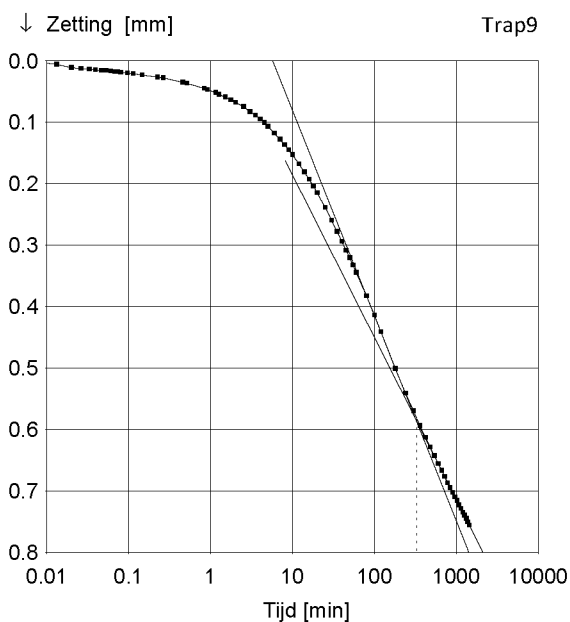
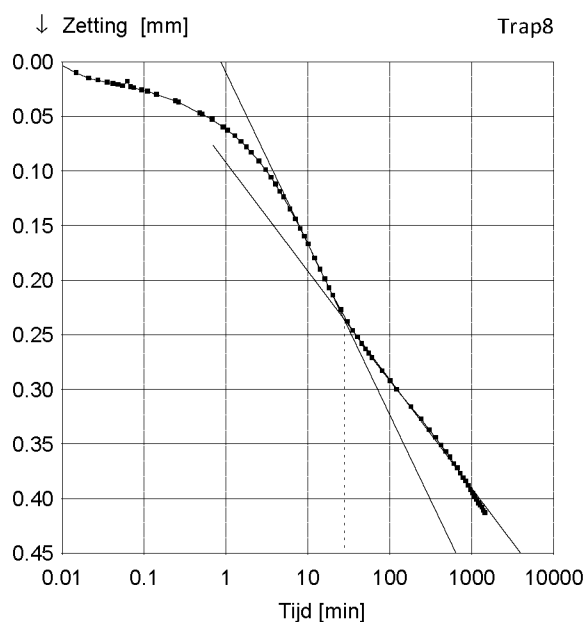
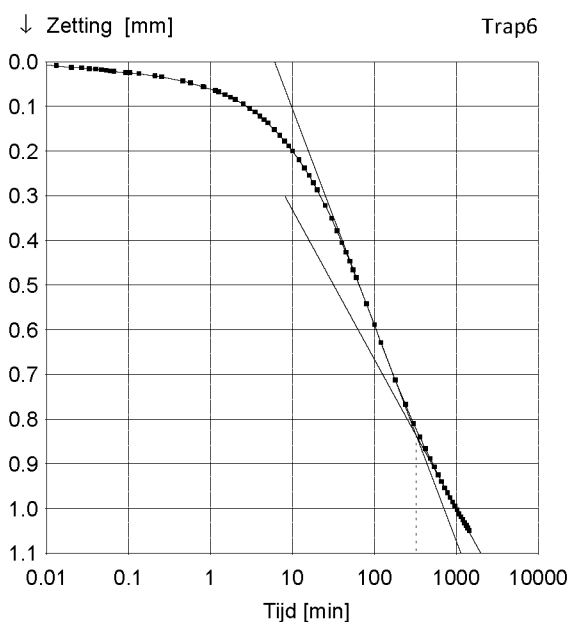
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 9	Einddatum	: 25-02-2019	Diepte	: 4.63 - 4.68 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.74 kN/m ³
Apparaat	: 12	Zetting (24u)	: 0.535 mm	Droog vol. gewicht γ_{dr}	: 5.47 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.465 mm	Watergehalte W	: 133 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	26.55	51.28	76.01	114.48	172.19	76.01	172.19	257.38
Δp [kN/m ²]	12.81	13.74	24.73	24.73	38.47	57.71	-96.18	96.18	85.19
c_v [10^{-8} m ² /s] (wortel-t)		2.87	0.53	0.28	0.28	0.31		1.60	0.32
m_v [1/MPa]		2.42	3.74	2.61	1.63	0.96		0.20	0.46
k_{10} [10^{-11} m/s]		68.00	19.32	7.21	4.42	2.96		3.12	1.45
c_v [10^{-8} m ² /s] (log-t)		1.36	0.42	0.25	0.24	0.24		1.87	0.21
C_α [10^{-3}]		21.59	33.44	30.66	27.73	25.32		8.000	22.02



Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 9	Einddatum	: 25-02-2019	Diepte	: 4.63 - 4.68 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.74 kN/m ³
Apparaat	: 12	Zetting (24u)	: 0.535 mm	Droog vol. gewicht γ_{dr}	: 5.47 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.465 mm	Watergehalte	W : 133 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	26.55	51.28	76.01	114.48	172.19	76.01	172.19	257.38
Δp [kN/m ²]	12.81	13.74	24.73	24.73	38.47	57.71	-96.18	96.18	85.19
c_v [10^{-8} m ² /s] (wortel-t)		2.87	0.53	0.28	0.28	0.31		1.60	0.32
m_v [1/MPa]		2.42	3.74	2.61	1.63	0.96		0.20	0.46
k_{10} [10^{-11} m/s]		68.00	19.32	7.21	4.42	2.96		3.12	1.45
c_v [10^{-8} m ² /s] (log-t)		1.36	0.42	0.25	0.24	0.24		1.87	0.21
C_α [10^{-3}]		21.59	33.44	30.66	27.73	25.32		8.000	22.02



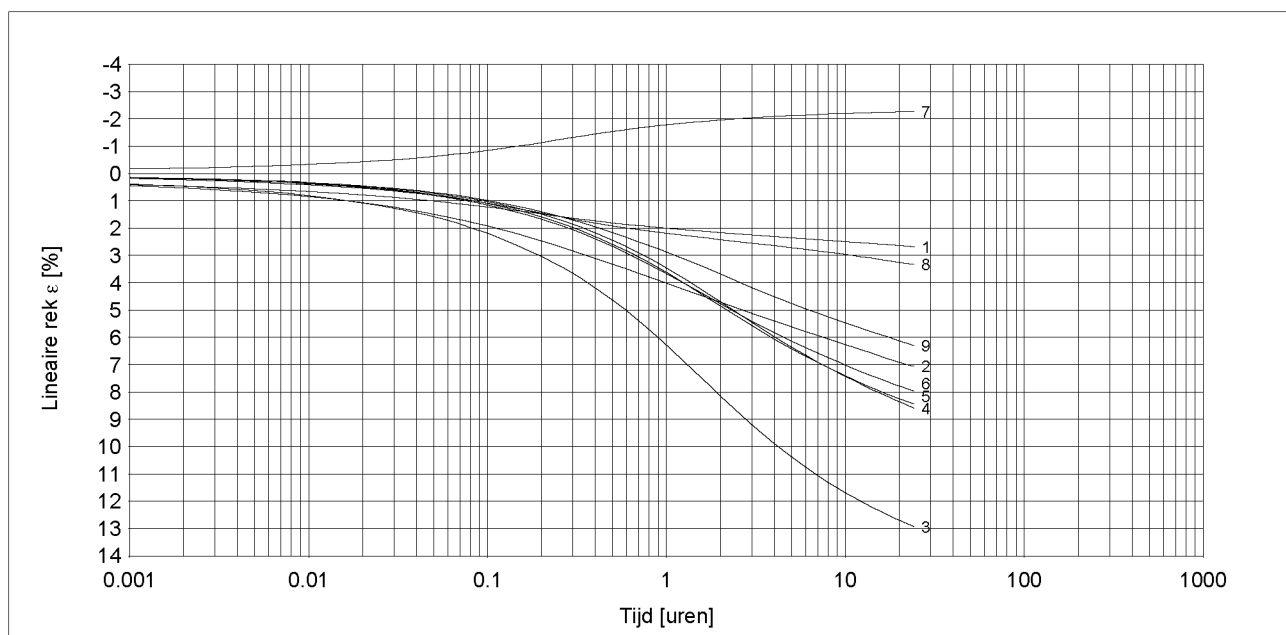
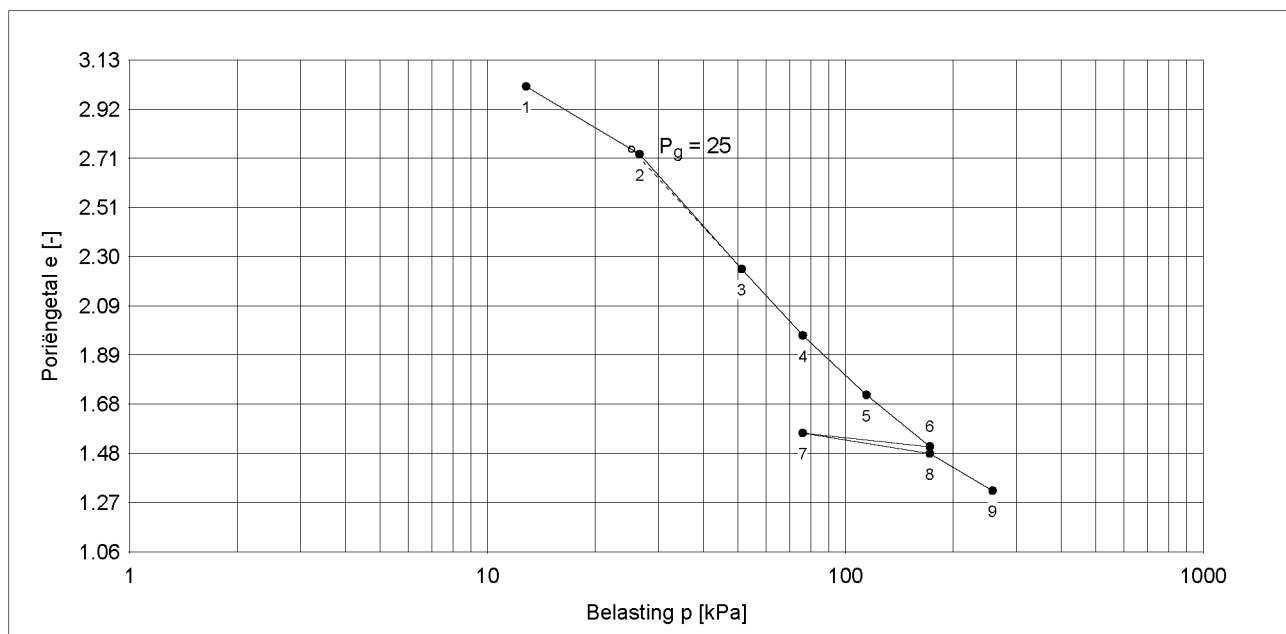
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 9	Einddatum	: 25-02-2019	Diepte	: 4.63 - 4.68 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.74 kN/m ³
Apparaat	: 12	Zetting (24u)	: 0.535 mm	Droog vol. gewicht γ_{dr}	: 5.47 kN/m ³
Soort monster	: Ongeroerd	e_0	: 3.13	Watergehalte W	: 133 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	12.81	26.55	51.28	76.01	114.48	172.19	76.01	172.19	257.38
$C_{c/r/sw} = \Delta e / \Delta \log p$	0.895	1.688	1.632	1.408	1.221	0.160	0.240	0.894	
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$		0.0216	0.0334	0.0307	0.0277	0.0253		0.0080	0.0220

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.240$	$C_c = 1.688$	$C_{sw} = 0.160$
Trap 7 - 8	Trap 2 - 3	Trap 6 - 7

$C_{\alpha} = 0.0320$
Trap 3 - 4



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 9	Einddatum	: 25-02-2019	Diepte	: 4.63 - 4.68 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.74 kN/m ³
Apparaat	: 12	Zetting (24u)	: 0.535 mm	Droog vol. gewicht γ_{dr}	: 5.47 kN/m ³
Soort monster	: Ongeroid	e_0	: 3.13	Watergehalte	W : 133 %

Bepaling parameters per trap

Belasting p [kPa]		13	27	51	76	114	172	76	172	257
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.8950	1.6881	1.6320	1.4083	1.2209	0.1603	0.2399	0.8935	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0216	0.0334	0.0307	0.0277	0.0253		0.0080	0.0220
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		10.4	5.8	6.6	7.7	9.0	37.5	42.8	11.3	
C_s		37.1	31.8	39.4	66.5	97.1	67.4	338.6	48.5	
C_{10^4}		4.9	3.3	4.0	5.3	6.5	11.6	28.4	5.8	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			2.87	0.53	0.28	0.28	0.31		1.60	0.32
$m_v [1/MPa]$			2.42	3.74	2.61	1.63	0.96		0.20	0.46
$k_{10} [10^{-11} m/s]$			68.00	19.32	7.21	4.42	2.96		3.12	1.45
$c_v [10^{-8} m^2/s]$ (Casagrande)			1.36	0.42	0.25	0.24	0.24		1.87	0.21
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.1004	0.2103	0.2280	0.2151	0.2031	0.0275	0.0414	0.1619	
c							0.0111			0.0100

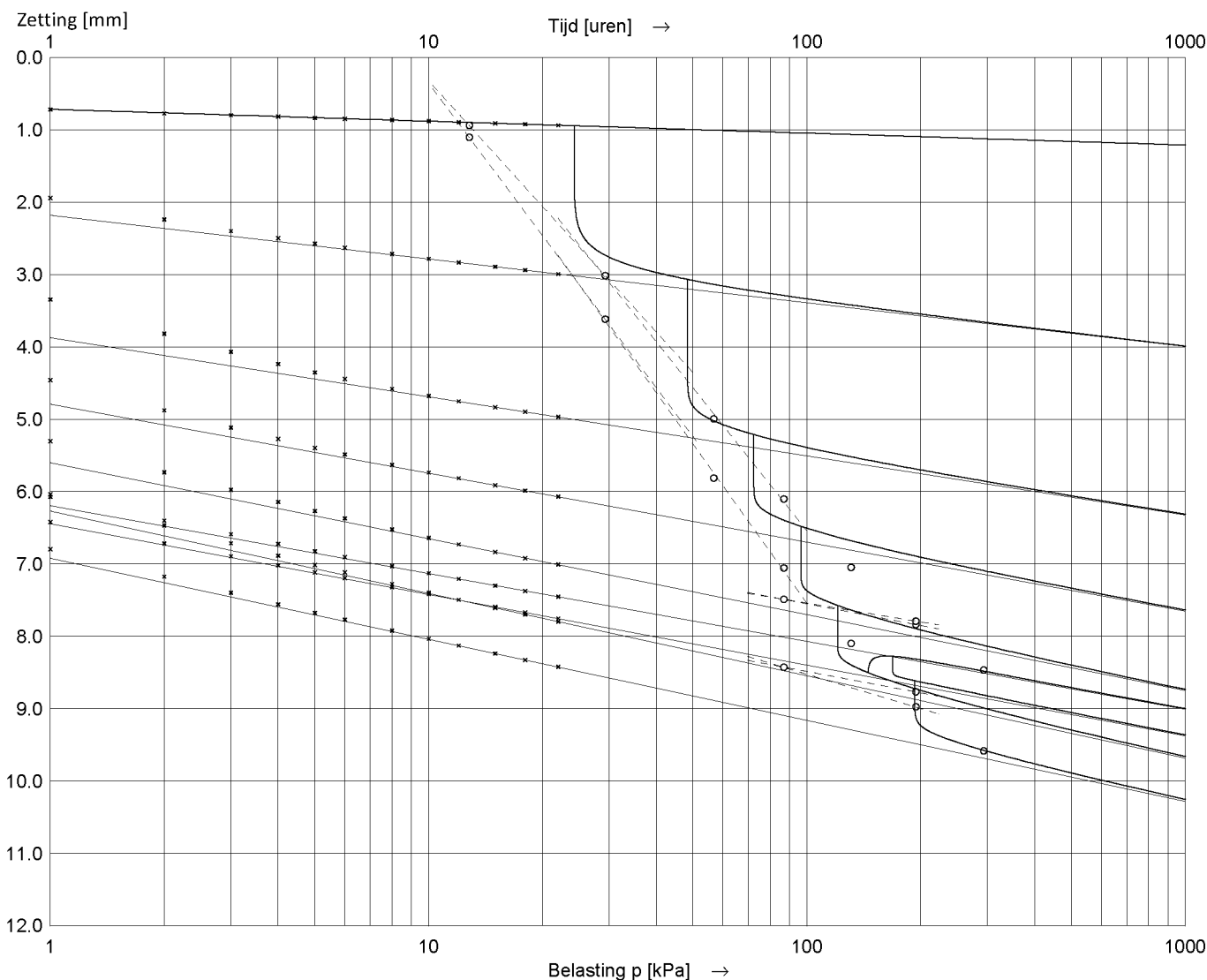
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 2 - 3	Trap 6 - 7	Trap 6, 9
$P_g = 25.3$	$C_r = 0.2399$	$C_c = 1.6881$	$C_{sw} = 0.1603$	$C_{\alpha} = 0.0320$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 19.6$	$C_p = 10.4$ $C_s = 37.1$ $C_{10^4} = 4.9$	$C_p' = 6.6$ $C_s' = 39.4$ $C_{10^4}' = 4.0$	$A_p = 37.5$ $A_s = 67.4$ $A_{10^4} = 11.6$	$C_{p(r)} = 42.8$ $C_{s(r)} = 338.6$ $C_{10^4(r)} = 28.4$
Isotachen	Trap 7 - 8	Trap 3 - 4	Trap 4	
$P_g = --$	a = 0.0414	b = 0.2280	c = --	

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 10	Einddatum	: 25-02-2019	Diepte	: 5.83 - 5.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.84 kN/m ³
Apparaat	: 13	Zetting (24u)	: 0.943 mm	Droog vol. gewicht γ_{dr}	: 5.87 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.057 mm	Watergehalte W	: 119 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	29.3	56.78	87.01	130.98	194.18	87.01	194.18	293.1
C _p	7.6	6.3	7.3	8.2	9.5	43.7	50.6	11.6	
C _s	35.7	59.0	59.1	79.7	84.9	75.7	387.7	54.8	
C _{10⁴}	4.1	4.4	4.9	5.8	6.5	13.2	33.3	6.3	

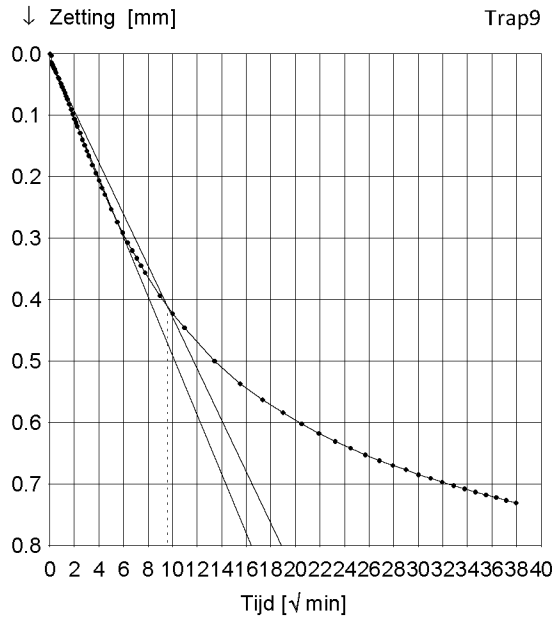
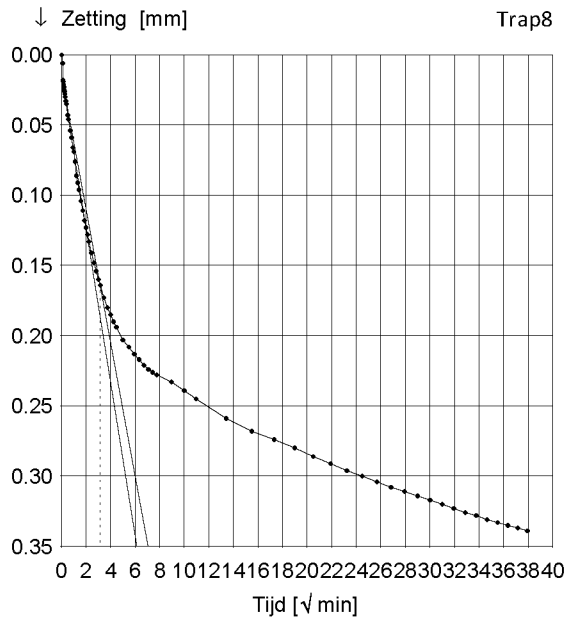
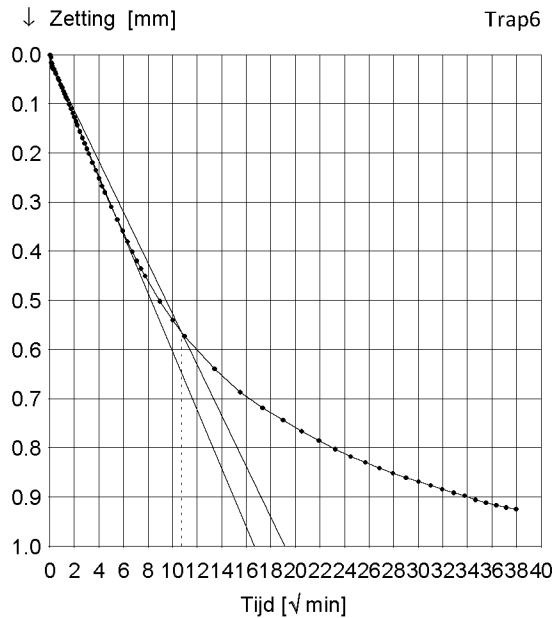
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
26 [kN/m ²]	C _p = 7.6	C _p ' = 6.7	C _p = 43.7	C _p = 50.6		
	C _s = 35.7	C _s ' = 59.0	C _s = 75.7	C _s = 387.7		
	C _{10⁴} = 4.1	C _{10⁴} ' = 4.6	C _{10⁴} = 13.2	C _{10⁴} = 33.3		



Asymptoot tijdinterval : 12 - 48 uur.

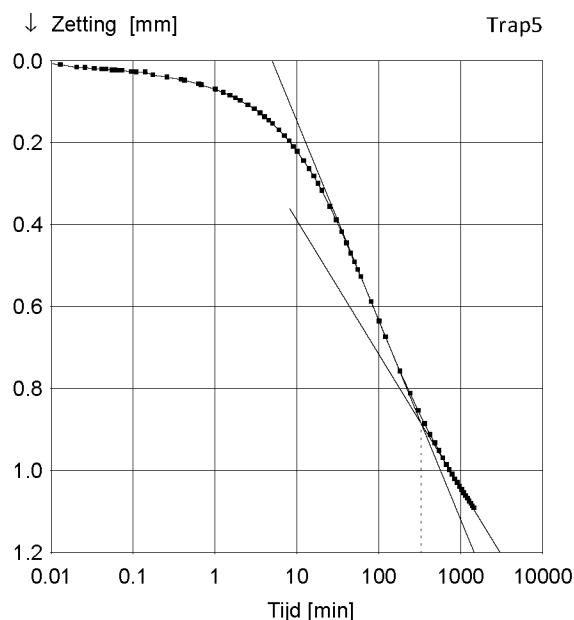
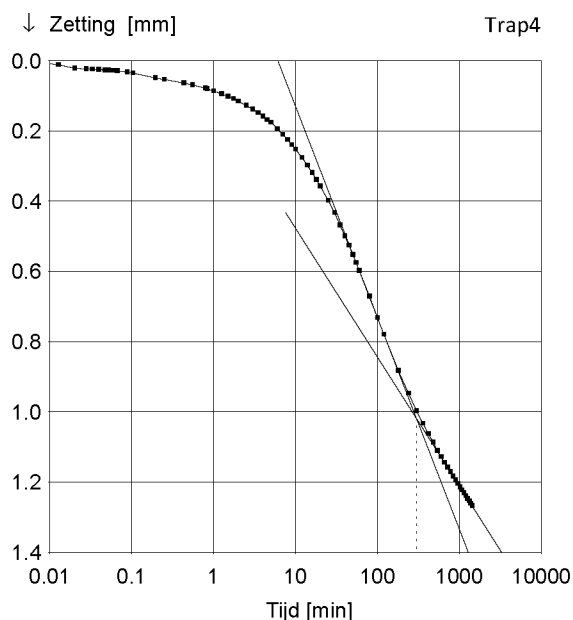
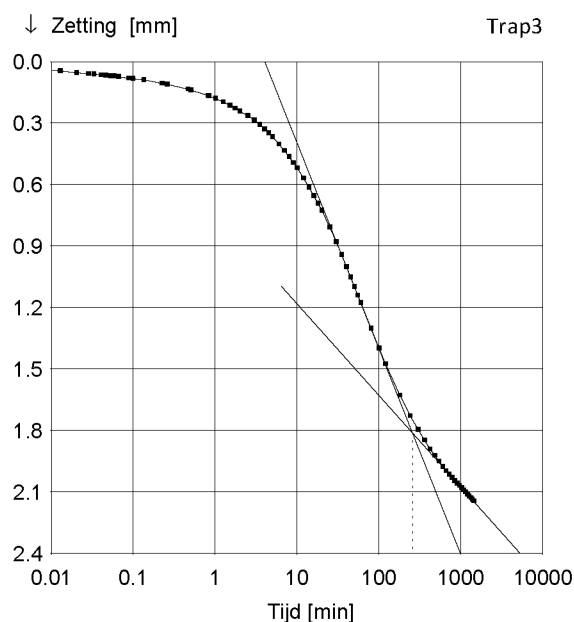
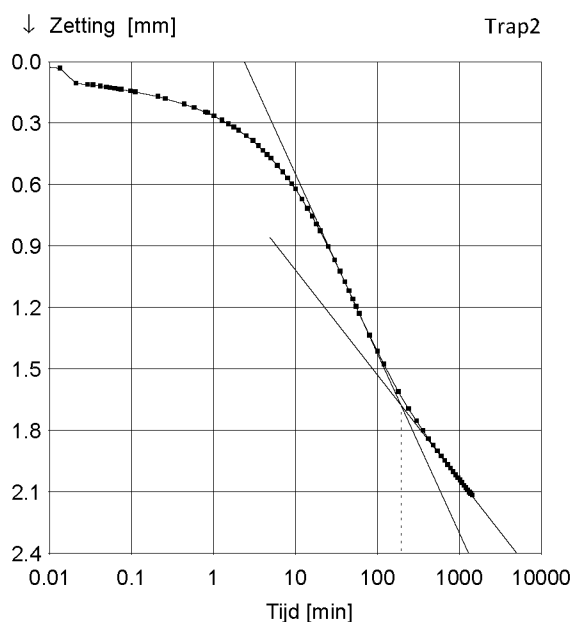
Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 10 Einddatum : 25-02-2019 Diepte : 5.83 - 5.88 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 12.84 kN/m³
 Apparaat : 13 Zetting (24u) : 0.943 mm Droog vol. gewicht γ_{dr} : 5.87 kN/m³
 Soort monster : Ongeroid h (24u) : 19.057 mm Watergehalte W : 119 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	29.3	56.78	87.01	130.98	194.18	87.01	194.18	293.1
Δp [kN/m ²]	12.81	16.49	27.48	30.23	43.97	63.2	-107.17	107.17	98.92
c_v [10^{-8} m ² /s] (wortel-t)		1.21	0.64	0.36	0.38	0.33		3.70	0.35
m_v [1/MPa]		4.18	3.31	2.03	1.25	0.78		0.13	0.40
k_{10} [10^{-11} m/s]		49.66	20.95	7.28	4.72	2.52		4.74	1.36
c_v [10^{-8} m ² /s] (log-t)		0.85	0.49	0.30	0.28	0.25		3.19	0.20
C_α [10^{-3}]		26.84	26.42	24.77	24.13	23.42		5.498	20.57



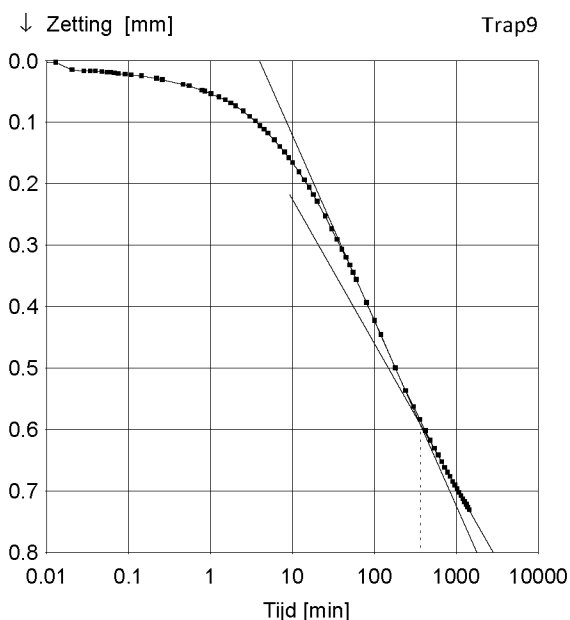
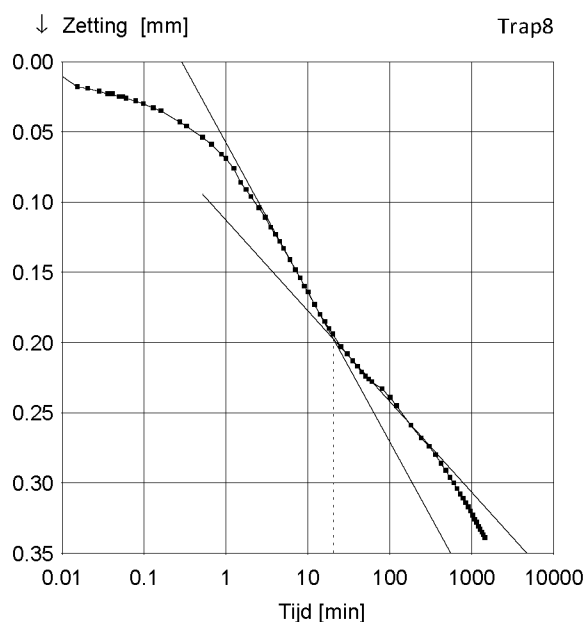
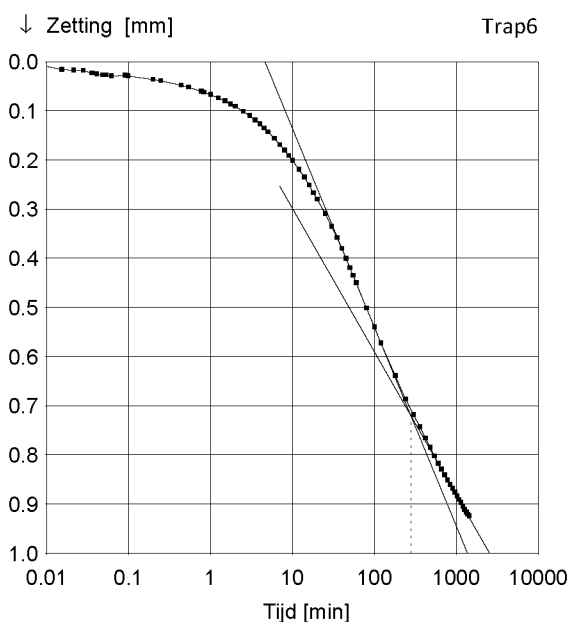
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 10	Einddatum	: 25-02-2019	Diepte	: 5.83 - 5.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.84 kN/m ³
Apparaat	: 13	Zetting (24u)	: 0.943 mm	Droog vol. gewicht γ_{dr}	: 5.87 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.057 mm	Watergehalte W	: 119 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	29.3	56.78	87.01	130.98	194.18	87.01	194.18	293.1
Δp [kN/m ²]	12.81	16.49	27.48	30.23	43.97	63.2	-107.17	107.17	98.92
c_v [10^{-8} m ² /s] (wortel-t)		1.21	0.64	0.36	0.38	0.33		3.70	0.35
m_v [1/MPa]		4.18	3.31	2.03	1.25	0.78		0.13	0.40
k_{10} [10^{-11} m/s]		49.66	20.95	7.28	4.72	2.52		4.74	1.36
c_v [10^{-8} m ² /s] (log-t)		0.85	0.49	0.30	0.28	0.25		3.19	0.20
C_α [10^{-3}]		26.84	26.42	24.77	24.13	23.42		5.498	20.57



Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 10	Einddatum	: 25-02-2019	Diepte	: 5.83 - 5.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.84 kN/m ³
Apparaat	: 13	Zetting (24u)	: 0.943 mm	Droog vol. gewicht γ_{dr}	: 5.87 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.057 mm	Watergehalte W	: 119 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	12.81	29.3	56.78	87.01	130.98	194.18	87.01	194.18	293.1
Δp [kN/m ²]	12.81	16.49	27.48	30.23	43.97	63.2	-107.17	107.17	98.92
c_v [10^{-8} m ² /s] (wortel-t)		1.21	0.64	0.36	0.38	0.33		3.70	0.35
m_v [1/MPa]		4.18	3.31	2.03	1.25	0.78		0.13	0.40
k_{10} [10^{-11} m/s]		49.66	20.95	7.28	4.72	2.52		4.74	1.36
c_v [10^{-8} m ² /s] (log-t)		0.85	0.49	0.30	0.28	0.25		3.19	0.20
C_α [10^{-3}]		26.84	26.42	24.77	24.13	23.42		5.498	20.57



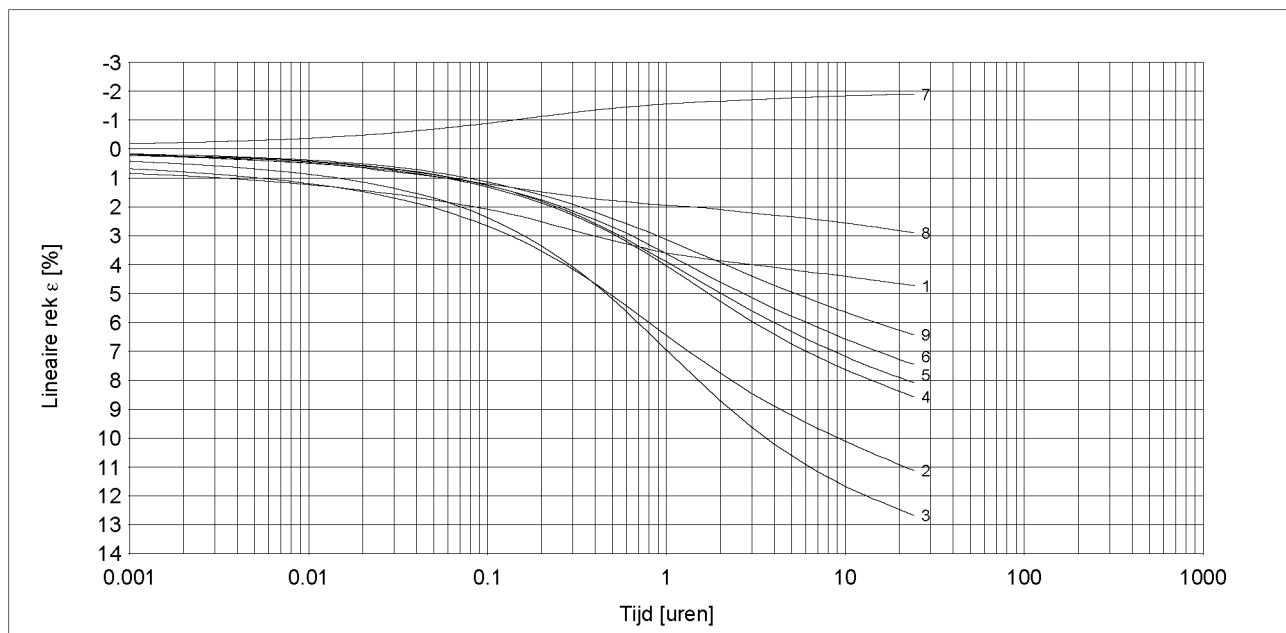
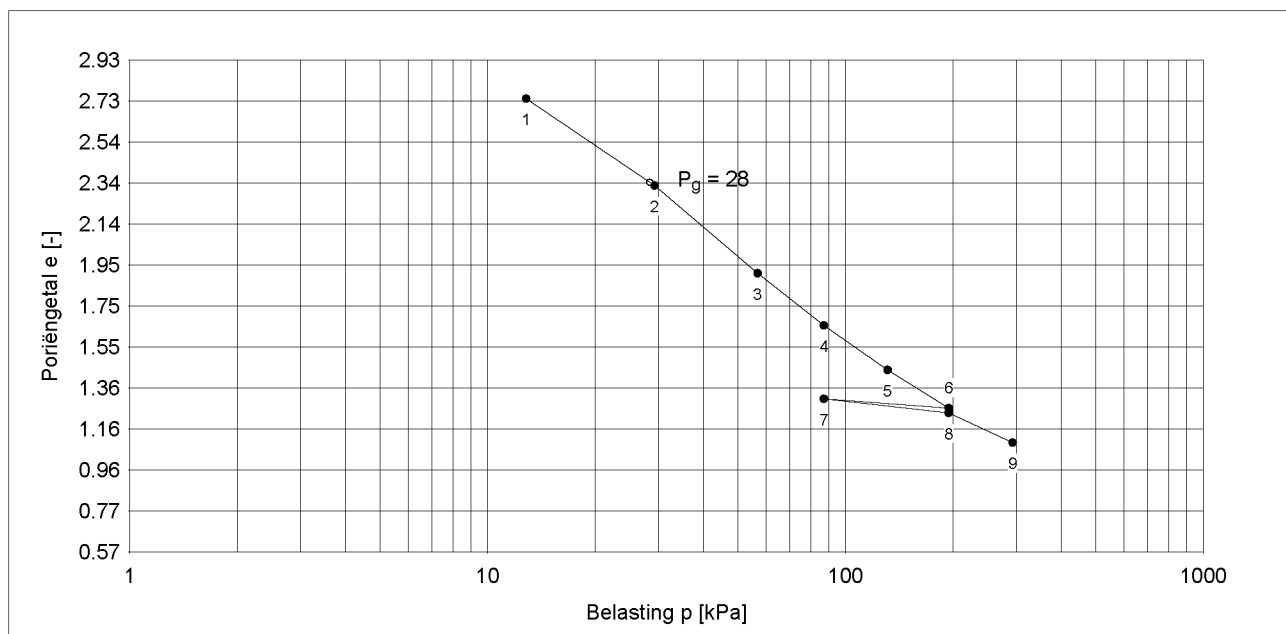
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 10	Einddatum	: 25-02-2019	Diepte	: 5.83 - 5.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.84 kN/m ³
Apparaat	: 13	Zetting (24u)	: 0.943 mm	Droog vol. gewicht γ_{dr}	: 5.87 kN/m ³
Soort monster	: Ongeroid	e_0	: 2.93	Watergehalte W	: 119 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	12.81	29.3	56.78	87.01	130.98	194.18	87.01	194.18	293.1
$C_{c/r/sw} = \Delta e / \Delta \log p$		1.158	1.467	1.343	1.208	1.062	0.123	0.191	0.803
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$			0.0268	0.0264	0.0248	0.0241	0.0234		0.0055 0.0206

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.191$	$C_c = 1.467$	$C_{sw} = 0.123$
Trap 7 - 8	Trap 2 - 3	Trap 6 - 7

$C_{\alpha} = 0.0260$
Trap 2 - 4



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 10	Einddatum	: 25-02-2019	Diepte	: 5.83 - 5.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.84 kN/m ³
Apparaat	: 13	Zetting (24u)	: 0.943 mm	Droog vol. gewicht γ_{dr}	: 5.87 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.93	Watergehalte	W : 119 %

Bepaling parameters per trap

Belasting p [kPa]		13	29	57	87	131	194	87	194	293
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		1.1575	1.4667	1.3428	1.2078	1.0616	0.1234	0.1910	0.8032	
$C_\alpha = \Delta \epsilon / \Delta \log t$			0.0268	0.0264	0.0248	0.0241	0.0234		0.0055	0.0206
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		7.6	6.3	7.3	8.2	9.5	43.7	50.6	11.6	
C_s		35.7	59.0	59.1	79.7	84.9	75.7	387.7	54.8	
C_{10^4}		4.1	4.4	4.9	5.8	6.5	13.2	33.3	6.3	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			1.21	0.64	0.36	0.38	0.33		3.70	0.35
$m_v [1/MPa]$			4.18	3.31	2.03	1.25	0.78		0.13	0.40
$k_{10} [10^{-11} m/s]$			49.66	20.95	7.28	4.72	2.52		4.74	1.36
$c_v [10^{-8} m^2/s]$ (Casagrande)			0.85	0.49	0.30	0.28	0.25		3.19	0.20
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.1423	0.2047	0.2098	0.2058	0.1961	0.0235	0.0365	0.1611	
c							0.0105			0.0093

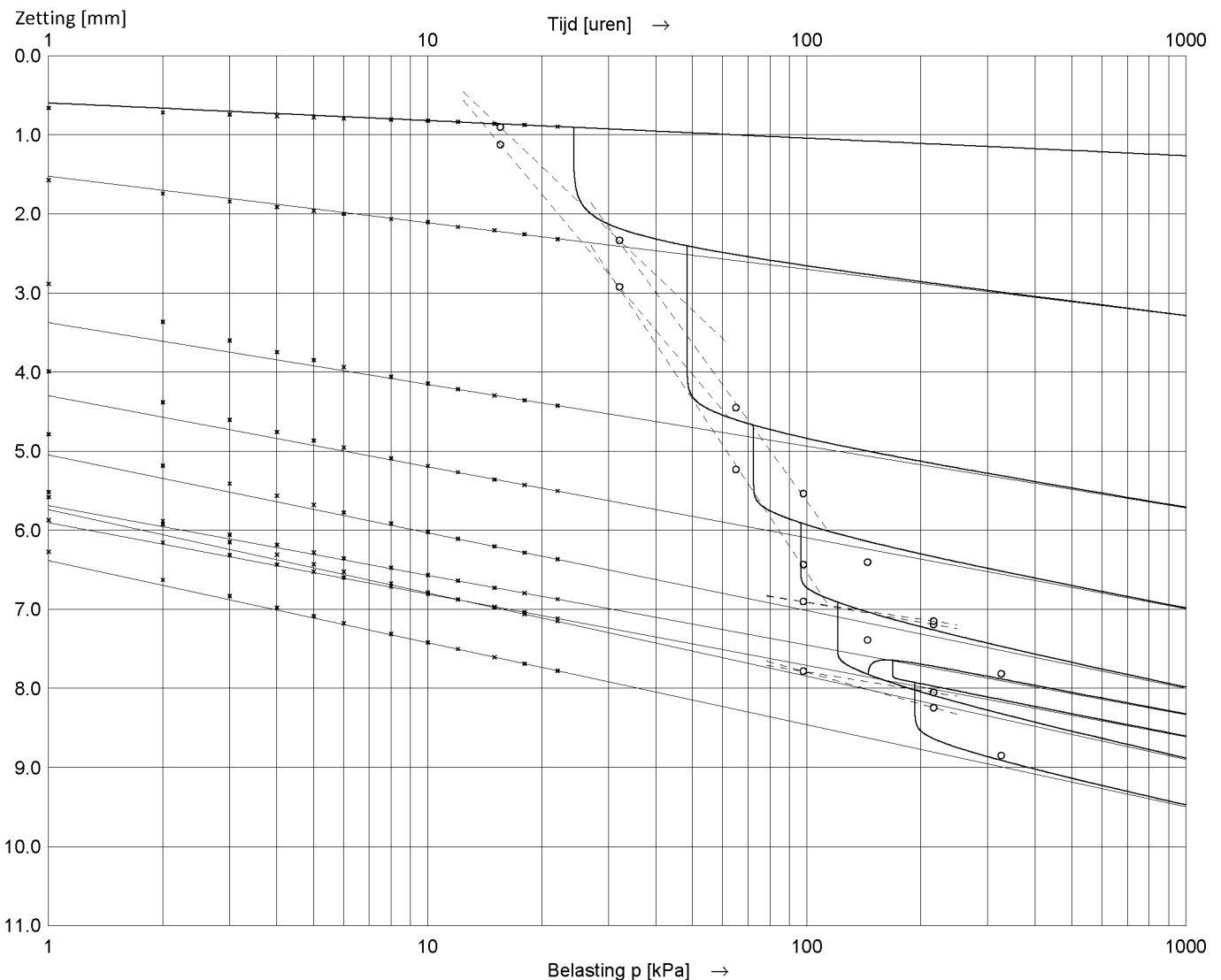
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 2 - 3	Trap 6 - 7	Trap 6, 9
$P_g = 28.4$	$C_r = 0.1910$	$C_c = 1.4667$	$C_{sw} = 0.1234$	$C_\alpha = 0.0260$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 25.6$	$C_p = 7.6$ $C_s = 35.7$ $C_{10^4} = 4.1$	$C_p' = 6.7$ $C_s' = 59.0$ $C_{10^4}' = 4.6$	$A_p = 43.7$ $A_s = 75.7$ $A_{10^4} = 13.2$	$C_{p(r)} = 50.6$ $C_{s(r)} = 387.7$ $C_{10^4(r)} = 33.3$
Isotachen	Trap 7 - 8	Trap 3 - 4	Trap 4	
$P_g = --$	a = 0.0365	b = 0.2098	c = --	

Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 11 Einddatum : 25-02-2019 Diepte : 7.03 - 7.08 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.39 kN/m³
 Apparaat : 14 Zetting (24u) : 0.901 mm Droog vol. gewicht γ_{dr} : 6.28 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.099 mm Watergehalte W : 113 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	216.14	97.98	216.14	326.06
C _p	9.6	6.4	7.2	8.6	9.7	52.4	61.4	11.7	
C _s	37.5	70.3	66.1	86.4	109.5	86.8	686.5	58.2	
C _{10⁴}	4.7	4.7	5.0	6.1	7.2	15.3	45.2	6.5	

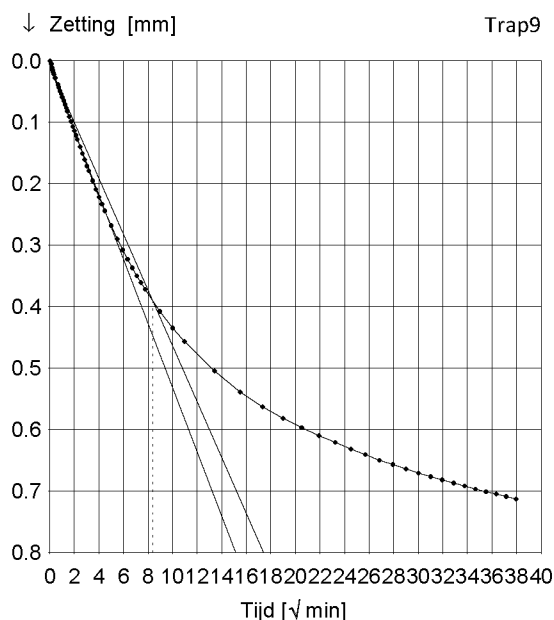
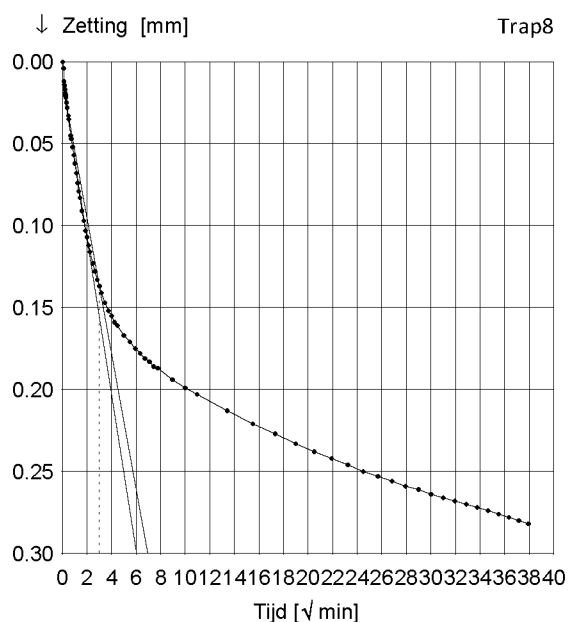
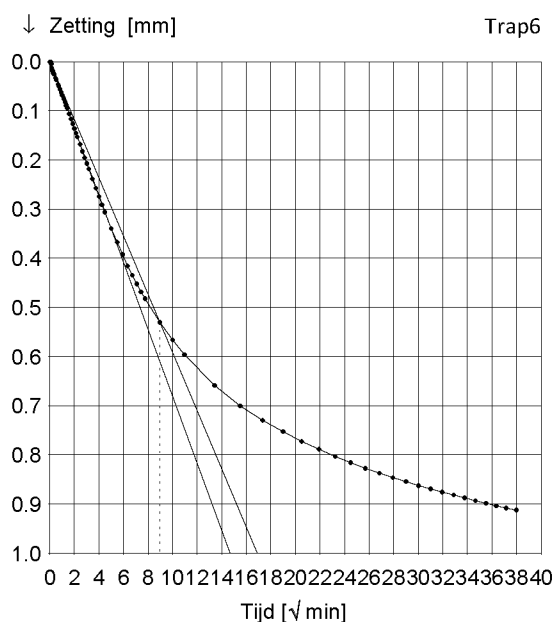
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
31 [kN/m ²]	C _p = 9.6	C _p ' = 6.6	C _p = 52.4	C _p = 61.4		
	C _s = 37.5	C _s ' = 68.8	C _s = 86.8	C _s = 686.5		
	C _{10⁴} = 4.7	C _{10⁴} ' = 4.8	C _{10⁴} = 15.3	C _{10⁴} = 45.2		



Asymptoot tijdinterval : 12 - 48 uur.

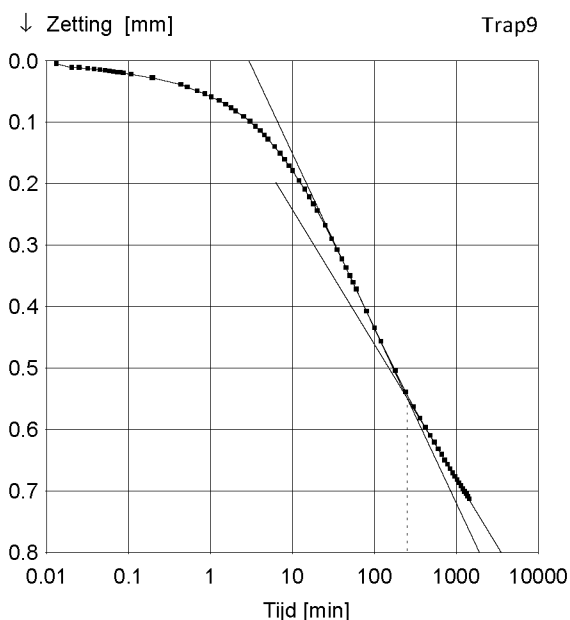
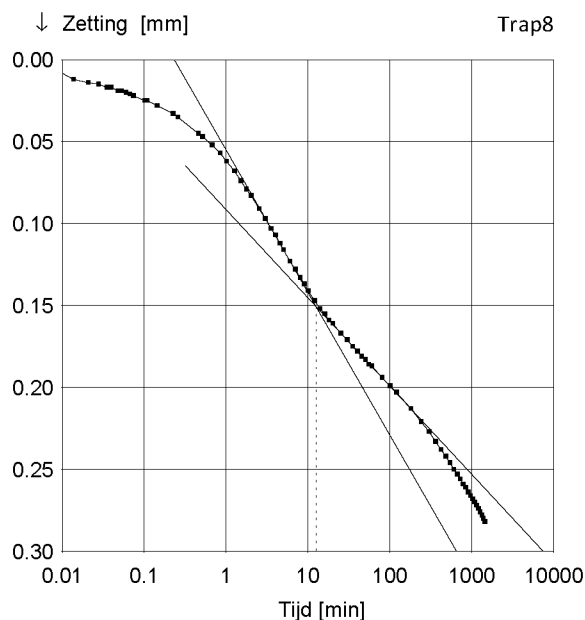
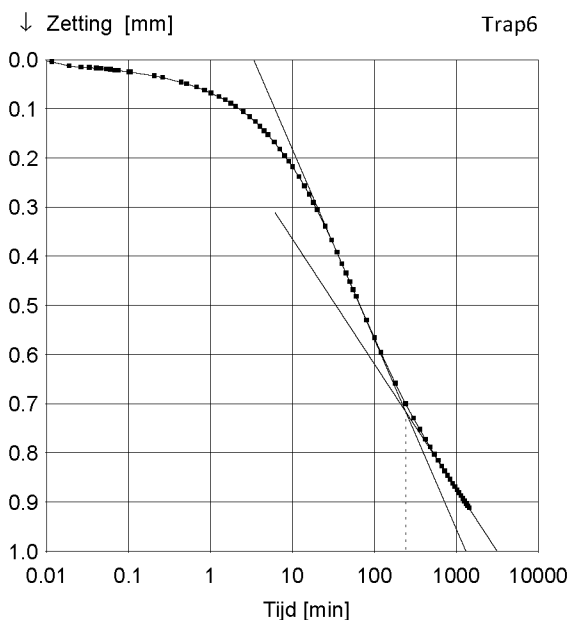
Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 11 Einddatum : 25-02-2019 Diepte : 7.03 - 7.08 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.39 kN/m³
 Apparaat : 14 Zetting (24u) : 0.901 mm Droog vol. gewicht γ_{dr} : 6.28 kN/m³
 Soort monster : Ongeroid h (24u) : 19.099 mm Watergehalte W : 113 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	216.14	97.98	216.14	326.06
Δp [kN/m ²]	15.55	16.49	32.97	32.97	46.71	71.45	-118.16	118.16	109.92
c_v [10^{-8} m ² /s] (wortel-t)		1.69	0.80	0.52	0.48	0.52		4.47	0.52
m_v [1/MPa]		3.18	2.91	1.71	1.01	0.63		0.09	0.32
k_{10} [10^{-11} m/s]		52.60	22.87	8.72	4.75	3.24		4.12	1.62
c_v [10^{-8} m ² /s] (log-t)		2.30	0.71	0.41	0.36	0.36		5.30	0.32
C_α [10^{-3}]		18.31	24.04	22.05	21.88	19.38		4.352	18.10



Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 11	Einddatum	: 25-02-2019	Diepte	: 7.03 - 7.08 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.39 kN/m ³
Apparaat	: 14	Zetting (24u)	: 0.901 mm	Droog vol. gewicht γ_{dr}	: 6.28 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.099 mm	Watergehalte W	: 113 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	15.55	32.04	65.01	97.98	144.69	216.14	97.98	216.14	326.06
Δp [kN/m ²]	15.55	16.49	32.97	32.97	46.71	71.45	-118.16	118.16	109.92
c_v [10^{-8} m ² /s] (wortel-t)		1.69	0.80	0.52	0.48	0.52		4.47	0.52
m_v [1/MPa]		3.18	2.91	1.71	1.01	0.63		0.09	0.32
k_{10} [10^{-11} m/s]		52.60	22.87	8.72	4.75	3.24		4.12	1.62
c_v [10^{-8} m ² /s] (log-t)		2.30	0.71	0.41	0.36	0.36		5.30	0.32
C_α [10^{-3}]		18.31	24.04	22.05	21.88	19.38		4.352	18.10



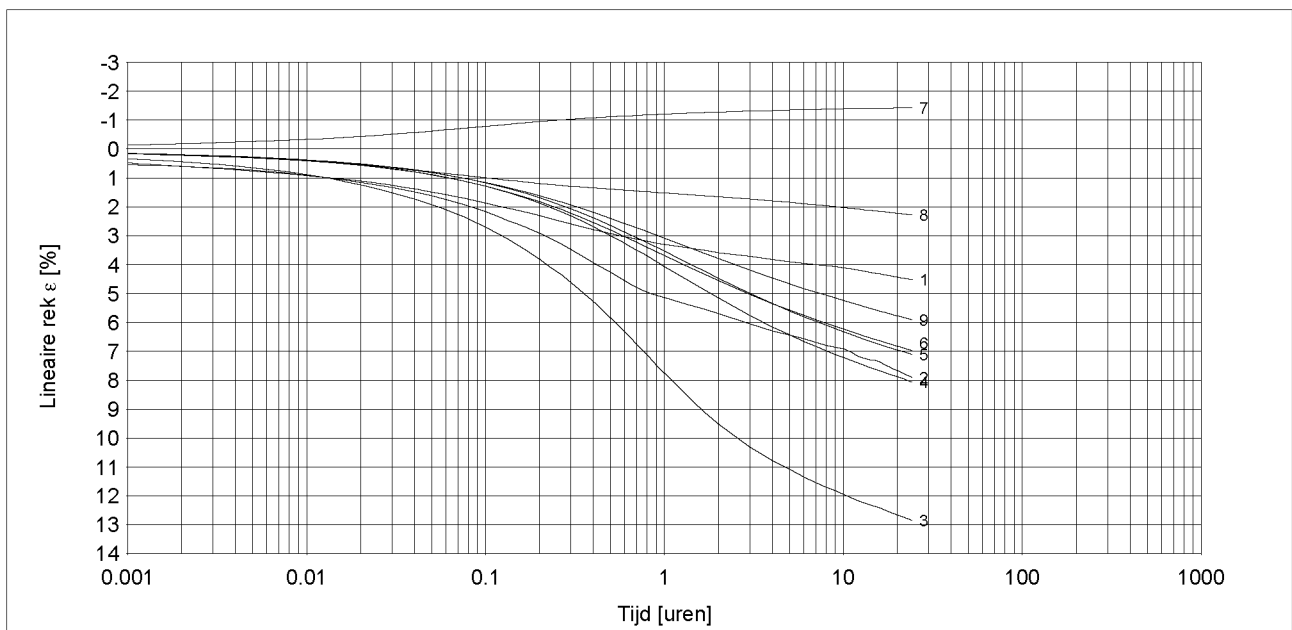
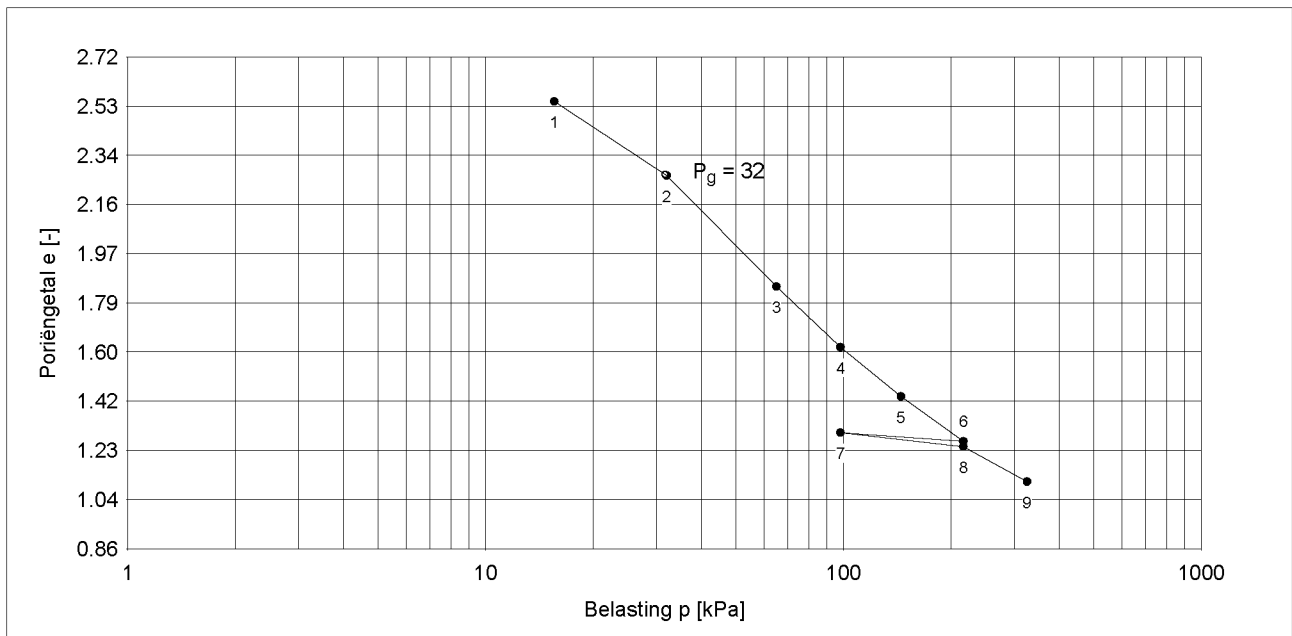
Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 11 Einddatum : 25-02-2019 Diepte : 7.03 - 7.08 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.39 kN/m³
 Apparaat : 14 Zetting (24u) : 0.901 mm Droog vol. gewicht γ_{dr} : 6.28 kN/m³
 Soort monster : Ongeroid e_0 : 2.72 Watergehalte W : 113 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	15.55	32.04	65.01	97.98	144.69	216.14	97.98	216.14	326.06
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.892	1.364	1.288	1.097	0.972	0.094	0.152	0.742
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$		0.0183	0.0240	0.0220	0.0219	0.0194		0.0044	0.0181

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.152$	$C_c = 1.364$	$C_{sw} = 0.094$
Trap 7 - 8	Trap 2 - 3	Trap 6 - 7

$C_{\alpha} = 0.0215$
Trap 2 - 4



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 11	Einddatum	: 25-02-2019	Diepte	: 7.03 - 7.08 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.39 kN/m ³
Apparaat	: 14	Zetting (24u)	: 0.901 mm	Droog vol. gewicht γ_{dr}	: 6.28 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.72	Watergehalte	W : 113 %

Bepaling parameters per trap

Belasting p [kPa]		16	32	65	98	145	216	98	216	326
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.8917	1.3645	1.2878	1.0973	0.9720	0.0935	0.1525	0.7418	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0183	0.0240	0.0220	0.0219	0.0194		0.0044	0.0181
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		9.6	6.4	7.2	8.6	9.7	52.4	61.4	11.7	
C_s		37.5	70.3	66.1	86.4	109.5	86.8	686.5	58.2	
C_{10^4}		4.7	4.7	5.0	6.1	7.2	15.3	45.2	6.5	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			1.69	0.80	0.52	0.48	0.52		4.47	0.52
$m_v [1/MPa]$			3.18	2.91	1.71	1.01	0.63		0.09	0.32
$k_{10} [10^{-11} m/s]$			52.60	22.87	8.72	4.75	3.24		4.12	1.62
$c_v [10^{-8} m^2/s]$ (Casagrande)			2.30	0.71	0.41	0.36	0.36		5.30	0.32
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.1137	0.1941	0.2047	0.1887	0.1798	0.0178	0.0292	0.1480	
c							0.0088			0.0079

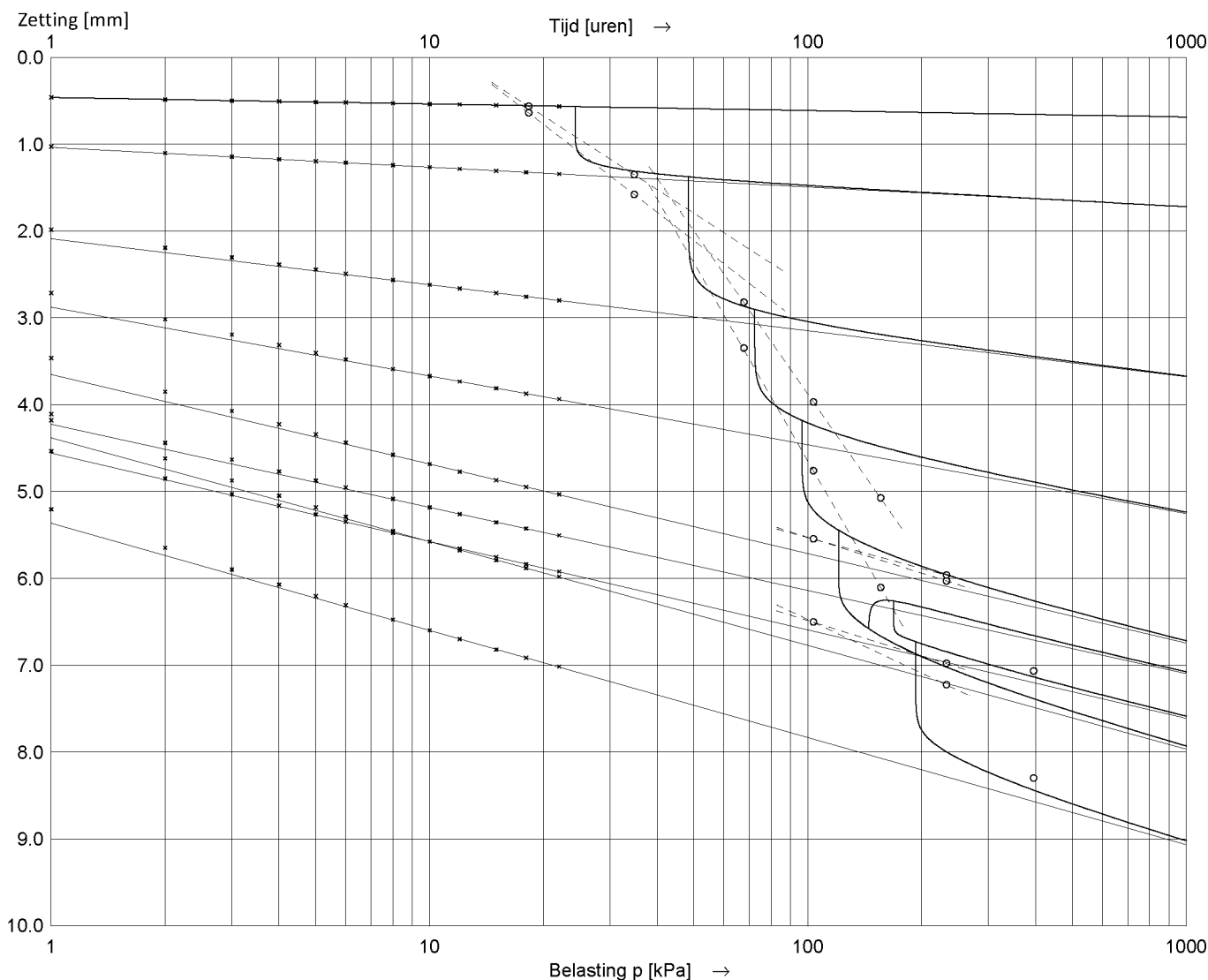
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 2 - 3	Trap 6 - 7	Trap 6, 9
$P_g = 31.7$	$C_r = 0.1525$	$C_c = 1.3645$	$C_{sw} = 0.0935$	$C_{\alpha} = 0.0215$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 31.2$	$C_p = 9.6$ $C_s = 37.5$ $C_{10^4} = 4.7$	$C_p' = 6.6$ $C_s' = 68.8$ $C_{10^4}' = 4.8$	$A_p = 52.4$ $A_s = 86.8$ $A_{10^4} = 15.3$	$C_{p(r)} = 61.4$ $C_{s(r)} = 686.5$ $C_{10^4(r)} = 45.2$
Isotachen	Trap 7 - 8	Trap 3 - 4	Trap 4	
$P_g = --$	a = 0.0292	b = 0.2047	c = --	

Boring : B02 Startdatum : 16-02-2019 Grondsoort: Klei matig siltig, sterk humeus
 Monster : 12 Einddatum : 25-02-2019 Diepte : 7.83 - 7.88 m. -NAP
 Bus : . Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.36 kN/m³
 Apparaat : 15 Zetting (24u) : 0.564 mm Droog vol. gewicht γ_{dr} : 6.68 kN/m³
 Soort monster : Ongeroerd h (24u) : 19.436 mm Watergehalte W : 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	18.3	34.79	67.76	103.48	155.69	232.63	103.48	232.63	394.76
C _p	15.8	8.8	7.1	7.1	8.1	32.3	37.6	9.3	
C _s	81.2	42.7	31.1	33.2	47.5	66.2	260.8	47.3	
C _{10⁴}	8.9	4.8	3.7	3.8	4.8	10.9	23.9	5.2	

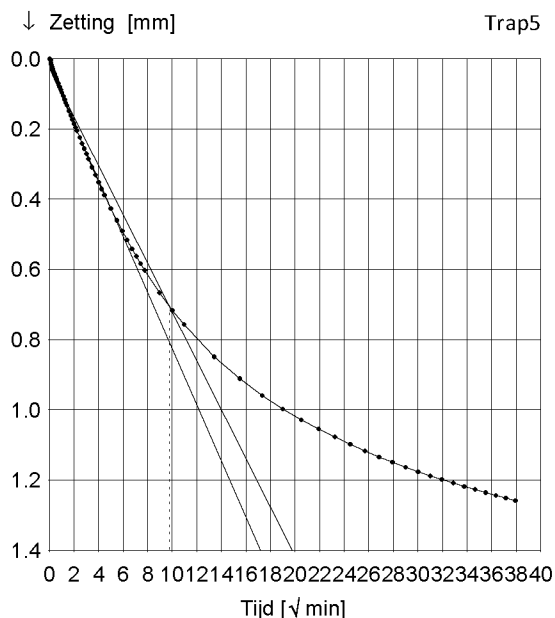
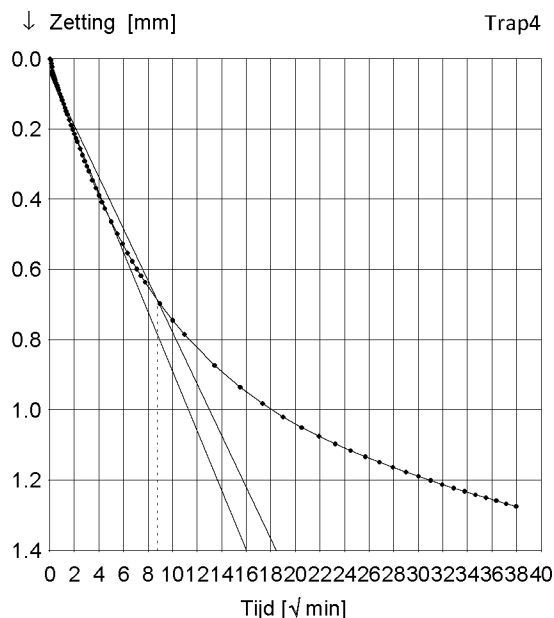
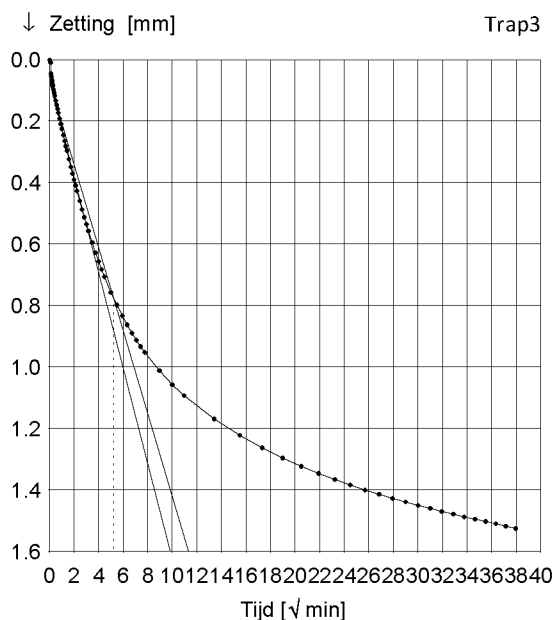
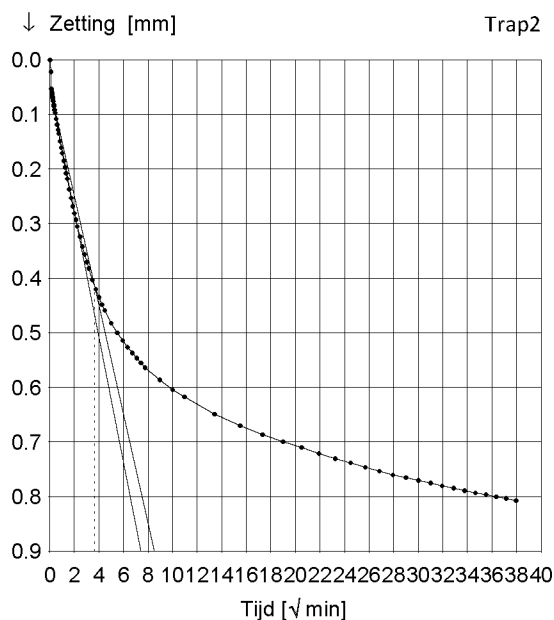
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
43 [kN/m ²]	C _p = 15.8	C _p ' = 7.1	C _p = 32.3	C _p = 37.6		
	C _s = 81.2	C _s ' = 33.2	C _s = 66.2	C _s = 260.8		
	C _{10⁴} = 8.9	C _{10⁴} ' = 3.8	C _{10⁴} = 10.9	C _{10⁴} = 23.9		



Asymptoot tijdinterval : 8 - 48 uur.

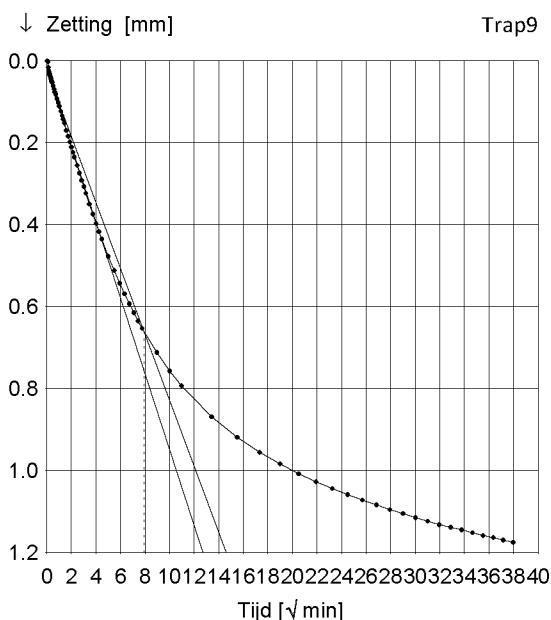
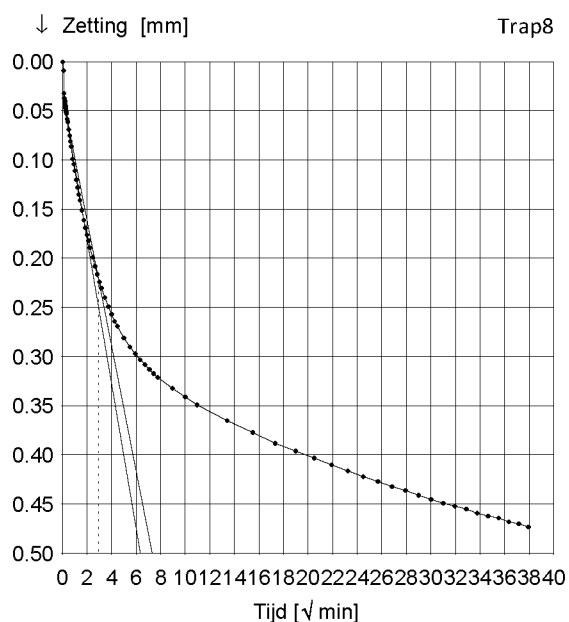
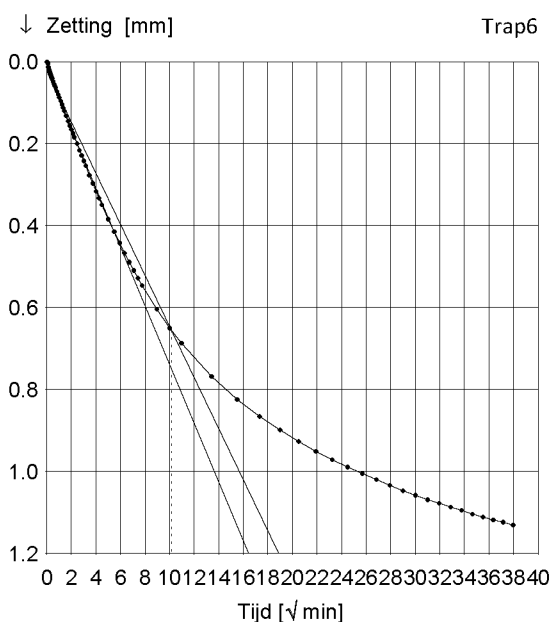
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 12	Einddatum	: 25-02-2019	Diepte	: 7.83 - 7.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.36 kN/m ³
Apparaat	: 15	Zetting (24u)	: 0.564 mm	Droog vol. gewicht γ_{dr}	: 6.68 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.436 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	18.3	34.79	67.76	103.48	155.69	232.63	103.48	232.63	394.76
Δp [kN/m ²]	18.3	16.49	32.97	35.72	52.21	76.94	-129.15	129.15	162.13
c_v [10^{-8} m ² /s] (wortel-t)		7.40	3.16	0.95	0.65	0.50		5.83	0.68
m_v [1/MPa]		1.25	1.27	1.17	0.91	0.63		0.12	0.33
k_{10} [10^{-11} m/s]		90.79	39.43	10.87	5.76	3.09		6.61	2.19
c_v [10^{-8} m ² /s] (log-t)		5.34	1.52	0.48	0.37	0.34		4.55	0.42
C_α [10^{-3}]		8.964	19.86	24.42	26.94	26.19		7.057	23.54



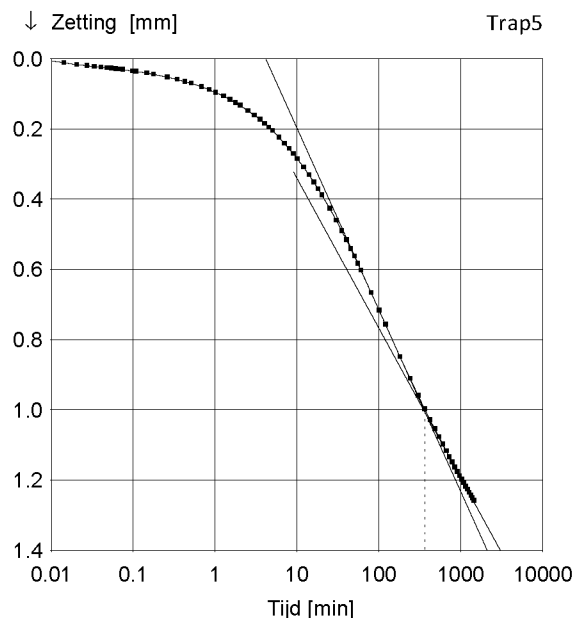
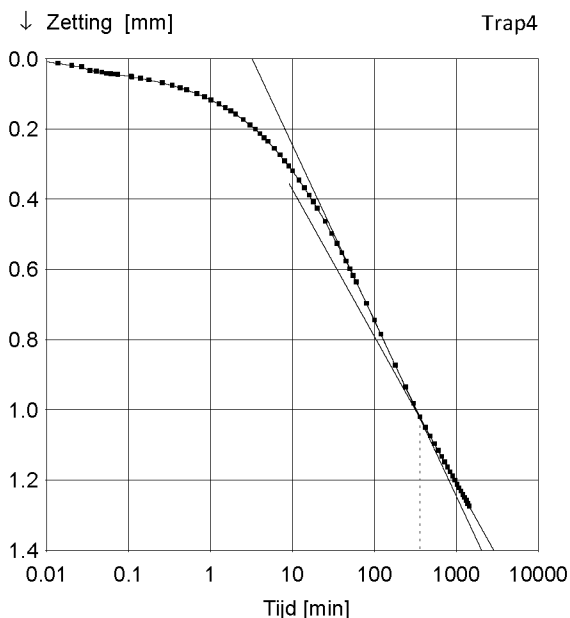
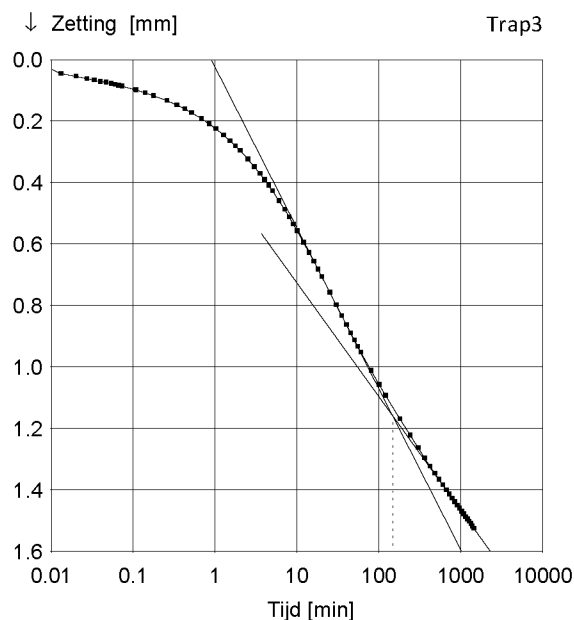
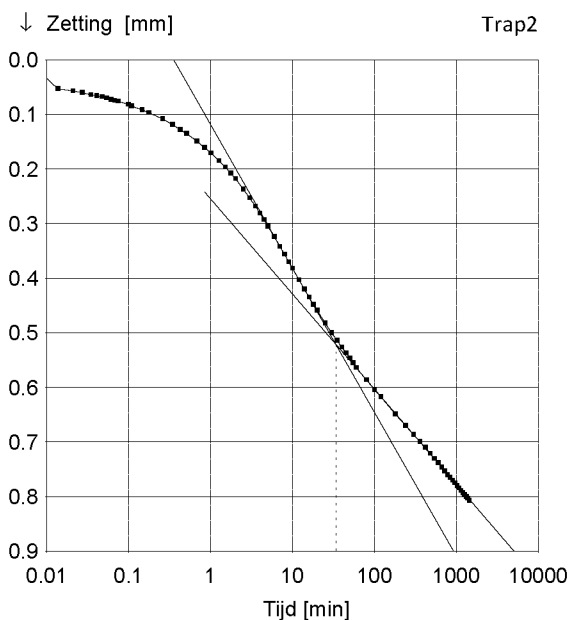
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 12	Einddatum	: 25-02-2019	Diepte	: 7.83 - 7.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.36 kN/m ³
Apparaat	: 15	Zetting (24u)	: 0.564 mm	Droog vol. gewicht γ_{dr}	: 6.68 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.436 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	18.3	34.79	67.76	103.48	155.69	232.63	103.48	232.63	394.76
Δp [kN/m ²]	18.3	16.49	32.97	35.72	52.21	76.94	-129.15	129.15	162.13
c_v [10^{-8} m ² /s] (wortel-t)		7.40	3.16	0.95	0.65	0.50		5.83	0.68
m_v [1/MPa]		1.25	1.27	1.17	0.91	0.63		0.12	0.33
k_{10} [10^{-11} m/s]		90.79	39.43	10.87	5.76	3.09		6.61	2.19
c_v [10^{-8} m ² /s] (log-t)		5.34	1.52	0.48	0.37	0.34		4.55	0.42
C_α [10^{-3}]		8.964	19.86	24.42	26.94	26.19		7.057	23.54



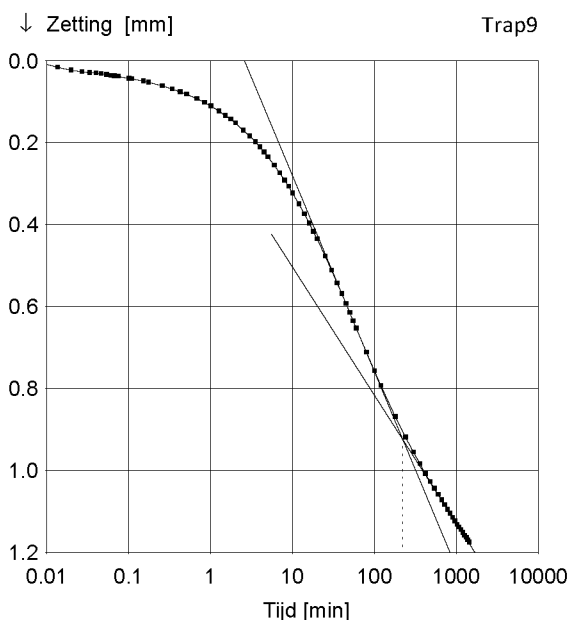
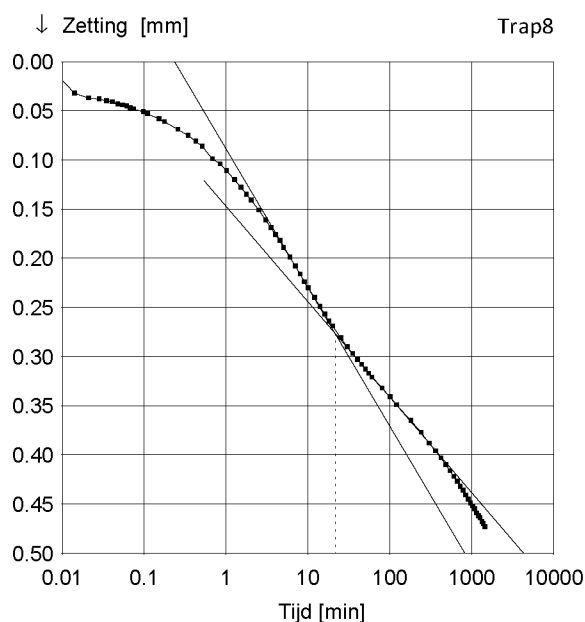
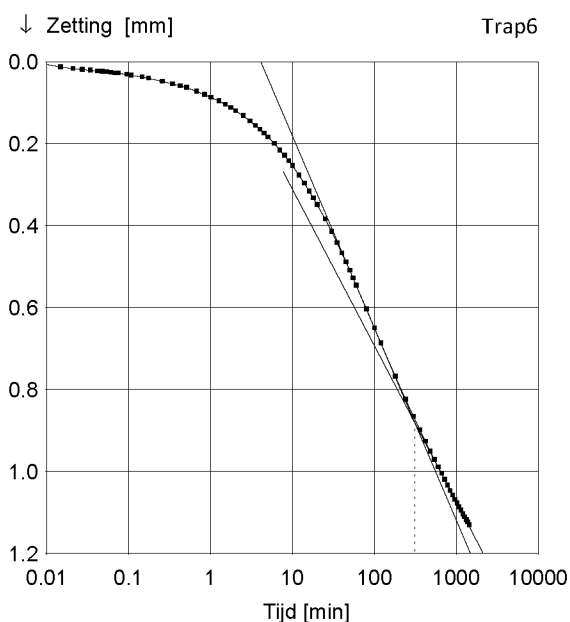
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 12	Einddatum	: 25-02-2019	Diepte	: 7.83 - 7.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.36 kN/m ³
Apparaat	: 15	Zetting (24u)	: 0.564 mm	Droog vol. gewicht γ_{dr}	: 6.68 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.436 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	18.3	34.79	67.76	103.48	155.69	232.63	103.48	232.63	394.76
Δp [kN/m ²]	18.3	16.49	32.97	35.72	52.21	76.94	-129.15	129.15	162.13
c_v [10^{-8} m ² /s] (wortel-t)		7.40	3.16	0.95	0.65	0.50		5.83	0.68
m_v [1/MPa]		1.25	1.27	1.17	0.91	0.63		0.12	0.33
k_{10} [10^{-11} m/s]		90.79	39.43	10.87	5.76	3.09		6.61	2.19
c_v [10^{-8} m ² /s] (log-t)		5.34	1.52	0.48	0.37	0.34		4.55	0.42
C_α [10^{-3}]		8.964	19.86	24.42	26.94	26.19		7.057	23.54



Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 12	Einddatum	: 25-02-2019	Diepte	: 7.83 - 7.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.36 kN/m ³
Apparaat	: 15	Zetting (24u)	: 0.564 mm	Droog vol. gewicht γ_{dr}	: 6.68 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.436 mm	Watergehalte W	: 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	18.3	34.79	67.76	103.48	155.69	232.63	103.48	232.63	394.76
Δp [kN/m ²]	18.3	16.49	32.97	35.72	52.21	76.94	-129.15	129.15	162.13
c_v [10^{-8} m ² /s] (wortel-t)		7.40	3.16	0.95	0.65	0.50		5.83	0.68
m_v [1/MPa]		1.25	1.27	1.17	0.91	0.63		0.12	0.33
k_{10} [10^{-11} m/s]		90.79	39.43	10.87	5.76	3.09		6.61	2.19
c_v [10^{-8} m ² /s] (log-t)		5.34	1.52	0.48	0.37	0.34		4.55	0.42
C_α [10^{-3}]		8.964	19.86	24.42	26.94	26.19		7.057	23.54



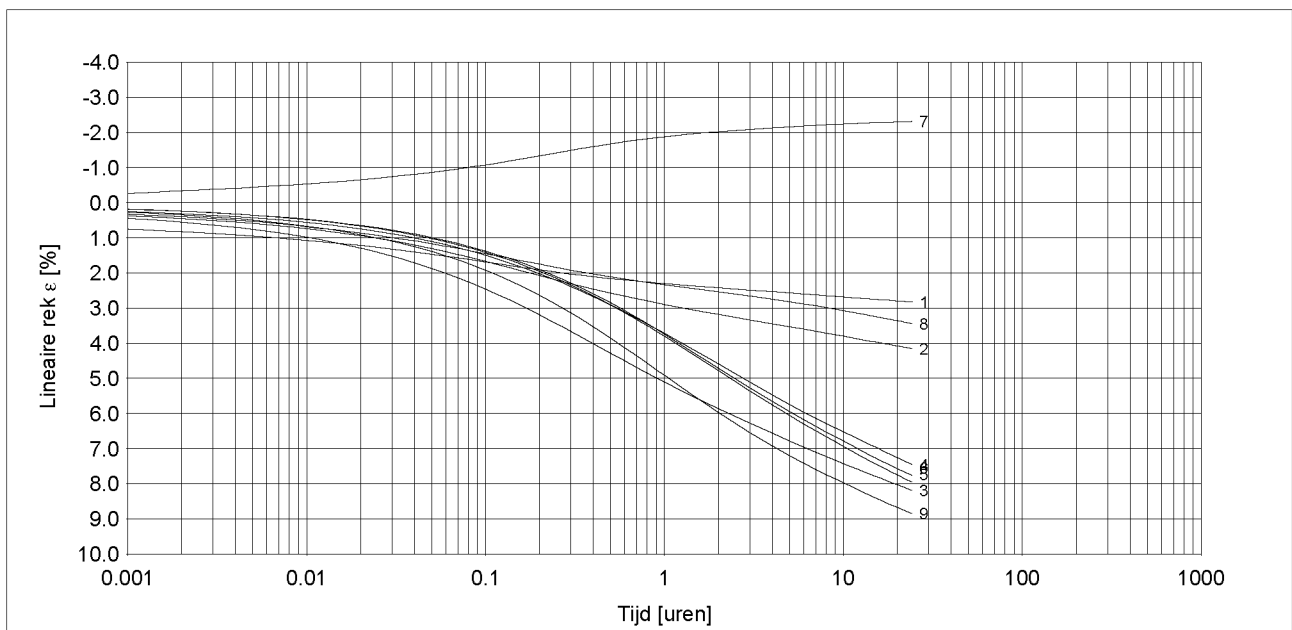
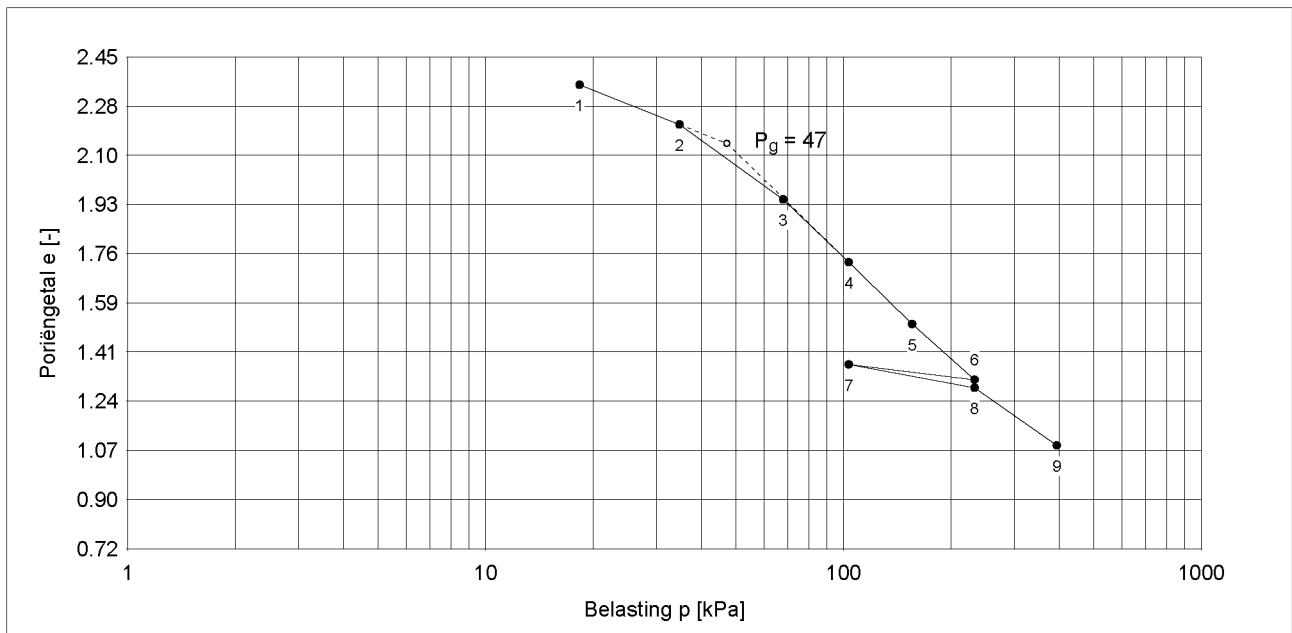
Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 12	Einddatum	: 25-02-2019	Diepte	: 7.83 - 7.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.36 kN/m ³
Apparaat	: 15	Zetting (24u)	: 0.564 mm	Droog vol. gewicht γ_{dr}	: 6.68 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.45	Watergehalte	W : 100 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	18.3	34.79	67.76	103.48	155.69	232.63	103.48	232.63	394.76
$C_{c/r/sw} = \Delta e / \Delta \log p$	0.499	0.909	1.196	1.223	1.119	0.152	0.232	0.882	
$C_{\alpha}^* = \Delta \varepsilon / \Delta \log t$		0.0090	0.0199	0.0244	0.0269	0.0262		0.0071	0.0235

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.232$	$C_c = 1.223$	$C_{sw} = 0.152$
Trap 7 - 8	Trap 4 - 5	Trap 6 - 7

$C_{\alpha} = 0.0257$
Trap 4 - 5



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 16-02-2019	Grondsoort:	Klei matig siltig, sterk humeus
Monster	: 12	Einddatum	: 25-02-2019	Diepte	: 7.83 - 7.88 m. -NAP
Bus	: .	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.36 kN/m ³
Apparaat	: 15	Zetting (24u)	: 0.564 mm	Droog vol. gewicht γ_{dr}	: 6.68 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.45	Watergehalte	W : 100 %

Bepaling parameters per trap

Belasting p [kPa]		18	35	68	103	156	233	103	233	395
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.4989	0.9086	1.1960	1.2232	1.1186	0.1525	0.2319	0.8825	
$C_{\alpha} = \Delta \epsilon / \Delta \log t$			0.0090	0.0199	0.0244	0.0269	0.0262		0.0071	0.0235
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		15.8	8.8	7.1	7.1	8.1	32.3	37.6	9.3	
C_s		81.2	42.7	31.1	33.2	47.5	66.2	260.8	47.3	
C_{10^4}		8.9	4.8	3.7	3.8	4.8	10.9	23.9	5.2	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)			7.40	3.16	0.95	0.65	0.50		5.83	0.68
$m_v [1/MPa]$			1.25	1.27	1.17	0.91	0.63		0.12	0.33
$k_{10} [10^{-11} m/s]$			90.79	39.43	10.87	5.76	3.09		6.61	2.19
$c_v [10^{-8} m^2/s]$ (Casagrande)			5.34	1.52	0.48	0.37	0.34		4.55	0.42
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0660	0.1281	0.1830	0.2028	0.2012	0.0282	0.0432	0.1752	
c							0.0115			0.0106

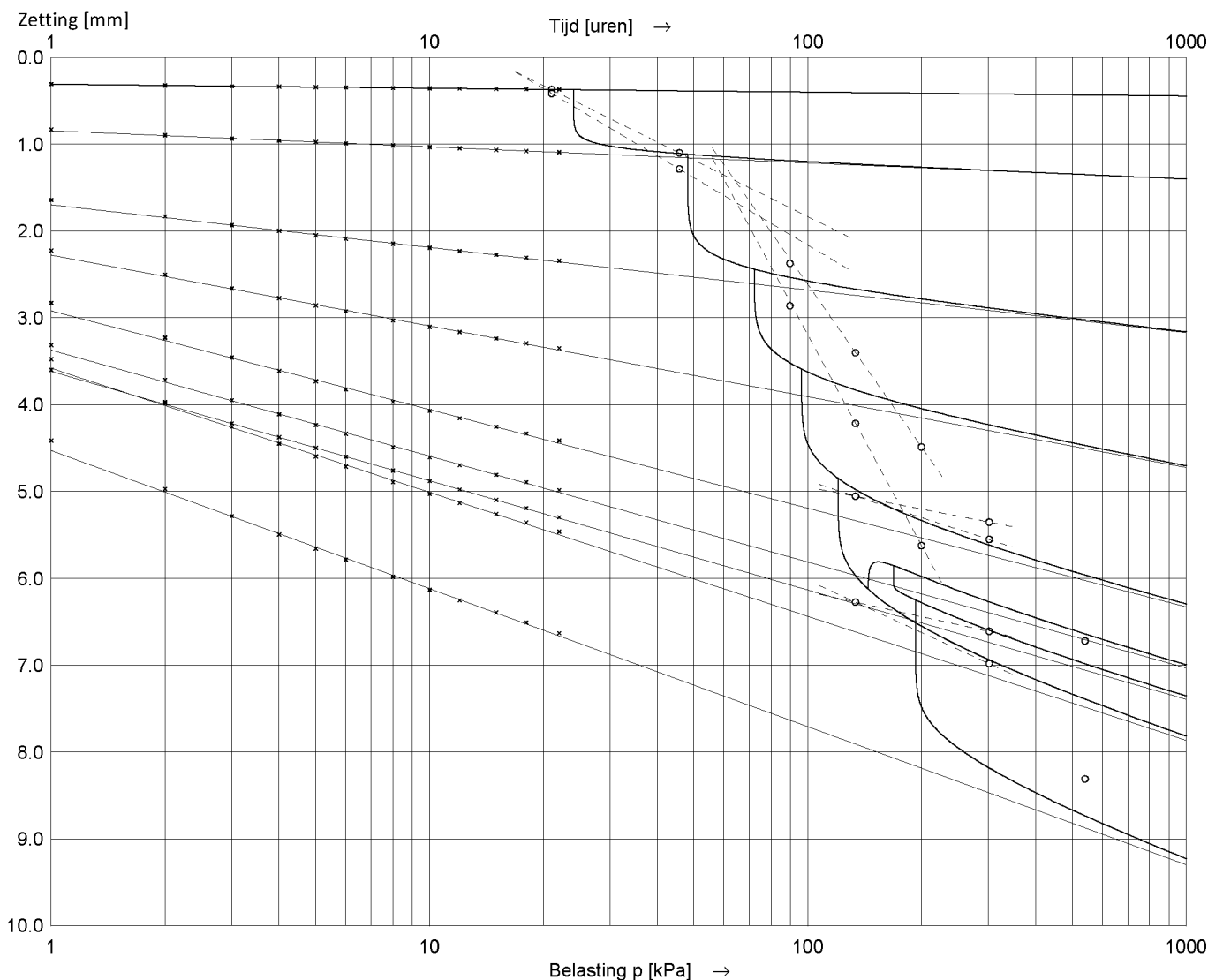
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 47.2$	$C_r = 0.2319$	$C_c = 1.2232$	$C_{sw} = 0.1525$	$C_{\alpha} = 0.0257$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 43.5$	$C_p = 15.8$ $C_s = 81.2$ $C_{10^4} = 8.9$	$C_p' = 7.1$ $C_s' = 33.2$ $C_{10^4}' = 3.8$	$A_p = 32.3$ $A_s = 66.2$ $A_{10^4} = 10.9$	$C_{p(r)} = 37.6$ $C_{s(r)} = 260.8$ $C_{10^4(r)} = 23.9$
Isotachen	Trap 7 - 8	Trap 4 - 5	Trap 5	
$P_g = --$	a = 0.0432	b = 0.2028	c = --	

Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 13	Einddatum	: 06-03-2019	Diepte	: 11.08 - 11.13 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.12 kN/m ³
Apparaat	: 1	Zetting (24u)	: 0.369 mm	Droog vol. gewicht γ_{dr}	: 6.24 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.631 mm	Watergehalte W	: 110 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	45.78	89.75	133.72	199.67	301.34	133.72	301.34	540.41
C _p	20.8	10.3	7.6	7.2	7.6	31.9	53.2	8.3	
C _s	108.0	43.2	24.0	24.3	27.5	76.2	412.1	34.5	
C _{10⁴}	11.8	5.3	3.3	3.3	3.6	11.9	35.1	4.2	

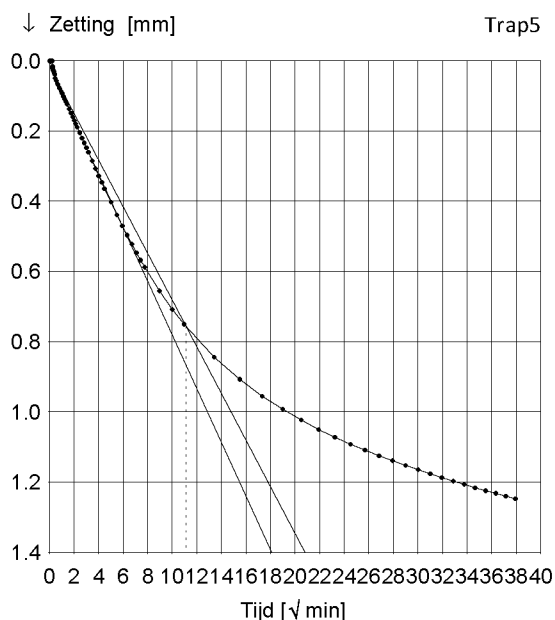
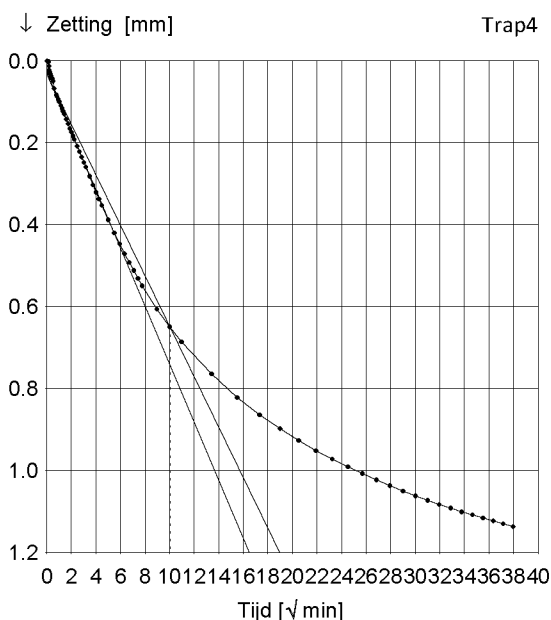
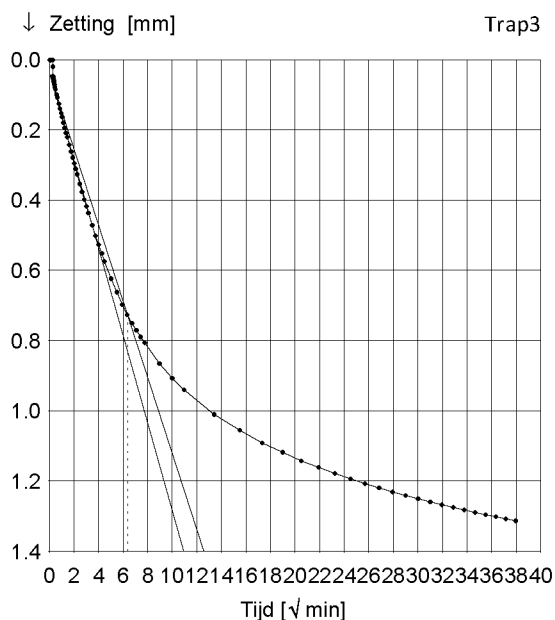
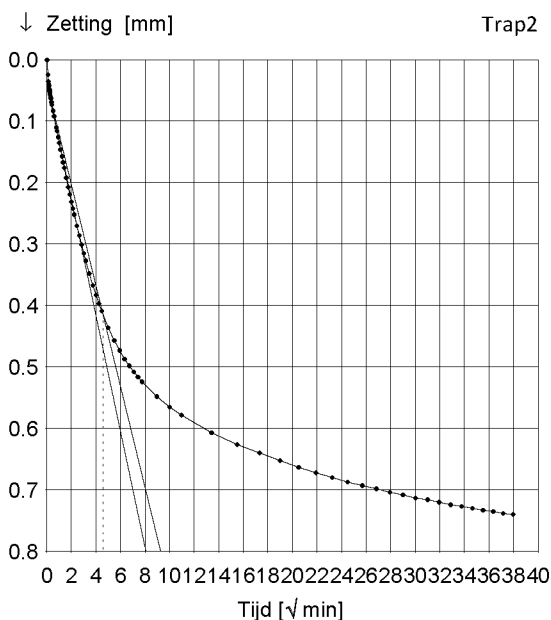
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
65 [kN/m ²]	C _p = 20.8	C _p ' = 7.2	C _p = 31.9	C _p = 53.2		
	C _s = 108.0	C _s ' = 24.3	C _s = 76.2	C _s = 412.1		
	C _{10⁴} = 11.8	C _{10⁴} ' = 3.3	C _{10⁴} = 11.9	C _{10⁴} = 35.1		



Asymptoot tijdinterval : 2 - 48 uur.

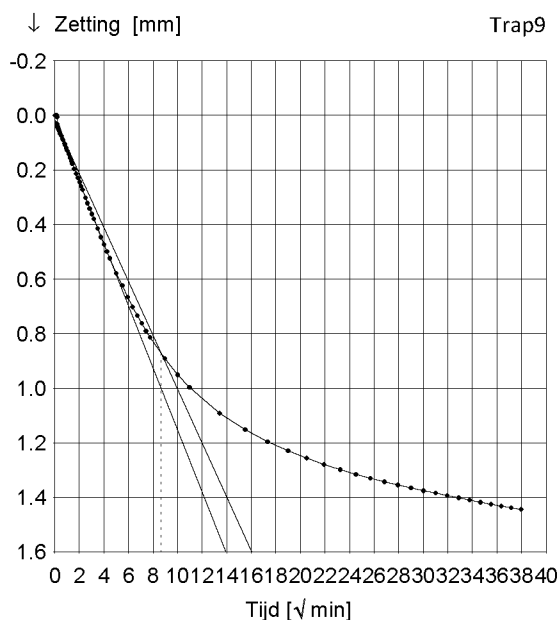
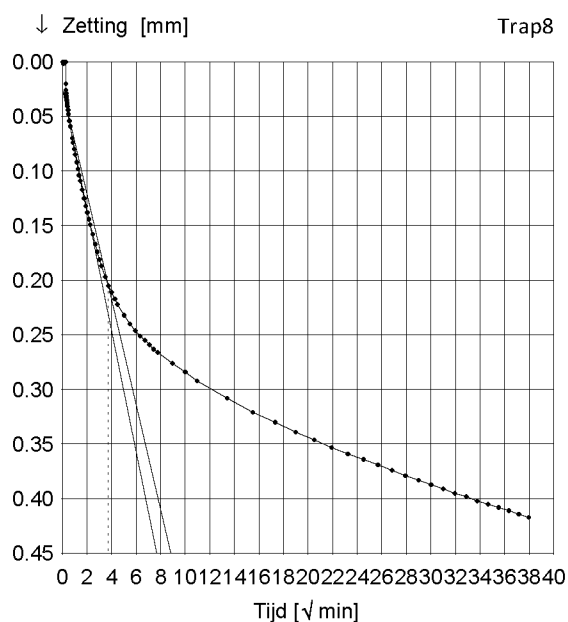
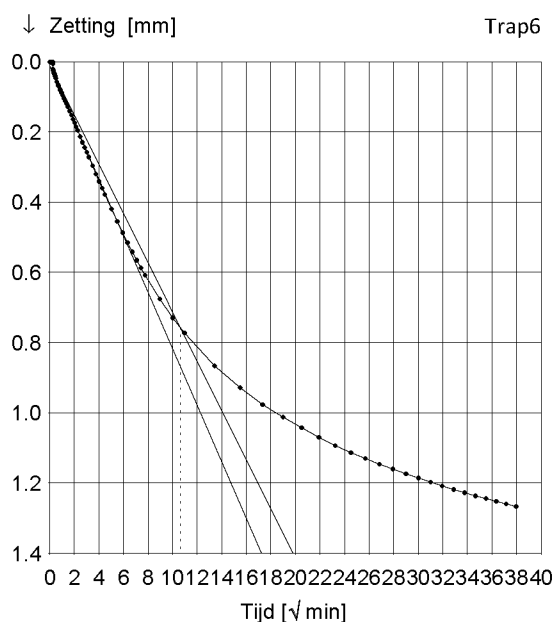
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 13	Einddatum	: 06-03-2019	Diepte	: 11.08 - 11.13 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.12 kN/m ³
Apparaat	: 1	Zetting (24u)	: 0.369 mm	Droog vol. gewicht γ_{dr}	: 6.24 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.631 mm	Watergehalte W	: 110 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	45.78	89.75	133.72	199.67	301.34	133.72	301.34	540.41
Δp [kN/m ²]	21.05	24.73	43.97	43.97	65.95	101.67	-167.62	167.62	239.07
c_v [10^{-8} m ² /s] (wortel-t)		4.77	2.19	0.76	0.53	0.49		3.84	0.59
m_v [1/MPa]		0.85	0.92	0.89	0.76	0.53		0.08	0.29
k_{10} [10^{-11} m/s]		39.97	19.76	6.62	3.94	2.59		3.13	1.68
c_v [10^{-8} m ² /s] (log-t)		3.32	1.39	0.46	0.39	0.35		4.78	0.42
C_α [10^{-3}]		7.577	16.64	22.19	25.01	26.91		6.334	24.86



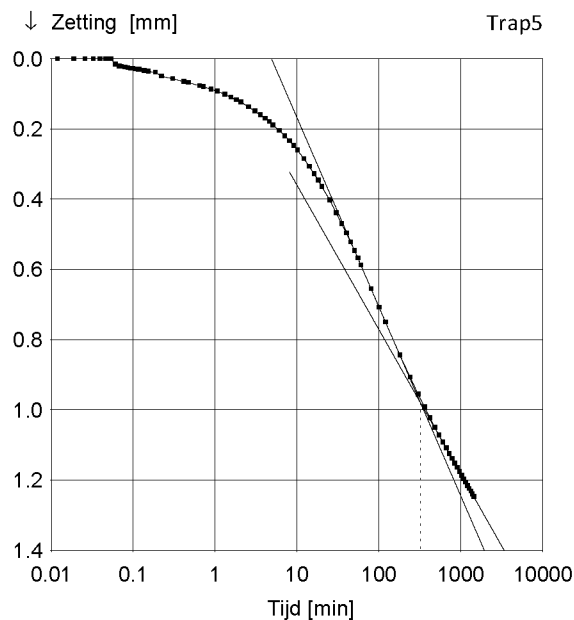
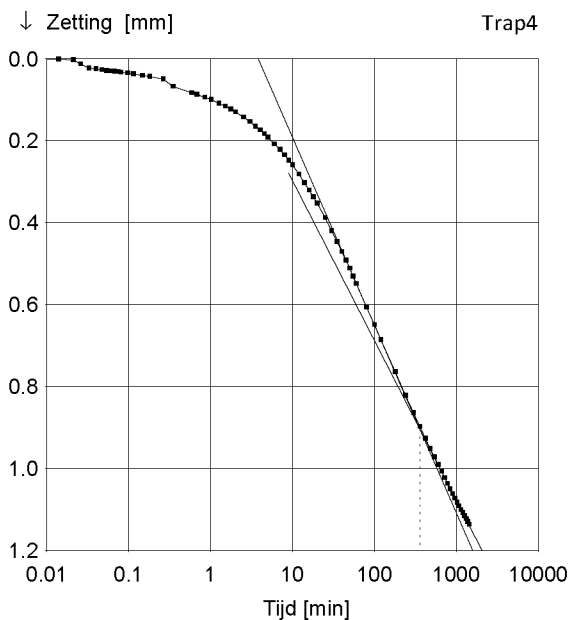
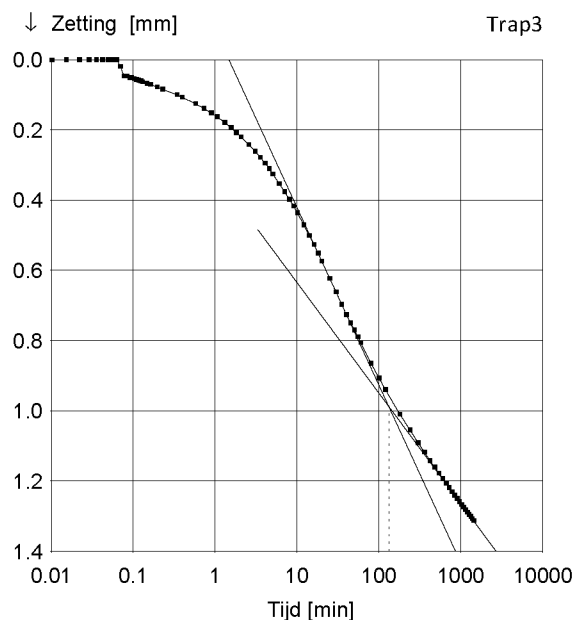
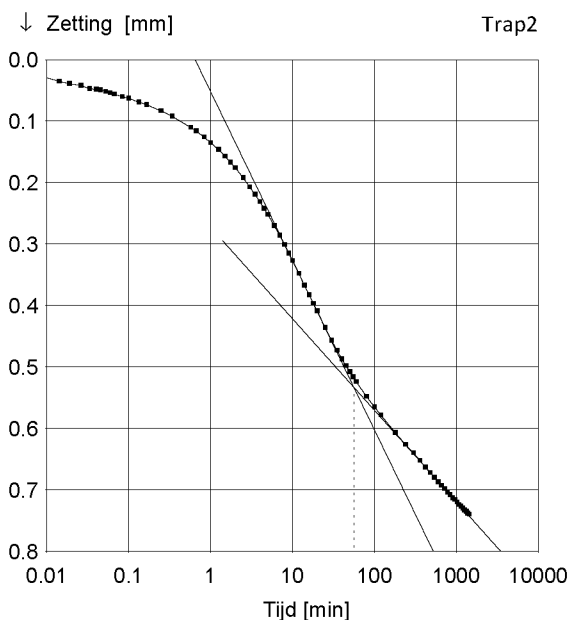
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 13	Einddatum	: 06-03-2019	Diepte	: 11.08 - 11.13 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.12 kN/m ³
Apparaat	: 1	Zetting (24u)	: 0.369 mm	Droog vol. gewicht γ_{dr}	: 6.24 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.631 mm	Watergehalte W	: 110 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	45.78	89.75	133.72	199.67	301.34	133.72	301.34	540.41
Δp [kN/m ²]	21.05	24.73	43.97	43.97	65.95	101.67	-167.62	167.62	239.07
c_v [10^{-8} m ² /s] (wortel-t)		4.77	2.19	0.76	0.53	0.49		3.84	0.59
m_v [1/MPa]		0.85	0.92	0.89	0.76	0.53		0.08	0.29
k_{10} [10^{-11} m/s]		39.97	19.76	6.62	3.94	2.59		3.13	1.68
c_v [10^{-8} m ² /s] (log-t)		3.32	1.39	0.46	0.39	0.35		4.78	0.42
C_α [10^{-3}]		7.577	16.64	22.19	25.01	26.91		6.334	24.86



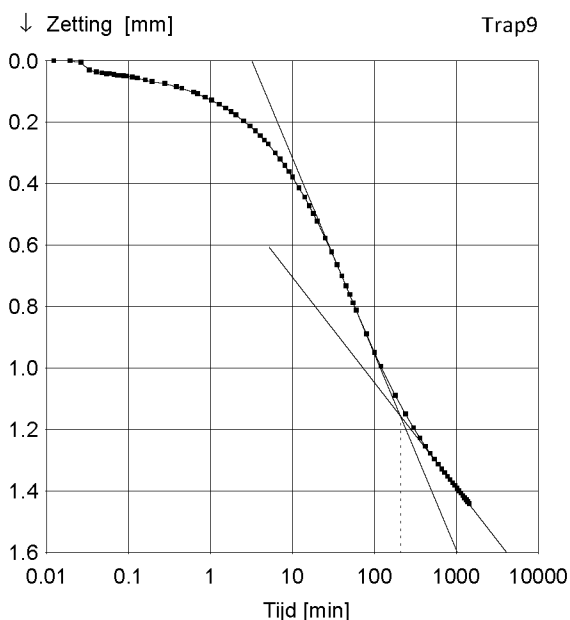
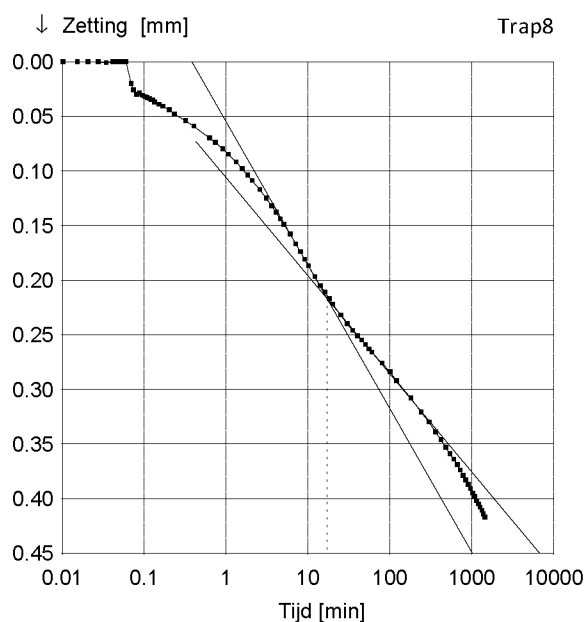
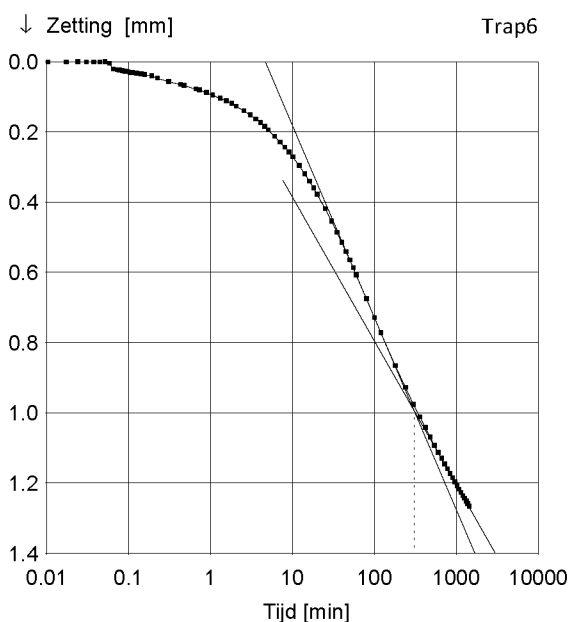
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 13	Einddatum	: 06-03-2019	Diepte	: 11.08 - 11.13 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.12 kN/m ³
Apparaat	: 1	Zetting (24u)	: 0.369 mm	Droog vol. gewicht γ_{dr}	: 6.24 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.631 mm	Watergehalte W	: 110 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	45.78	89.75	133.72	199.67	301.34	133.72	301.34	540.41
Δp [kN/m ²]	21.05	24.73	43.97	43.97	65.95	101.67	-167.62	167.62	239.07
c_v [10^{-8} m ² /s] (wortel-t)		4.77	2.19	0.76	0.53	0.49		3.84	0.59
m_v [1/MPa]		0.85	0.92	0.89	0.76	0.53		0.08	0.29
k_{10} [10^{-11} m/s]		39.97	19.76	6.62	3.94	2.59		3.13	1.68
c_v [10^{-8} m ² /s] (log-t)		3.32	1.39	0.46	0.39	0.35		4.78	0.42
C_α [10^{-3}]		7.577	16.64	22.19	25.01	26.91		6.334	24.86



Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 13	Einddatum	: 06-03-2019	Diepte	: 11.08 - 11.13 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.12 kN/m ³
Apparaat	: 1	Zetting (24u)	: 0.369 mm	Droog vol. gewicht γ_{dr}	: 6.24 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.631 mm	Watergehalte W	: 110 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	21.05	45.78	89.75	133.72	199.67	301.34	133.72	301.34	540.41
Δp [kN/m ²]	21.05	24.73	43.97	43.97	65.95	101.67	-167.62	167.62	239.07
c_v [10 ⁻⁸ m ² /s] (wortel-t)		4.77	2.19	0.76	0.53	0.49		3.84	0.59
m_v [1/MPa]		0.85	0.92	0.89	0.76	0.53		0.08	0.29
k_{10} [10 ⁻¹¹ m/s]		39.97	19.76	6.62	3.94	2.59		3.13	1.68
c_v [10 ⁻⁸ m ² /s] (log-t)		3.32	1.39	0.46	0.39	0.35		4.78	0.42
C_α [10 ⁻³]		7.577	16.64	22.19	25.01	26.91		6.334	24.86

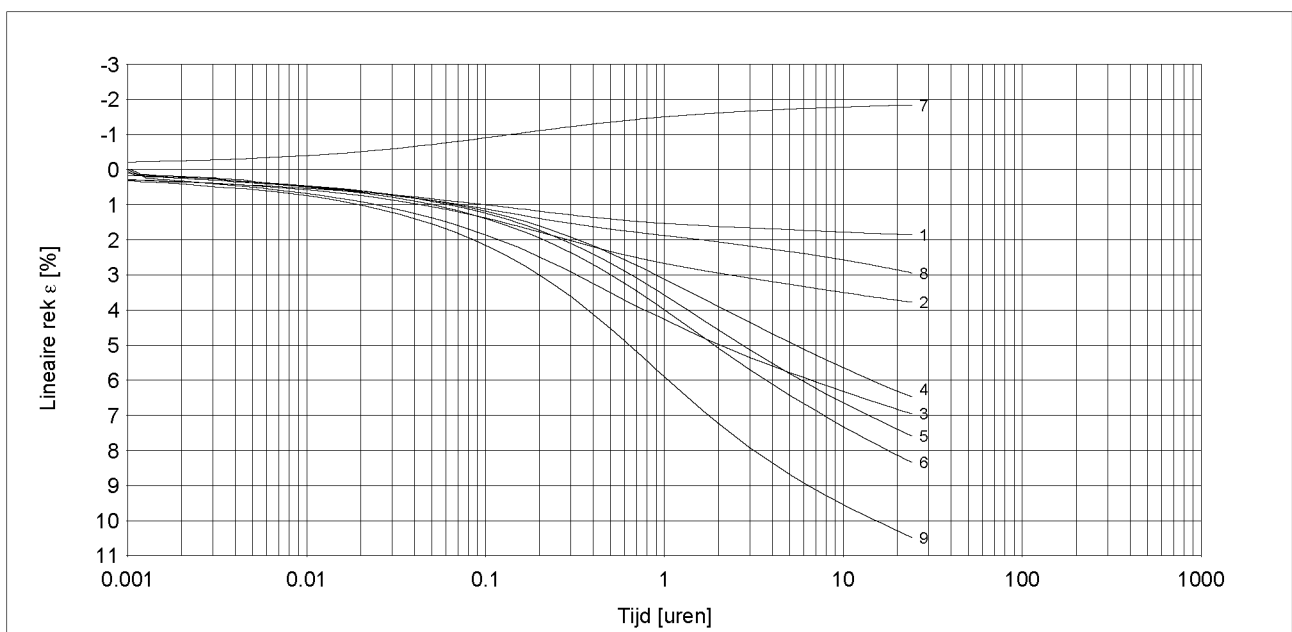
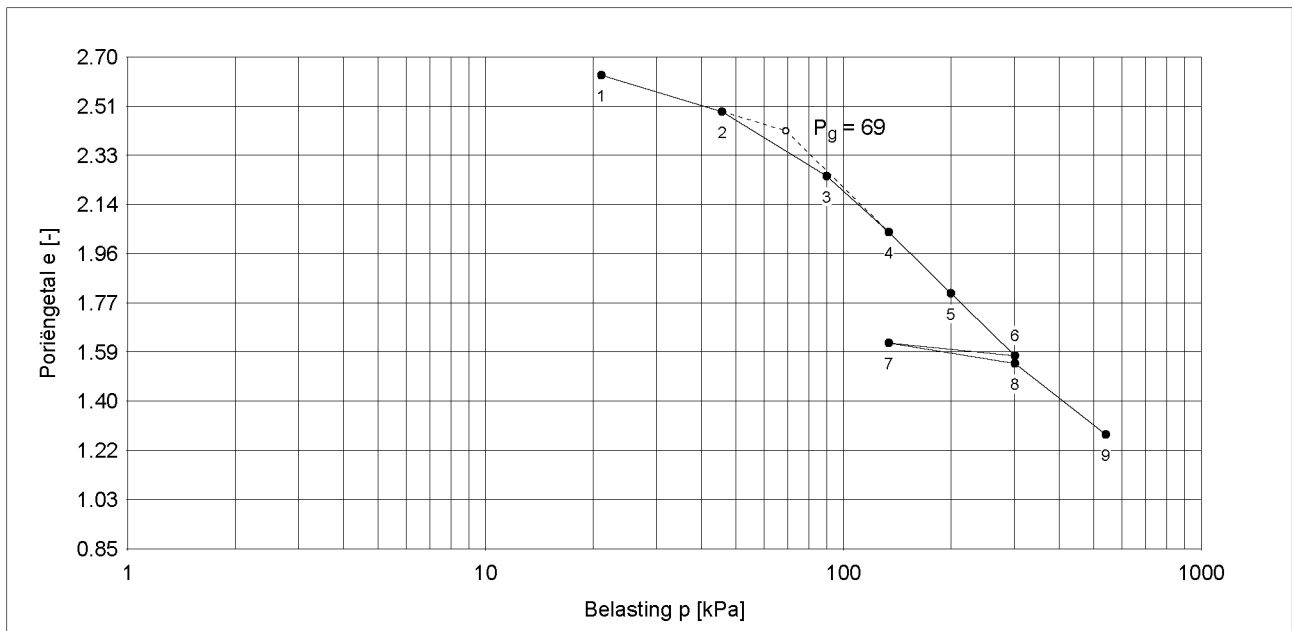


Boring : B02 Startdatum : 25-02-2019 Grondsoort: Klei, matig siltig, sterk humeus
 Monster : 13 Einddatum : 06-03-2019 Diepte : 11.08 - 11.13 m. -NAP
 Bus : - Hoogte monster : 20.00 mm Initieel vol. gewicht γ : 13.12 kN/m³
 Apparaat : 1 Zetting (24u) : 0.369 mm Droog vol. gewicht γ_{dr} : 6.24 kN/m³
 Soort monster : Ongeroerd e_0 : 2.70 Watergehalte W : 110 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9	
Belasting	21.05	45.78	89.75	133.72	199.67	301.34	133.72	301.34	540.41	
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.405	0.830	1.213	1.323	1.309	0.134	0.218	1.050	
$C_{\alpha}^* = \Delta \epsilon / \Delta \log t$			0.0076	0.0166	0.0222	0.0250	0.0269		0.0063	0.0249

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.218$ Trap 7 - 8	$C_c = 1.323$ Trap 4 - 5	$C_{sw} = 0.134$ Trap 6 - 7	$C_{\alpha} = 0.0236$ Trap 4 - 5
---	---	--	---



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Klei, matig siltig, sterk humeus
Monster	: 13	Einddatum	: 06-03-2019	Diepte	: 11.08 - 11.13 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 13.12 kN/m ³
Apparaat	: 1	Zetting (24u)	: 0.369 mm	Droog vol. gewicht γ_{dr}	: 6.24 kN/m ³
Soort monster	: Ongeroerd	e_0	: 2.70	Watergehalte	W : 110 %

Bepaling parameters per trap

Belasting p [kPa]		21	46	90	134	200	301	134	301	540
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.4052	0.8299	1.2133	1.3234	1.3087	0.1341	0.2184	1.0504	
$C_\alpha = \Delta \epsilon / \Delta \log t$		0.0076	0.0166	0.0222	0.0250	0.0269		0.0063	0.0249	
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		20.8	10.3	7.6	7.2	7.6	31.9	53.2	8.3	
C_s		108.0	43.2	24.0	24.3	27.5	76.2	412.1	34.5	
C_{10^4}		11.8	5.3	3.3	3.3	3.6	11.9	35.1	4.2	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)		4.77	2.19	0.76	0.53	0.49		3.84	0.59	
$m_v [1/MPa]$		0.85	0.92	0.89	0.76	0.53		0.08	0.29	
$k_{10} [10^{-11} m/s]$		39.97	19.76	6.62	3.94	2.59		3.13	1.68	
$c_v [10^{-8} m^2/s]$ (Casagrande)		3.32	1.39	0.46	0.39	0.35		4.78	0.42	
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0495	0.1070	0.1677	0.1967	0.2114	0.0224	0.0367	0.1894	
c							0.0124			0.0118

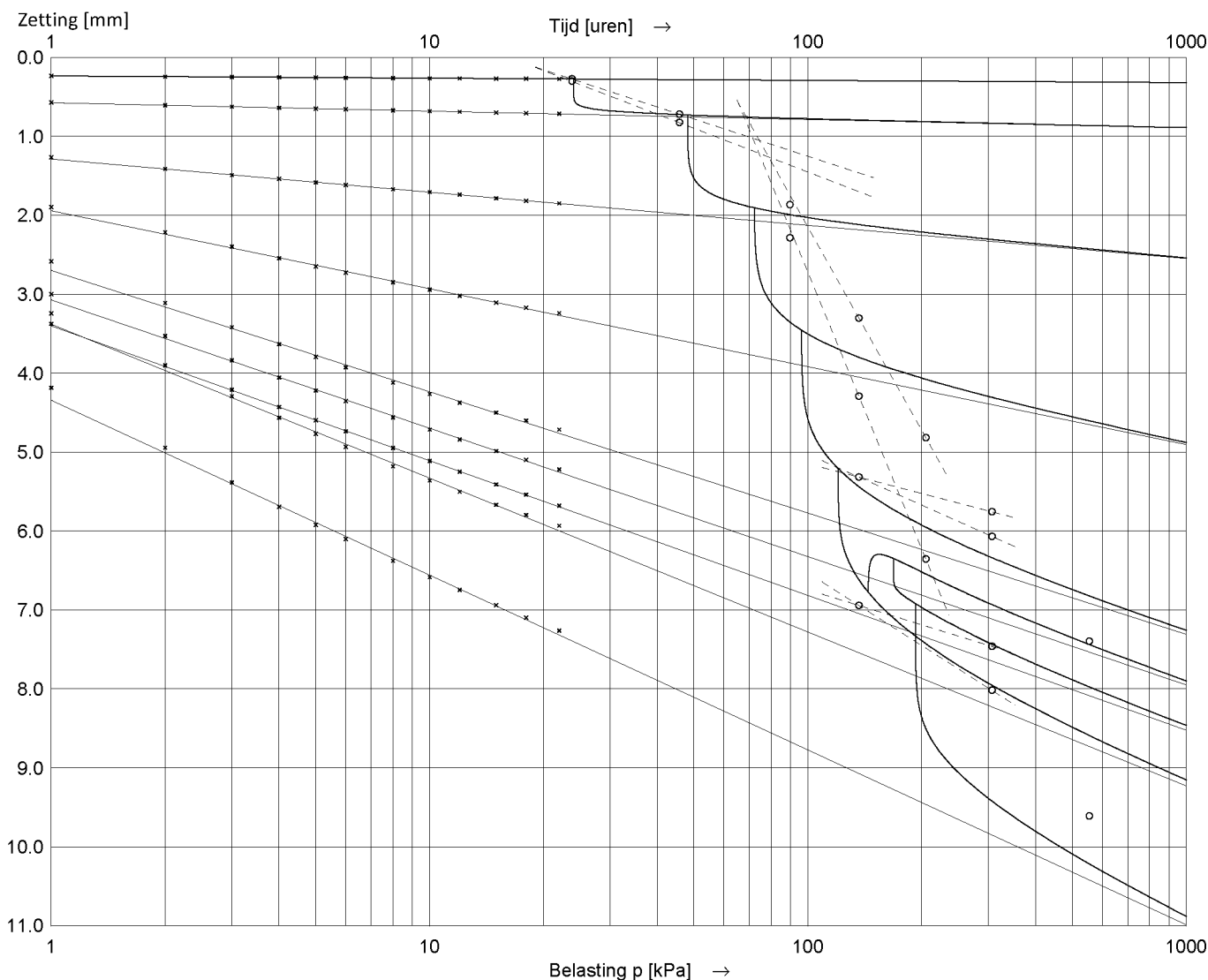
Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 69.0$	$C_r = 0.2184$	$C_c = 1.3234$	$C_{sw} = 0.1341$	$C_\alpha = 0.0236$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 64.6$	$C_p = 20.8$ $C_s = 108.0$ $C_{10^4} = 11.8$	$C_p' = 7.2$ $C_s' = 24.3$ $C_{10^4}' = 3.3$	$A_p = 31.9$ $A_s = 76.2$ $A_{10^4} = 11.9$	$C_{p(r)} = 53.2$ $C_{s(r)} = 412.1$ $C_{10^4(r)} = 35.1$
Isotachen	Trap 7 - 8	Trap 5 - 6	Trap 6	
$P_g = --$	a = 0.0367	b = 0.2114	c = 0.0124	

Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroerd	h (24u)	: 19.725 mm	Watergehalte W	: 168 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	23.8	45.78	89.75	136.46	205.16	306.83	136.46	306.83	554.14
C _p	28.8	11.5	5.7	5.3	6.3	21.1	36.1	7.1	
C _s	166.0	42.1	14.5	14.6	19.2	49.3	197.1	22.9	
C _{10⁴}	17.0	5.5	2.2	2.2	2.7	7.8	20.8	3.2	

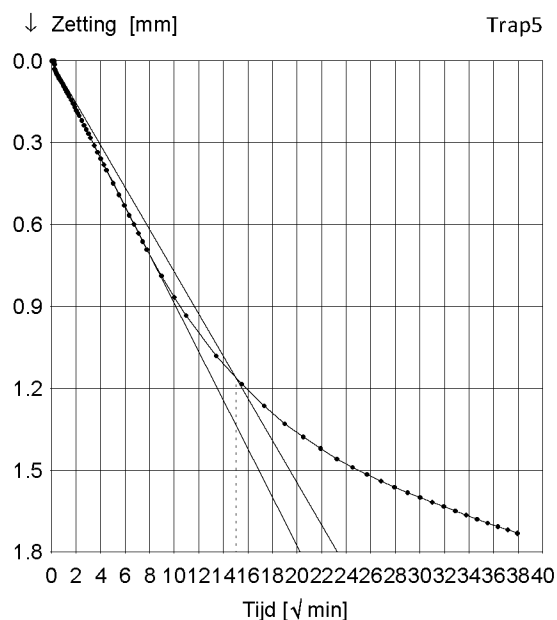
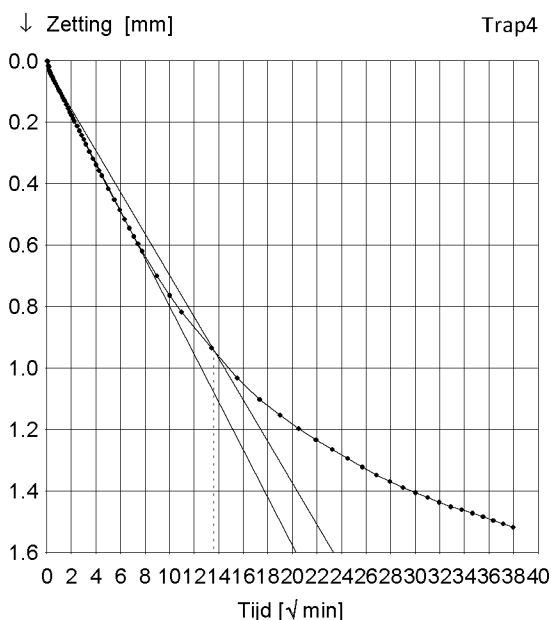
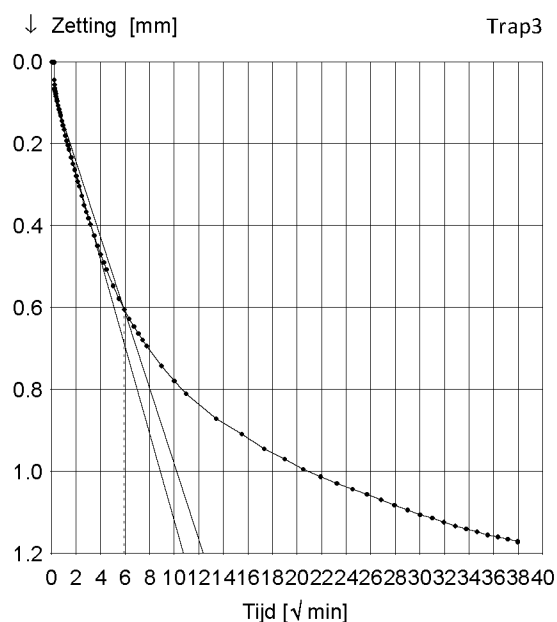
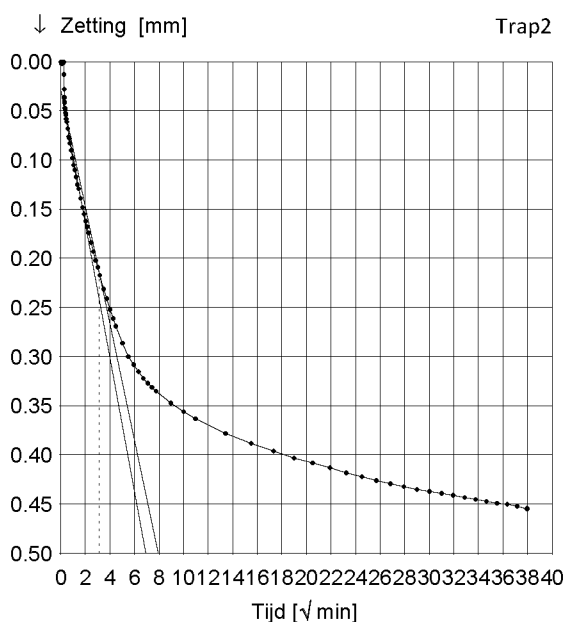
Grensspanning p _g	Voor p _g	Na p _g	Ontlasten	Herbelasten	Ontlasten(2)	Herbelasten(2)
74 [kN/m ²]	C _p = 28.8	C _p ' = 5.3	C _p = 21.1	C _p = 36.1		
	C _s = 166.0	C _s ' = 14.6	C _s = 49.3	C _s = 197.1		
	C _{10⁴} = 17.0	C _{10⁴} ' = 2.2	C _{10⁴} = 7.8	C _{10⁴} = 20.8		



Asymptoot tijdinterval : 2 - 48 uur.

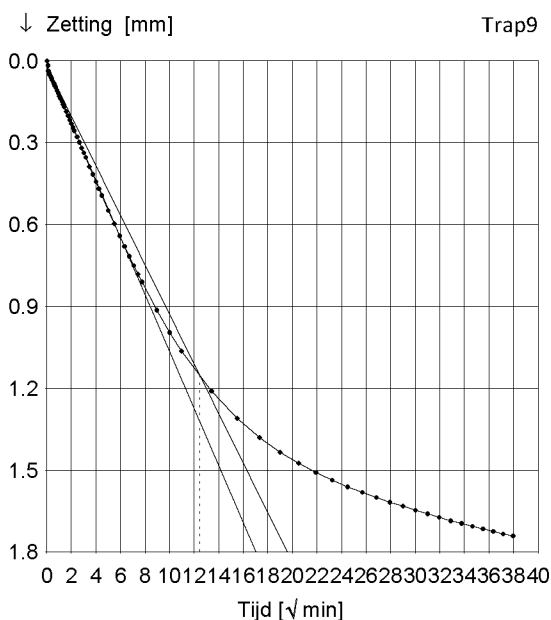
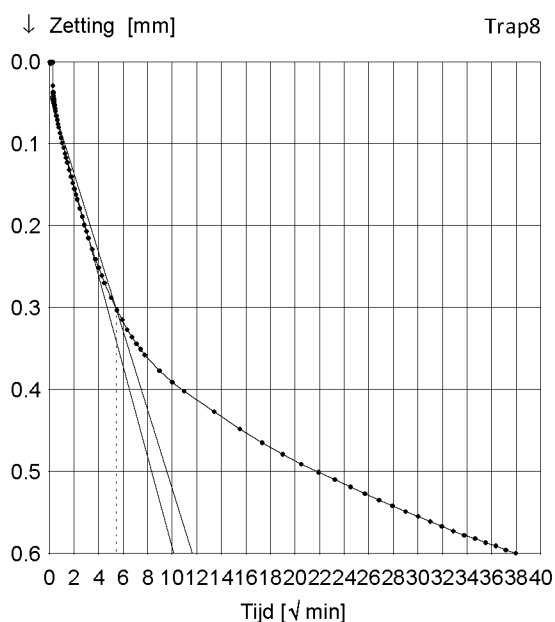
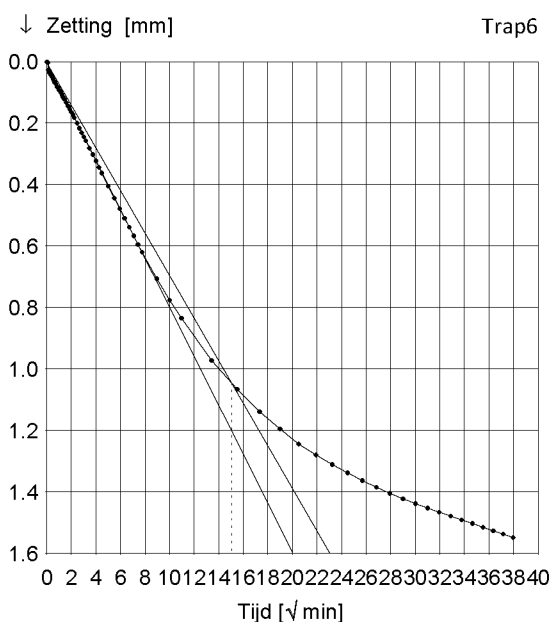
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.725 mm	Watergehalte W	: 168 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	23.8	45.78	89.75	136.46	205.16	306.83	136.46	306.83	554.14
Δp [kN/m ²]	23.8	21.98	43.97	46.71	68.7	101.67	-170.37	170.37	247.31
c_v [10^{-8} m ² /s] (wortel-t)		10.59	2.67	0.42	0.28	0.23		1.64	0.25
m_v [1/MPa]		0.47	0.71	1.21	1.13	0.77		0.12	0.39
k_{10} [10^{-11} m/s]		48.83	18.73	5.04	3.13	1.69		2.00	0.94
c_v [10^{-8} m ² /s] (log-t)		4.35	2.00	0.29	0.25	0.20		1.87	0.20
C_α [10^{-3}]		4.291	17.38	31.87	38.12	36.82		11.91	37.24



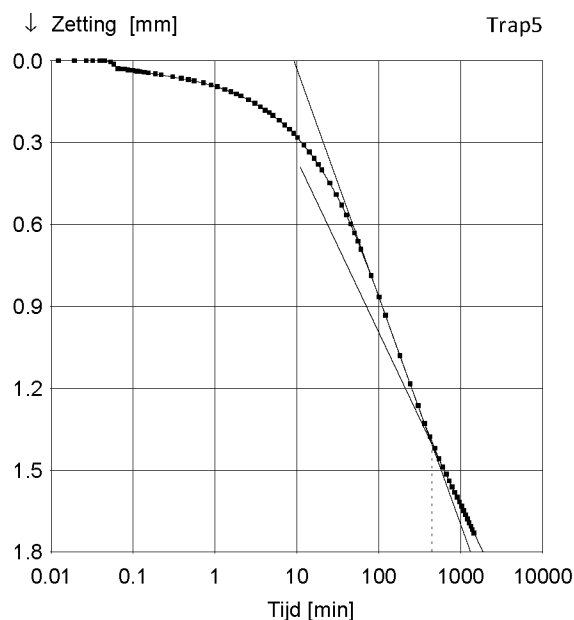
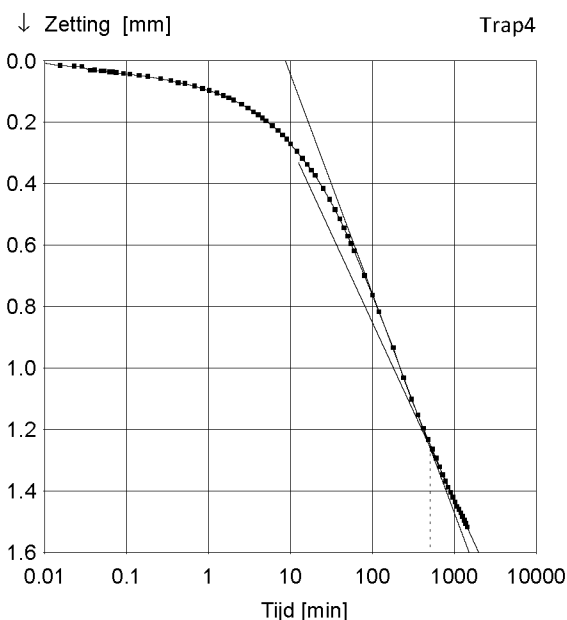
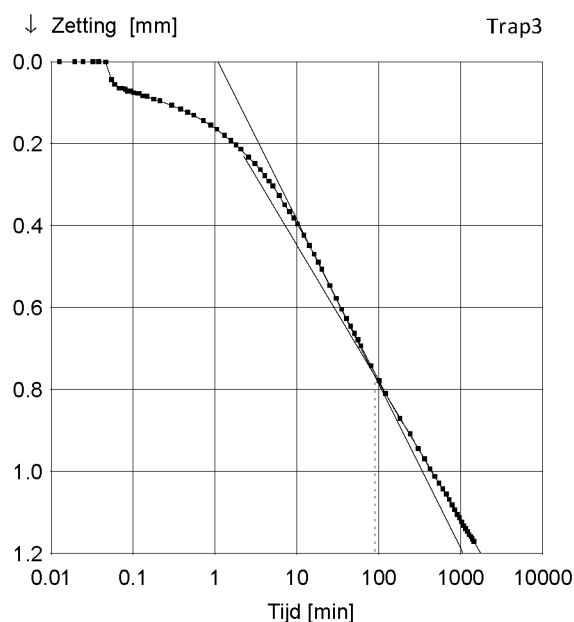
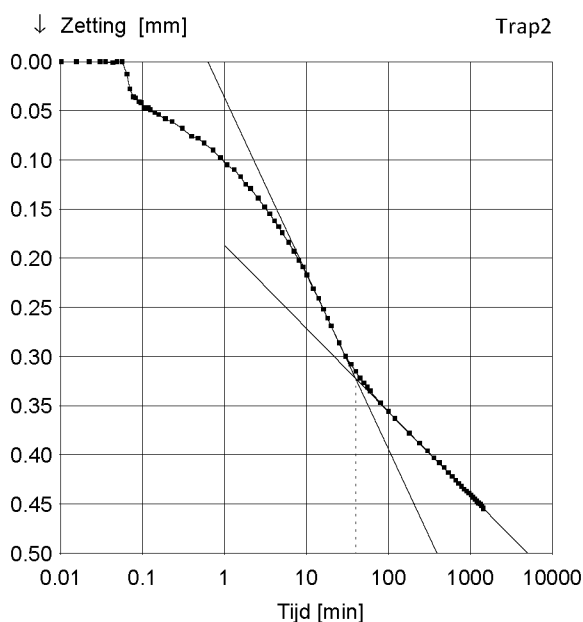
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.725 mm	Watergehalte W	: 168 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	23.8	45.78	89.75	136.46	205.16	306.83	136.46	306.83	554.14
Δp [kN/m ²]	23.8	21.98	43.97	46.71	68.7	101.67	-170.37	170.37	247.31
c_v [10^{-8} m ² /s] (wortel-t)		10.59	2.67	0.42	0.28	0.23		1.64	0.25
m_v [1/MPa]		0.47	0.71	1.21	1.13	0.77		0.12	0.39
k_{10} [10^{-11} m/s]		48.83	18.73	5.04	3.13	1.69		2.00	0.94
c_v [10^{-8} m ² /s] (log-t)		4.35	2.00	0.29	0.25	0.20		1.87	0.20
C_α [10^{-3}]		4.291	17.38	31.87	38.12	36.82		11.91	37.24



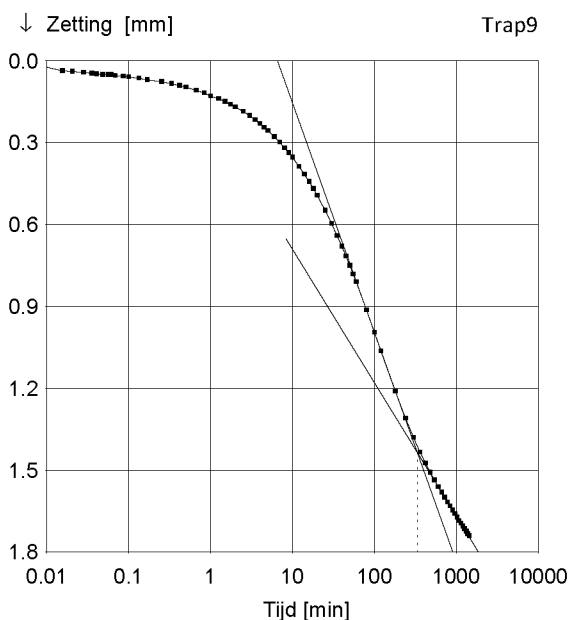
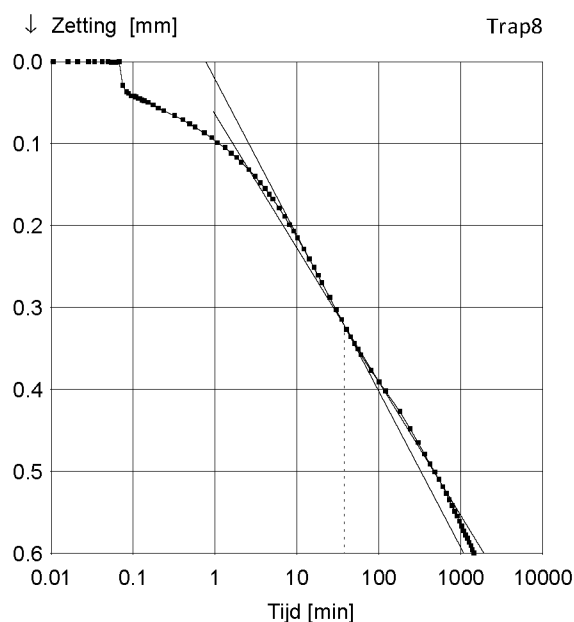
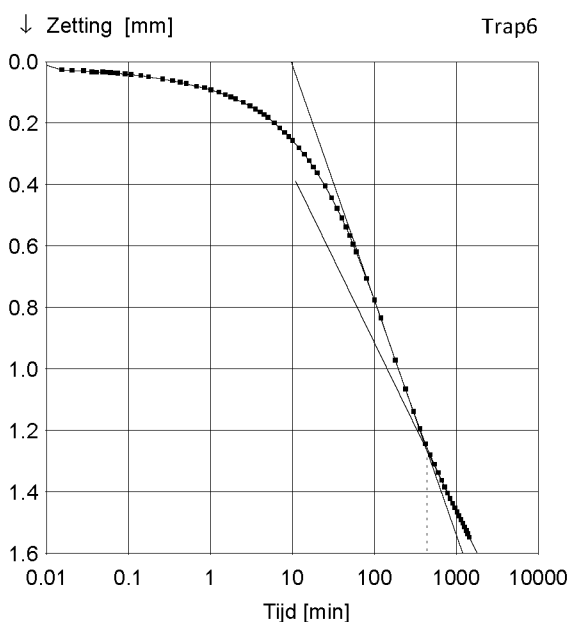
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.725 mm	Watergehalte W	: 168 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	23.8	45.78	89.75	136.46	205.16	306.83	136.46	306.83	554.14
Δp [kN/m ²]	23.8	21.98	43.97	46.71	68.7	101.67	-170.37	170.37	247.31
c_v [10^{-8} m ² /s] (wortel-t)		10.59	2.67	0.42	0.28	0.23		1.64	0.25
m_v [1/MPa]		0.47	0.71	1.21	1.13	0.77		0.12	0.39
k_{10} [10^{-11} m/s]		48.83	18.73	5.04	3.13	1.69		2.00	0.94
c_v [10^{-8} m ² /s] (log-t)		4.35	2.00	0.29	0.25	0.20		1.87	0.20
C_α [10^{-3}]		4.291	17.38	31.87	38.12	36.82		11.91	37.24



Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroid	h (24u)	: 19.725 mm	Watergehalte W	: 168 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting [kN/m ²]	23.8	45.78	89.75	136.46	205.16	306.83	136.46	306.83	554.14
Δp [kN/m ²]	23.8	21.98	43.97	46.71	68.7	101.67	-170.37	170.37	247.31
c_v [10^{-8} m ² /s] (wortel-t)		10.59	2.67	0.42	0.28	0.23		1.64	0.25
m_v [1/MPa]		0.47	0.71	1.21	1.13	0.77		0.12	0.39
k_{10} [10^{-11} m/s]		48.83	18.73	5.04	3.13	1.69		2.00	0.94
c_v [10^{-8} m ² /s] (log-t)		4.35	2.00	0.29	0.25	0.20		1.87	0.20
C_α [10^{-3}]		4.291	17.38	31.87	38.12	36.82		11.91	37.24



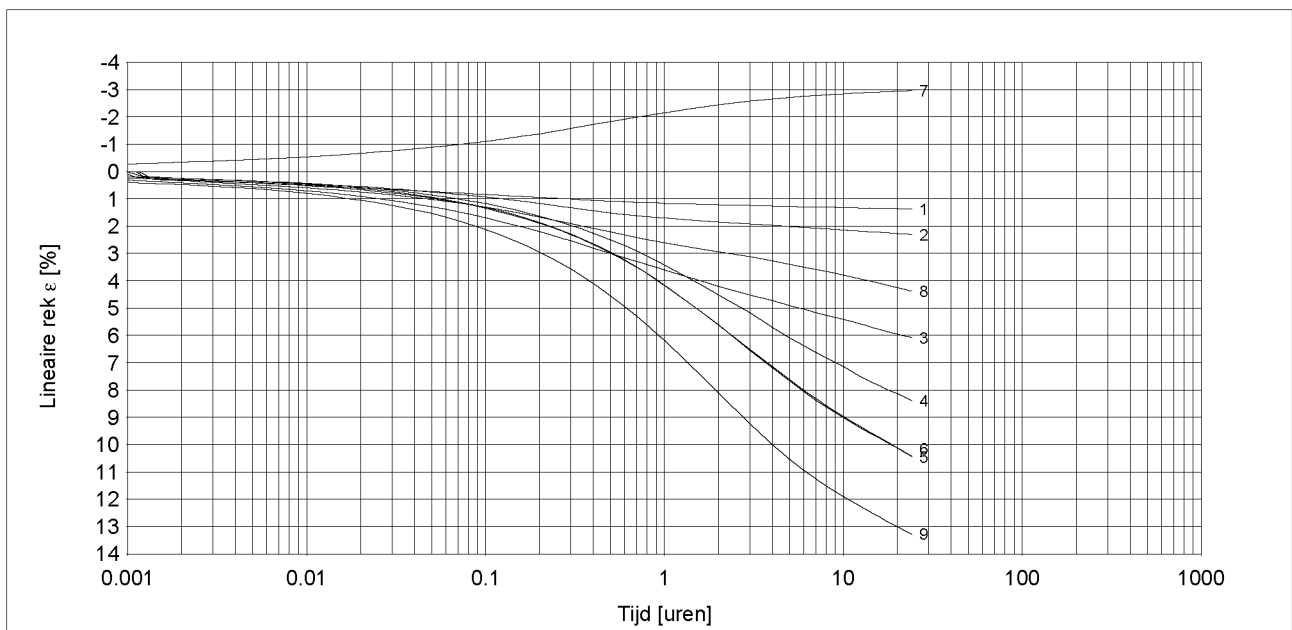
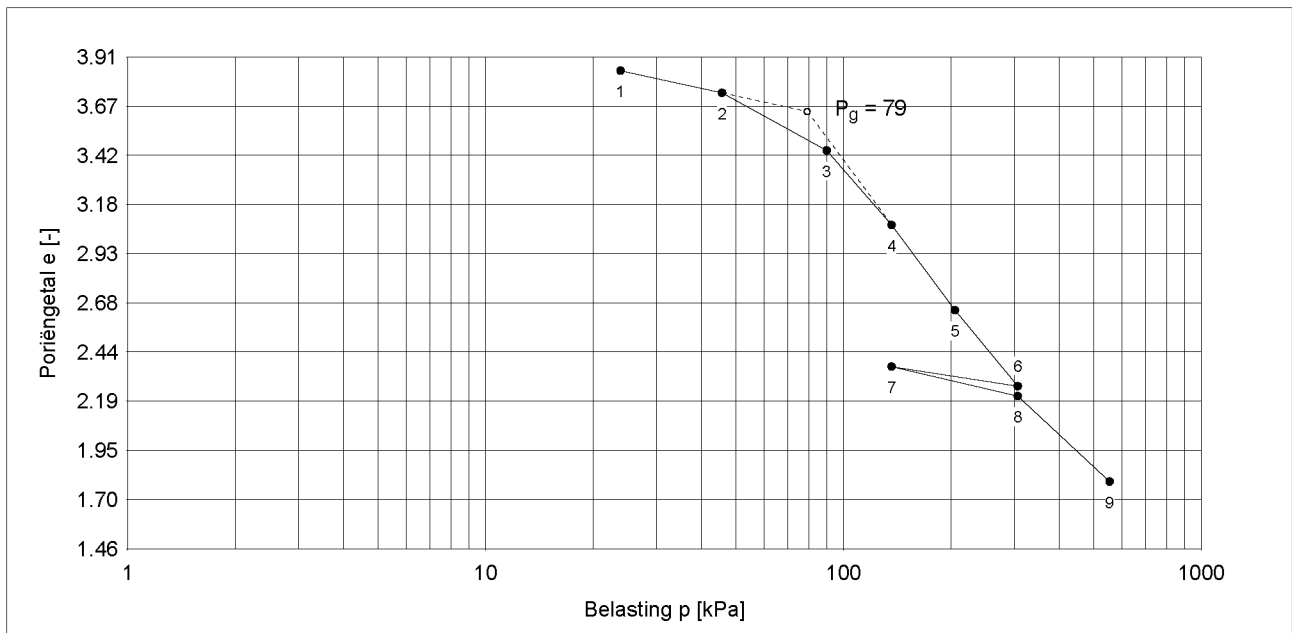
Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroerd	e_0	: 3.91	Watergehalte W	: 168 %

Belastingtrappen:	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6	Trap7	Trap8	Trap9
Belasting	23.8	45.78	89.75	136.46	205.16	306.83	136.46	306.83	554.14
$C_{c/r/sw} = \Delta e / \Delta \log p$	0.393	0.984	2.049	2.401	2.175	0.276	0.419	1.665	
$C_{\alpha}^* = \Delta \varepsilon / \Delta \log t$		0.0043	0.0174	0.0319	0.0381	0.0368		0.0119	0.0372

* Berekening C_{α} gebaseerd op de proefstukhoogte aan het begin van de trap

$C_r = 0.419$	$C_c = 2.401$	$C_{sw} = 0.276$
Trap 7 - 8	Trap 4 - 5	Trap 6 - 7

$C_{\alpha} = 0.0350$
Trap 4 - 5



* Lineaire rek berekend t.o.v. proefstukhoogte aan het begin van iedere trap

Boring	: B02	Startdatum	: 25-02-2019	Grondsoort:	Veen, sterk kleiig
Monster	: 14	Einddatum	: 06-03-2019	Diepte	: 11.43 - 11.48 m. -NAP
Bus	: -	Hoogte monster	: 20.00 mm	Initieel vol. gewicht γ	: 12.04 kN/m ³
Apparaat	: 2	Zetting (24u)	: 0.275 mm	Droog vol. gewicht γ_{dr}	: 4.49 kN/m ³
Soort monster	: Ongeroerd	e_0	: 3.91	Watergehalte W	: 168 %

Bepaling parameters per trap

Belasting p [kPa]		24	46	90	136	205	307	136	307	554
NEN / Bjerrum	Trap	1	2	3	4	5	6	7	8	9
$C_{c/r/sw} = \Delta e / \Delta \log p$		0.3934	0.9839	2.0491	2.4011	2.1753	0.2757	0.4188	1.6649	
$C_{\alpha} = \Delta e / \Delta \log t$		0.0043	0.0174	0.0319	0.0381	0.0368		0.0119	0.0372	
KoppeJan	Trap	1	2	3	4	5	6	7	8	9
C_p		28.8	11.5	5.7	5.3	6.3	21.1	36.1	7.1	
C_s		166.0	42.1	14.5	14.6	19.2	49.3	197.1	22.9	
C_{10^4}		17.0	5.5	2.2	2.2	2.7	7.8	20.8	3.2	
Taylor / Casagrande	Trap	1	2	3	4	5	6	7	8	9
$c_v [10^{-8} m^2/s]$ (Taylor)		10.59	2.67	0.42	0.28	0.23		1.64	0.25	
$m_v [1/MPa]$		0.47	0.71	1.21	1.13	0.77		0.12	0.39	
$k_{10} [10^{-11} m/s]$		48.83	18.73	5.04	3.13	1.69		2.00	0.94	
$c_v [10^{-8} m^2/s]$ (Casagrande)		4.35	2.00	0.29	0.25	0.20		1.87	0.20	
Isotachen	Trap	1	2	3	4	5	6	7	8	9
a, b		0.0357	0.0931	0.2090	0.2703	0.2734	0.0361	0.0553	0.2411	
c						0.0174			0.0177	

Bepaling P_g en parameters op basis van geselecteerde trappen

NEN / Bjerrum	Trap 7 - 8	Trap 4 - 5	Trap 6 - 7	Trap 6, 9
$P_g = 79.2$	$C_r = 0.4188$	$C_c = 2.4011$	$C_{sw} = 0.2757$	$C_{\alpha} = 0.0350$
KoppeJan	Trap 1 - 2	Trap 5 - 6	Trap 6 - 7	Trap 7 - 8
$P_g = 74.3$	$C_p = 28.8$ $C_s = 166.0$ $C_{10^4} = 17.0$	$C_p' = 5.3$ $C_s' = 14.6$ $C_{10^4}' = 2.2$	$A_p = 21.1$ $A_s = 49.3$ $A_{10^4} = 7.8$	$C_{p(r)} = 36.1$ $C_{s(r)} = 197.1$ $C_{10^4(r)} = 20.8$
Isotachen	Trap 7 - 8	Trap 5 - 6	Trap 6	
$P_g = --$	a = 0.0553	b = 0.2734	c = 0.0174	