



Geotechnisch advies:

Nieuwbouw van biogasinstallatie Lange Lijnbaan nabij nr 51 te Harlingen

Onderdeel: Funderingsadvies

Projectnummer: 5406

Datum: 20-03-2024

Status: Voorlopig

In opdracht van:



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Documentgegevens

Projectnaam Nieuwbouw van biogasinstallatie Lange Lijnbaan nabij nr 51 te Harlingen
Onderdeel Funderingsadvies
Projectnummer 5406
Documentnummer 5406-FA-R01
Versienummer 1
Status Voorlopig
Datum 20-03-2024
Contactpersoon/projectleider Ing.  J

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Projectnummer nb

Versiebeheer

Versie	Doc nr	Datum	Status	Omschrijving	Ongesteld	Gecontroleerd
1	5406-FA-R01	22-02-2024	Voorlopig	-	 J	 J
2	5406-FA-R02	20-03-2024	Definitief	Tekstuele aanpassingen	 J	 J

Op al onze werkzaamheden zijn de algemene leveringsvoorwaarden (ALV 2018) van de Vereniging Ondernemers Technisch Bodemonderzoek (V.O.T.B.), zoals gedeponeerd bij de Kamer van Koophandel Midden-Nederland te Utrecht onder nr. 40476246 en de rechtsverhouding opdrachtgever-architect, ingenieurs en adviseur DNR2011 van toepassing.



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1 Inleiding

1.1 Algemeen

Op 22-01-2024 ontving GrondGrip BV te Drachten van SFP Groningen B.V. opdracht voor het opstellen van een geotechnisch advies voor het project Nieuwbouw van biogasinstallatie Lange Lijnbaan nabij nr 51 te Harlingen.

Dit rapport bevat het geotechnisch advies, het uitgevoerde grondonderzoek is reeds eerder gerapporteerd.

Dit rapport omvat de volgende onderdelen:

- ▶ een korte projectomschrijving
- ▶ een beschrijving van het geotechnisch onderzoek en de bodemgesteldheid
- ▶ het funderingsadvies en uitwerking van de fundering
- ▶ aanbevelingen voor de uitvoering
- ▶ slotopmerking

1.2 Normen en richtlijnen

Voor het opstellen van de adviesrapportage zijn de volgende normen en richtlijnen van toepassing geacht:

- [1.] NEN 9997-1+C2:2017, Geotechnisch ontwerp van Constructies – Deel 1: Algemene regels, november 2017

1.3 Beschikbare gegevens

Het advies is opgesteld aan de hand van het uitgevoerde grondonderzoek. Zie rapport:

- [2.] 'Geotechnisch onderzoek', 61211729, 06-07-2021, IJB Geotechniek B.V.

De resultaten van het betreffende grondonderzoek zijn als bijlage toegevoegd (zie Bijlage C).

Overige door de opdrachtgever ter beschikking gestelde documenten:

- [3.] 'Bestektekening en doorsneden', van W2N Engineering.

GrondGrip staat niet in voor de juistheid en/of volledigheid van de door derden verstrekte informatie en gegevens.

2 Projectinformatie

Het project "Nieuwbouw van biogasinstallatie Lange Lijnbaan nabij nr 51 te Harlingen" bestaat uit de nieuwbouw van een Biogasinstallatie. De nieuwbouw wordt opgetrokken uit een staal/beton constructie met een betonvloer.

Het bouwpeil bedraagt circa N.A.P. + 4,6 m. Bij het voorliggende ontwerp is ervan uitgegaan dat het huidige maaiveld wordt afgevlakt en lokaal met enkele decimeters wordt opgehoogd tot een niveau van circa N.A.P. +4,6 m. Er is een kelder bij gebouw 4 op niveau 1900 – peil.

De constructeur heeft aangegeven dat voor de palen onder de fundering de volgende belastingen te verwachten zijn:

- Gebouw 1, Kantoor, 600-700 kN
- Gebouw 2, Opwaardeerhal, 450 kN
- Gebouw 4, Verwerkingshal, 700-1700 kN
- (Gebouw 6), Silo's, 1000 kN.

Gebouw 3, de waterzuivering, en gebouw 5, Digistraat worden vooralsnog niet uitgewerkt.



Figuur 1 Locatie nieuwbouw (bron: Google Maps)



Figuur 2 gebouw 1 - Kantoor

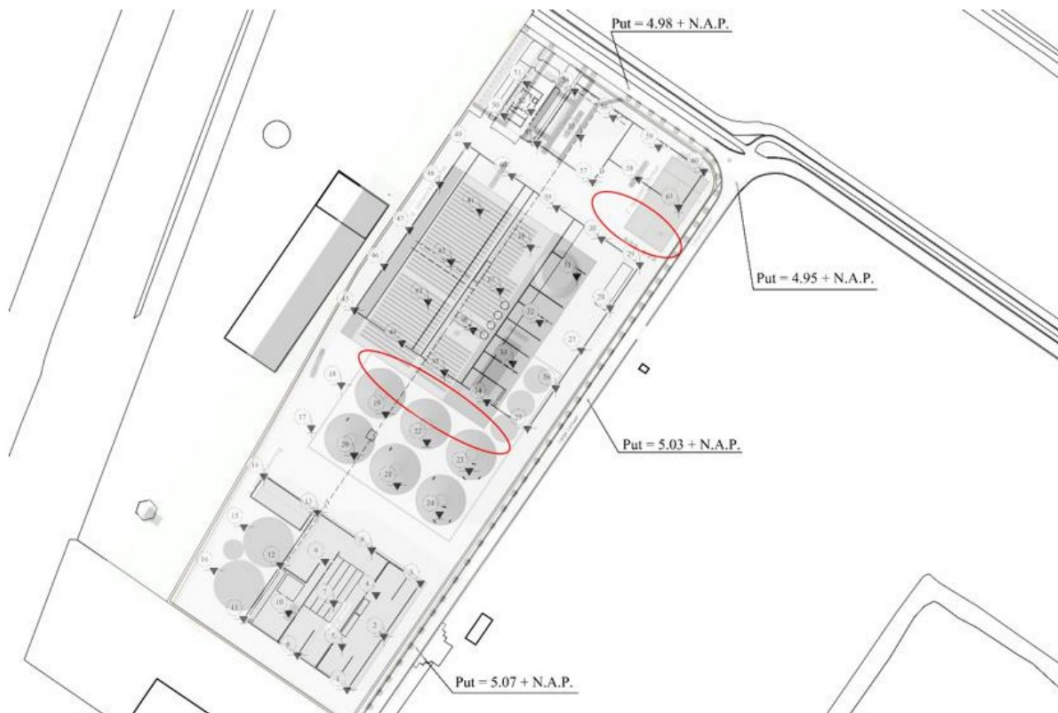


Figuur 3 gebouw 4 - Verwerkingshal

3 Grondonderzoek, terrein en bodemgesteldheid

3.1 Onderzoekopzet

Het grondonderzoek is op 08-06-2023 uitgevoerd volgens onderstaande plattegrond.



Figuur 4 Locatie nieuwbouw en sonderingen (bron: Geotechnisch onderzoek [2.])

De rapportage van het grondonderzoek is voor de volledigheid als bijlage toegevoegd aan dit rapport (zie Bijlage C).

Het uitgevoerde onderzoek dekt het projectgebied onvoldoende af. De diepte van het uitgevoerde onderzoek is toereikend. De hart-op- hart afstand van het onderzoek (a_{gem}) bedraagt plaatselijk meer dan 25m en is daarmee in eerste instantie niet overal voldoende. De aard en omvang van het onderzoek voldoet hiermee vooralsnog aan §3.2.3 van NEN 9997-1 voor de toetsing van geotechnische constructies. Deze zijn in rood op bovenstaande situatie ingetekend. Het advies is derhalve om ter plaatse van deze zones nog enkele sonderingen uit te voeren om ongunstige variatie in de ondergrond te ondervangen.

3.2 Terreinhoogte

De maaiveldhoogte ter plaatse van de onderzoekslocaties varieerde tussen de N.A.P. +4,01 m en N.A.P. +4,73 m.

3.3 Bodemopbouw

In onderstaande tabel is de aangetroffen bodemgesteldheid globaal omschreven:

Bovenkant laag [m t.o.v. NAP]			Grondsoort
Maaiveld			Klei zandig. Lokaal is sprake van een zandige bovenlaag van circa 1 tot 2 meter dikte
-4,8	à	-5,5	Zand siltig tot vast. Lokaal zijn dunne klei/leem lagen aangetroffen
Maximaal verkende diepte is N.A.P. -23,0 m			

Tabel 1 Globale bodemopbouw

3.4 Water

De actuele grondwaterstand is tijdens het grondonderzoek aangetroffen op een niveau van circa N.A.P. +3,26 m tot N.A.P. +3,21 m. Dit is uiteraard een eenmalige waarneming, welke mogelijk iets is beïnvloed door het boren. De grondwaterstand kan aan fluctuaties onderhevig zijn onder invloed van o.a. neerslag en verdamping, seizoensinvloeden, beheersmaatregelen, open waterstanden etc.

4 Funderingsadvies

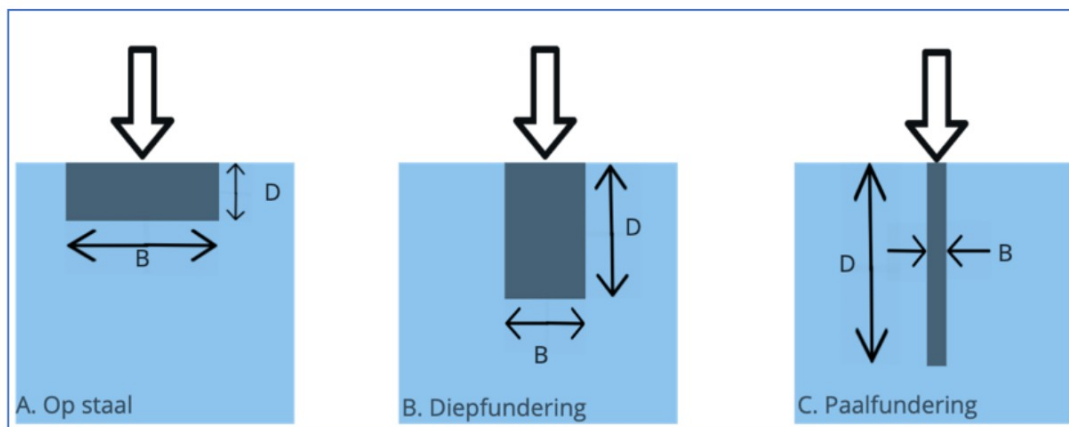
4.1 Funderingskeuze

4.1.1 Funderingstype

Er zijn 3 hoofdtypen fundering, te weten:

- A. fundering op staal; een ondiepe fundering op de vaste grond. Een fundering op staal is vaak goedkoper dan een fundering op palen, wanneer op geringe diepte goede, draagkrachtige bodemlagen aanwezig zijn. Bij samendrukbare bodem is het vaak niet goed mogelijk om een fundering op staal te realiseren, omdat de zettingen dan te groot zouden worden.
- B. diepfundering; tussenvorm palen en staal, met elementen met een diepte tussen circa 3 en 5 × de breedte. Een diepfundering kan interessant zijn wanneer pas op een diepte van 2 tot 4 m een draagkrachtige bodemlaag aanwezig is en voor een normale fundering op staal te veel grondwerk zou zijn vereist.
- C. fundering op palen, bestaande uit elementen met een diepte $> 5 \times$ de breedte/diameter. Een fundering op palen wordt doorgaans toegepast in gebieden met slappe of heterogene bodem, bij uitbreiding van bestaande bebouwing (om zettingsverschillen te voorkomen) en/of bij zeer hoge funderingsbelastingen.

Een schematisch overzicht van de hoofdtypen is hieronder weergegeven.



Figuur 5 Soorten funderingen

4.1.2 Keuze fundering

Gezien de aangetroffen bodemgesteldheid, met over het algemeen weinig draagkrachtige en samendrukbare lagen in de eerste meters vanaf maaiveld, in combinatie met de aard van de bouwplannen met plaatselijk hoge puntlasten, komt voor dit project een fundering op palen in aanmerking.

Hierbij is voor dit project in eerste instantie uitgegaan van de toepassing van prefab betonpalen. Hierbij dient rekening te worden gehouden met heitrillingen. Indien gewenst kunnen we door middel van een trillingspredictie de risico's op schade aan belendingen (conform SBR-A) inzichtelijk maken.



Ten aanzien van de paalkeuze dient het volgende te worden opgemerkt:

- ▶ De paalsysteemkeuze is gebaseerd op de voorhanden zijnde en verstrekte gegevens. Aanvullende milieukundige, archeologisch, geohydrologische, gemeentelijke of overige randvoorwaarden kunnen aanleiding geven tot wijziging van het paaltype.
- ▶ De keuze voor alternatieve paalsystemen is niet uitgesloten.

4.2 Paalfundering

4.2.1 Uitgangspunten

Het funderingsadvies is opgesteld op basis van NEN 9997-1+C2:2017. Deze norm bevat de NEN-EN 1997-1 (Eurocode 7 – Deel 1) en de nationale bijlage en laatste aanvullingen.

De gebruikte geotechnische uitgangspunten zijn als volgt samengevat:

- ▶ In het rapport worden de draagkracht en vervormingen bepaald van axiaal op druk belaste funderingselementen.
- ▶ Voor dit project is uitgegaan van een niet-stijf bouwwerk, waarbij de constructie geplaatst is in veiligheidsklasse RC2 en geotechnische categorie 2.
- ▶ Paalklasse factoren;

Paaltype	α_p	α_s	α_t	β	S	L/Z
Prefab	0,70	0,010	0,0070	1,0	1,0	1
α_p	=	paalklassefactor voor de berekening van de draagkracht van de paalpunt				
β	=	factor die de invloed van de paalvoetvorm in rekening brengt				
S	=	factor die de invloed van de vorm van de dwarsdoorsnede van de paalvoet in rekening brengt				
α_s	=	factor die de invloed van het paaltype op de schachtwrijving in rekening brengt				

Tabel 2 Paalklassefactoren

- ▶ Partiële en correlatie factoren

$\xi_{3/4}$	=	Correlatiefactor voor de bepaling van karakteristieke waarden uit de resultaten van grondproeven. (Bepaald volgens NEN 9997-1, Tabel A.10a, uitgaande van aantal sonderingen N = 1 en niet stijf). Vooralsnog is geen controle op de variatie uitgevoerd, en is een eventueel mogelijke optimalisatie bij variatie < 12% nog niet toegepast.	=	1,39
γ_t	=	Partiële weerstandsfactor op de totale weerstand voor op druk belaste palen	=	1,20

Tabel 3 Partiële veiligheids- en correlatie factoren

- ▶ Voor klei-, leem/silt of veenlagen wordt, cf. NEN 9997-1 art. 7.6.1.1, door ons bureau schachtwrijving buiten beschouwing gelaten.
- ▶ Er is geen rekening gehouden met een toegenomen grondspanning t.g.v. een ophoging.
- ▶ Er is rekening gehouden met een reductie t.g.v. ontgraving.
- ▶ Er is uitgegaan van alleenstaande palen. Groepswerking is buiten beschouwing gelaten.
- ▶ Er is rekening gehouden met negatieve kleef tot een niveau van N.A.P. -5,0 m tot -5,5 m.
- ▶ Positieve kleef is gerekend in de draagkrachtige lagen.



4.2.2 Resultaten drukdraagvermogen

Aan de hand van de berekende punt- en schachtweerstand is de maximale draagkracht $[R_{c,d}]$ bepaald. Vervolgens is de netto draagkracht $R_{c,net,d}$ bepaald door de maximale draagkracht $[R_{c,d}]$ te verminderen met de negatieve kleef welke zich kan ontwikkelen langs de paalschacht. Deze extra paalbelasting ($F_{s,nk,d}$) treedt op naast de constructiebelastingen ($F_{c,d}$).

In de volgende tabel staat per sondeerpunt, paal (schacht) afmeting en paalpuntniveau de maximale rekenwaarde van de grond mechanische draagkracht aangegeven. De in de tabel genoemde rekenwaarden zijn opgebouwd uit de punt- en schachtweerstand en verminderd met de negatieve kleefbelasting.

De genoemde draagkrachten (druk) gelden voor verticaal en centrisc op druk belaste palen. Opgemerkt dient te worden dat de palen niet zijn gecontroleerd op de slankheid en de maximale (beton) spanning in de paalschacht.

In Bijlage A en Bijlage B zijn een voorbeeldberekening en uitgebreide samenvattingstabellen opgenomen

4.2.2.1 Gebouw 1, Kantoor

Tabel 4 PaalDrukdraagvermogens per paaldiameter en sondering, gebouw 1 - Kantoor

Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig				
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		$R_{c,netto,d}$ [kN]	
	niveau	niveau	G1 290	G1 320
52	4.16	-16.50	653	741
		-17.00	684	773
		-17.50	715	804
		-18.00	778	876
53	4.12	-12.00	556	635
		-12.50	863	834
		-13.00	656	727
		-13.50	617	684
		-16.50	893	1012
		-17.00	806	887
		-17.50	825	924
		-18.00	823	916
54	4.27	-12.50	873	821
		-13.00	623	694
		-13.50	583	649
		-16.00	578	644
		-16.50	617	695
		-17.00	674	756
		-17.50	696	780
		-18.00	714	792
55	4.12	-6.50	537	633
		-7.00	648	757
		-7.50	762	883
		-8.00	900	1067
		-8.50	915	879
		-9.00	622	713
		-9.50	555	625
		-10.00	556	636
		-10.50	579	656
		-11.00	603	688
		-11.50	623	707
		-12.00	647	734
		-12.50	782	787
		-13.00	683	757
		-13.50	673	746
		-16.00	700	780
		-16.50	847	961
		-17.00	887	1003
		-17.50	913	1014
		-18.00	897	1002



4.2.2.2 Gebouw 2, Opwaardeerhal

Tabel 5 PaalDrukdraagvermogens per paaldiameter en sondering, gebouw 2 - Opwaardeerhal

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		$R_{c, netto, d}$ [kN]	
	niveau	niveau	G2 290	G2 320
58	4.14	-6.00	333	400
		-6.50	418	496
		-7.00	515	603
		-7.50	614	712
		-8.00	764	911
		-8.50	897	913
		-9.00	625	719
59	4.31	-6.00	348	422
		-6.50	455	541
		-7.00	560	657
		-7.50	708	788
		-8.00	675	785
		-8.50	614	688
		-9.00	392	446
60	4.73	-6.00	401	486
		-6.50	502	598
		-7.00	613	718
		-7.50	625	686
		-8.00	604	671
		-8.50	595	704
		-9.00	555	636
61	4.40	-6.00	300	377
		-6.50	442	531
		-7.00	558	659
		-7.50	692	810
		-8.00	672	711
		-8.50	469	546
		-9.00	358	407

4.2.2.3 Gebouw 4, Verwerkingshal

Tabel 6 PaalDrukdraagvermogens per paaldiameter en sondering, gebouw 4 - Verwerkingshal

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		$R_{c, netto, d}$ [kN]	
	niveau	niveau	G4 290	G4 320
25	4.30	-12.50	617	704
		-13.00	546	600
		-13.50	513	571
		-16.50	564	632
		-17.00	817	946
		-17.50	946	1081
		-18.00	1045	1192
		-18.50	1026	1165
		-19.00	1095	1193
26	4.39	-12.50	767	897
		-13.00	812	848
		-13.50	689	764
		-16.50	759	865
		-17.00	1082	1168
		-17.50	925	1012
		-18.00	909	1019
		-18.50	895	997
		-19.00	1049	1194
		-19.50	1129	
27	4.33	-8.50	717	633
		-9.00	419	486



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		R _{c, netto, d} [kN]	
	niveau	niveau	G4 290	G4 320
		-9.50	418	480
		-10.00	391	449
		-10.50	448	499
		-11.00	465	530
		-11.50	468	529
		-12.00	519	593
		-12.50	758	874
		-13.00	637	706
		-13.50	628	698
		-16.50	703	789
		-17.00	882	1009
		-17.50	934	1058
		-18.00	1135	1254
		-18.50	1037	1171
		-19.00	977	1092
		-19.50	995	1110
28	4.37	-8.50	646	700
		-9.00	537	619
		-9.50	463	535
		-10.00	431	422
		-10.50	376	418
		-13.00	836	816
		-13.50	648	718
		-14.00	585	651
		-17.00	665	745
		-17.50	857	975
		-18.00	997	1139
		-18.50	1054	1194
29	4.28	-13.00	667	737
		-13.50	633	704
		-16.50	701	786
		-17.00	853	975
		-17.50	819	923
		-18.00	858	964
		-19.00	1135	1299
		-19.50	1310	
30	4.17	-8.50	641	753
		-9.00	769	918
		-9.50	831	987
		-10.00	575	602
		-10.50	524	599
		-13.00	685	749
		-13.50	643	716
		-16.50	787	885
		-17.00	1055	1203
		-17.50	1230	1390
		-18.00	1279	1454
		-18.50	1342	1519
31	4.21	-7.50	610	718
		-8.00	722	841
		-8.50	805	948
		-9.00	919	1100
		-9.50	971	1158
		-10.00	927	1094
		-10.50	657	680
		-11.00	563	637
		-11.50	571	647



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		R _{c, netto, d} [kN]	
	niveau	niveau	G4 290	G4 320
32	4.22	-13.00	658	722
		-13.50	634	702
		-16.50	820	932
		-17.00	1056	1204
		-17.50	1160	1320
		-18.00	1052	1189
		-18.50	1099	1229
		-19.00	1075	1217
		-7.50	663	772
		-8.00	750	843
		-8.50	482	526
		-9.00	433	503
		-9.50	450	471
		-10.00	364	407
		-10.50	363	407
		-12.50	530	610
		-13.00	602	663
		-13.50	576	641
33	4.19	-16.50	701	812
		-17.00	821	926
		-17.50	841	952
		-18.00	852	958
		-18.50	980	1051
		-19.00	926	1041
		-19.50	926	1040
		-12.50	655	705
		-13.00	603	669
		-13.50	564	628
		-16.50	689	776
		-17.00	873	983
		-17.50	909	1016
		-18.00	930	968
		-18.50	851	955
		-19.00	878	983
34	4.18	-12.50	657	762
		-13.00	555	609
		-13.50	545	599
		-16.50	872	1012
		-17.00	1064	1220
		-17.50	920	1025
		-18.00	913	1031
		-18.50	917	1028
		-19.00	947	1088
		-19.50	1047	1161
35	4.13	-6.50	618	727
		-7.00	818	968
		-7.50	870	1046
		-8.00	877	1049
		-8.50	818	897
		-9.00	548	564
		-9.50	471	540
		-12.50	836	961
		-13.00	889	1014
		-13.50	974	1074
		-17.00	986	1025
		-17.50	886	988
		-18.00	880	981
36	4.19	-12.00	637	751
		-12.50	1049	1222
		-13.00	749	828



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld niveau	paalpunt niveau	$R_{c, netto, d}$ [kN]	
			G4 290	G4 320
		-13.50	694	766
37	4.23	-13.00	715	756
		-13.50	629	699
		-16.50	663	741
		-17.00	669	745
		-17.50	764	858
		-18.00	768	857
		-18.50	794	882
		-19.00	801	889
38	4.20	-7.50	707	827
		-8.00	870	1046
		-8.50	922	994
		-9.00	826	967
		-9.50	714	691
		-10.00	600	695
		-10.50	629	645
		-11.00	589	671
		-11.50	613	696
		-12.50	748	787
		-13.00	679	744
		-13.50	636	706
		-16.50	1053	1099
		-17.00	994	1129
		-17.50	1003	1132
		-18.00	1209	1396
39	4.20	-18.50	1379	1572
		-19.00	1339	1512
		-19.50	1636	1895
		-7.00	609	714
		-7.50	708	822
		-8.00	801	957
		-8.50	949	1134
		-9.00	1001	1191
		-9.50	882	1035
		-10.00	655	705
		-10.50	581	658
		-12.50	904	945
		-13.00	792	879
		-13.50	718	798
		-16.50	1222	1362
		-17.00	1199	1292
40	4.15	-17.50	1174	1326
		-18.00	1233	1389
		-18.50	1222	1295
		-19.00	1154	1286
		-19.50	1121	1240
		-7.00	612	713
		-7.50	713	828
		-8.00	677	696
		-8.50	642	751
		-9.00	672	783
		-9.50	606	608
		-10.00	536	611
		-10.50	546	615
		-11.50	629	710
		-12.00	660	744
		-12.50	969	1117
		-13.00	810	895
		-13.50	767	852
		-16.50	792	882
		-17.00	863	966
		-17.50	881	985
		-18.00	868	965



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		$R_{c, netto, d}$ [kN]	
	niveau	niveau	G4 290	G4 320
		-18.50	935	1037
41	4.19	-16.50	643	724
		-17.00	798	843
		-17.50	758	846
		-18.00	759	849
42	4.20	-7.50	609	714
		-8.00	702	828
		-8.50	757	845
		-9.00	425	459
		-9.50	368	419
		-12.50	755	757
		-13.00	633	704
		-13.50	589	655
		-16.50	684	768
		-17.00	698	781
		-17.50	954	1097
		-18.00	1085	1243
		-18.50	1252	1427
		-19.00	1371	1410
		-19.50	1293	1459
43	4.20	-7.50	626	701
		-8.00	681	759
		-8.50	712	839
		-9.00	714	621
		-9.50	500	586
		-10.00	516	596
		-12.50	1161	1196
		-13.00	792	881
		-13.50	722	801
		-16.50	791	893
		-17.00	1128	1296
		-17.50	1202	1373
		-18.00	1286	1460
		-18.50	1356	1539
		-19.00	1569	1784
		-19.50	1647	1884
44	4.14	-6.50	620	731
		-7.00	598	601
		-7.50	398	459
		-8.00	413	485
		-8.50	411	478
		-9.00	562	660
		-9.50	468	503
		-10.00	427	483
		-13.00	718	797
		-13.50	681	752
		-16.50	926	1065
		-17.00	927	1034
		-17.50	901	1003
		-18.00	897	1001
		-18.50	917	1024
		-19.00	1108	1274
		-19.50	1367	1562
45	4.18	-7.50	804	941
		-8.00	880	964
		-8.50	543	543
		-9.00	460	499
		-9.50	425	484
		-12.50	675	775
		-13.00	660	734
		-13.50	599	665



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		$R_{c; netto; d}$ [kN]	
	niveau	niveau	G4 290	G4 320
46	4.10	-17.50	790	894
		-18.00	942	1072
		-18.50	1031	1178
		-19.00	1298	1483
		-19.50	1415	1612
		-7.00	672	797
		-7.50	836	984
		-8.00	888	1067
		-8.50	572	663
		-9.00	493	539
		-9.50	468	538
		-10.00	485	553
		-10.50	470	520
		-12.50	1085	1143
		-13.00	739	820
		-13.50	676	751
		-17.00	1034	1179
		-17.50	1132	1289
		-18.00	1214	1383
		-18.50	1373	1559
		-19.00	1609	1862
		-19.50	1661	1919
		-20.00	1713	1977
		-20.50	1765	2034
47	4.16	-7.50	710	815
		-8.00	787	922
		-8.50	655	608
		-9.00	492	568
		-9.50	415	474
		-10.00	431	489
		-10.50	444	502
		-11.50	608	683
		-13.50	613	680
		-17.50	847	972
		-18.00	1056	1216
		-18.50	1133	1200
		-19.00	945	1051
		-19.50	958	1072
48	4.15	-7.50	741	869
		-8.00	845	974
		-8.50	907	994
		-9.00	522	597
		-9.50	515	595
		-10.00	513	588
		-10.50	502	567
		-11.00	524	597
		-11.50	529	597
		-12.50	777	786
		-13.00	689	765
		-13.50	645	717
		-17.00	905	984
		-17.50	853	951
		-18.00	858	957
49	4.12	-7.00	691	825
		-7.50	780	947
		-8.00	832	1005
		-8.50	519	556
		-9.00	424	475
		-11.00	612	666
		-11.50	572	655



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		$R_{c, netto, d}$ [kN]	
	niveau	niveau	G4 290	G4 320
		-12.00	572	647
		-12.50	581	660
		-13.00	581	645
		-13.50	555	617
		-16.50	732	823
		-17.00	854	926
		-17.50	843	948
		-18.00	862	965
		-18.50	892	1000
		-19.00	1006	1081
		-19.50	931	1035

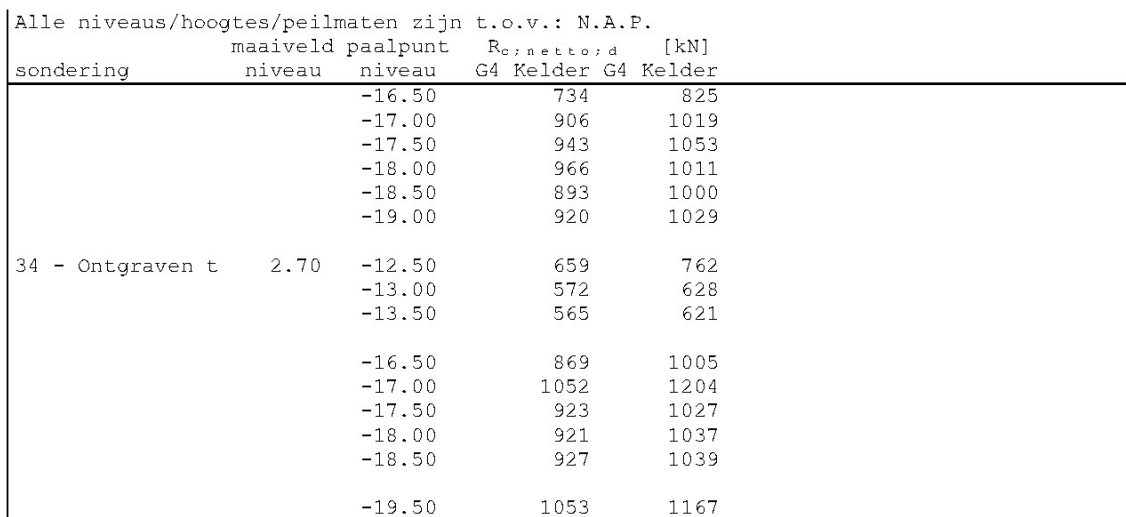
4.2.2.4 Gebouw 4, Verwerkingshal (kelder Peil -1,9 m)

Tabel 7 PaalDrukdraagvermogens per paaldiameter en sondering, gebouw 4 - Verwerkingshal - kelder Peil -1900 (N.A.P +2,7m)

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
sondering	maaiveld paalpunt		$R_{c, netto, d}$ [kN]	
	niveau	niveau	G4 Kelder	G4 Kelder
25 - Ontgraven t	2.70	-8.50	738	790
		-9.00	465	504
		-9.50	408	461
		-12.50	661	751
		-13.00	602	661
		-13.50	577	641
		-17.00	862	993
		-17.50	983	1119
		-18.00	1076	1224
		-18.50	1059	1200
		-19.00	1124	1226
26 - Ontgraven t	2.70	-12.50	785	911
		-13.00	832	874
		-13.50	724	803
		-16.50	796	904
		-17.00	1099	1188
		-17.50	957	1048
		-18.00	946	1059
		-18.50	935	1040
		-19.50	1156	
27 - Ontgraven t	2.70	-12.50	763	876
		-13.00	654	725
		-13.50	646	717
		-16.50	715	802
		-17.00	882	1006
		-17.50	933	1055
		-18.00	1122	1240
		-18.50	1035	1167
		-19.00	983	1097
		-19.50	1002	1116
28 - Ontgraven t	2.70	-13.00	833	822
		-13.50	667	739
		-14.00	614	683
		-17.00	691	774
		-17.50	870	988
		-18.00	1004	1143
		-18.50	1060	1200
		-19.00	1041	1178
		-19.50	1026	1147
29 - Ontgraven t	2.70	-8.00	661	776



		-8.50	574	601
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
		maaiveld	paalpunt	R _{c; netto; d} [kN]
sondering	niveau	niveau	G4 Kelder	G4 Kelder
		-9.00	429	482
		-13.00	689	762
		-13.50	664	738
		-16.50	732	820
		-17.00	873	995
		-17.50	843	948
		-18.00	880	987
		-19.00	1140	1302
		-19.50	1309	
30 - Ontgraven t	2.70	-8.50	647	754
		-9.00	767	908
		-9.50	829	977
		-10.00	614	650
		-10.50	575	653
		-12.50	846	885
		-13.00	733	804
		-13.50	701	778
		-16.50	838	940
		-17.00	1086	1235
		-17.50	1255	1415
		-18.00	1305	1480
		-18.50	1367	1545
		-19.00	1625	1882
		-19.50	1679	1918
		-20.00	1516	
31 - Ontgraven t	2.70	-7.50	607	708
		-8.00	713	825
		-8.50	793	926
		-9.00	935	1113
		-9.50	1017	1203
		-10.00	935	1095
		-10.50	699	731
		-11.00	621	699
		-11.50	632	713
		-13.00	714	784
		-13.50	693	767
		-16.50	867	981
		-17.00	1086	1235
		-17.50	1186	1346
		-18.00	1089	1228
		-18.50	1137	1270
		-19.00	1115	1259
32 - Ontgraven t	2.70	-7.50	661	765
		-8.00	748	839
		-8.50	522	571
		-9.00	486	559
		-9.50	508	538
		-12.50	583	665
		-13.00	649	715
		-13.50	626	696
		-16.50	743	856
		-17.00	857	965
		-17.50	880	993
		-18.00	894	1003
		-18.50	1014	1091
		-19.00	967	1085
		-19.50	969	1086
33 - Ontgraven t	2.70	-12.50	689	745
		-13.00	648	718
		-13.50	617	687



4.2.2.5 Gebouw 6, Silo's

Tabel 8 PaalDrukdraagvermogens per paaldiameter en sondering, gebouw 6 - Silo's

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.				
		maaiveld	paalpunt	$R_{c; netto; d}$ [kN]
sondering	niveau	niveau	G6 290	G6 320
17	4.21	-17.00	906	1036
		-17.50	1188	1321
		-18.00	1221	1317
		-18.50	1143	1283
		-19.00	1068	1187
18	4.22	-17.00	908	1060
		-17.50	1164	1203
		-18.00	1015	1103
		-18.50	930	1044
		-19.00	938	1049
19	4.17	-17.00	1242	1420
		-17.50	1345	1283
		-18.00	1003	1113
		-18.50	979	1087
		-19.00	959	1065
20	4.13	-17.00	1022	1179
		-17.50	1193	1373
		-18.00	1212	1376
		-18.50	1286	1468
		-19.00	1290	1463
21	4.12	-17.00	907	1038
		-17.50	982	983
		-18.00	913	1021
		-18.50	922	1039
		-19.00	919	1047
22	4.23	-17.00	1043	1210
		-17.50	1197	1316
		-18.00	1183	1309
		-18.50	1029	1130
		-19.00	978	1077
23	4.21	-17.00	1034	1168
		-17.50	1051	1178
		-18.00	1340	1524
		-18.50	1399	1520
		-19.00	1377	1553
24	4.22	-17.00	815	946
		-17.50	920	1051
		-18.00	919	948
		-18.50	848	943
		-19.00	851	945



4.2.2.6 Overige sonderingen

Tabel 9 PaalDrukdraagvermogens per paaldiameter en sondering, gebouw 3 en 5

Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig					
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.					
sondering	niveau	maaiveld paalpunt niveau	$R_{c, netto, d}$ [kN]		
			G5	G3	290 G5 G3 320
1	4.20	-6.00	341		421
		-6.50	449		540
		-7.00	555		657
		-7.50	725		858
		-8.00	849		1023
		-8.50	742		818
		-9.00	504		467
		-9.50	376		429
		-10.00	379		425
		-10.50	377		424
		-11.00	372		417
		-11.50	371		414
		-12.00	419		480
		-12.50	858		998
		-13.00	725		778
		-13.50	612		680
		-14.00	569		631
		-14.50	571		634
		-15.00	574		637
		-15.50	579		643
		-16.00	585		650
		-16.50	685		777
		-17.00	773		892
		-17.50	1081		1238
		-18.00	1137		1293
		-18.50	1371		1572
		-19.00	1309		1488
		-19.50	1374		1568
		-20.00	1364		1557
		-20.50	1691		1952
		-21.00	1743		2009
2	4.20	-6.00	350		418
		-6.50	459		540
		-7.00	596		694
		-7.50	724		858
		-8.00	689		595
		-8.50	507		597
		-9.00	527		610
		-9.50	530		614
		-10.00	636		694
		-10.50	567		638
		-11.00	581		658
		-11.50	565		635
		-12.00	634		721
		-12.50	957		1108



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig						
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.						
sondering	niveau	paalpunt niveau	$R_{c, netto, d}$ [kN]			
			G5	G3	290	G5 G3 320
3	4.22	-13.00			845	894
		-13.50			758	842
		-14.00			733	814
		-14.50			736	817
		-15.00			740	822
		-15.50			747	830
		-16.00			758	843
		-16.50			796	887
		-17.00			1092	1217
		-17.50			1075	1215
		-18.00			1095	1233
		-18.50			1100	1237
		-19.00			1495	1706
		-19.50			1604	
		-6.00			208	268
		-6.50			304	333
		-7.00			294	324
		-7.50			283	313
		-8.00			284	303
		-8.50			279	328
		-9.00			278	325
		-9.50			307	358
		-10.00			312	319
		-10.50			283	318
		-11.00			293	332
		-11.50			292	329
		-12.00			320	365
		-12.50			467	541
		-13.00			450	489
		-13.50			439	488
		-14.00			427	476
		-14.50			429	478
		-15.00			434	483
		-15.50			441	491
		-16.00			449	501
		-16.50			464	518
		-17.00			466	519
		-17.50			543	624
		-18.00			863	1003
		-18.50			1147	1338
		-19.00			912	1004
		-19.50			817	903
		-20.00			755	840
4	4.06	-6.00			388	468
		-6.50			475	562
		-7.00			586	686
		-7.50			738	626
		-8.00			380	438
		-8.50			368	427



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig						
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.						
sondering	niveau	paalpunt niveau	R _{c, netto, d} [kN]			
			G5	G3	290	G5 G3 320
		-9.00			358	412
		-9.50			387	416
		-10.00			366	409
		-10.50			359	402
		-11.00			365	408
		-11.50			365	408
		-12.00			441	508
		-12.50			909	958
		-13.00			640	708
		-13.50			594	659
		-14.00			559	622
		-14.50			563	625
		-15.00			569	633
		-15.50			576	641
		-16.00			582	648
		-16.50			637	713
		-17.00			658	736
		-17.50			859	996
		-18.00			1104	1265
		-18.50			1187	1353
		-19.00			1422	1313
		-19.50			1078	1194
		-20.00			989	1102
5	4.10	-6.00			491	586
		-6.50			558	659
		-7.00			635	739
		-7.50			725	717
		-8.00			388	445
		-8.50			378	441
		-9.00			379	434
		-9.50			405	470
		-10.00			463	531
		-10.50			474	539
		-11.00			513	581
		-11.50			475	532
		-12.00			567	643
		-12.50			1037	1162
		-13.00			804	857
		-13.50			712	785
		-14.00			677	753
		-14.50			682	758
		-15.00			686	762
		-15.50			696	774
		-16.00			702	781
		-16.50			769	860
		-17.00			789	881
		-17.50			1165	1346
		-18.00			1376	1578
		-18.50			1561	1809
		-19.00			1613	1867



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig							
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.							
		maaiveld	paalpunt	R _{c, netto, d} [kN]			
sondering		niveau	niveau	G5	G3	290 G5 G3 320	
6	4.01		-19.50			1665	1924
			-20.00			1718	1982
			-6.00			231	283
			-6.50			291	346
			-7.00			385	453
			-7.50			553	654
			-8.00			664	702
			-8.50			411	483
			-9.00			393	458
			-9.50			387	443
			-10.00			428	488
			-10.50			588	674
			-11.00			640	736
			-11.50			634	723
			-12.00			806	926
			-12.50			1242	1409
			-13.00			1162	1215
			-13.50			802	892
			-14.00			748	829
			-14.50			739	821
			-15.00			744	826
			-15.50			749	832
			-16.00			760	846
			-16.50			777	867
			-17.00			833	914
			-17.50			833	926
			-18.00			838	931
			-18.50			902	1008
	-19.00			1228	1427		
	-19.50			1424	1626		
7	4.05		-6.00			313	376
			-6.50			387	457
			-7.00			440	489
			-7.50			480	555
			-8.00			418	489
			-8.50			450	526
			-9.00			472	549
			-9.50			474	548
			-10.00			505	582
			-10.50			505	530
			-11.00			482	548
			-11.50			492	554
			-12.00			495	559
			-12.50			878	1037
			-13.00			1135	1250
			-13.50			833	893
			-14.00			726	806
			-14.50			694	771
	-15.00			698	775		



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig						
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.						
sondering	niveau	paalpunt niveau	$R_{c, netto, d}$ [kN]			
			G5	G3	290	G5 G3 320
8	4.05	-15.50			704	782
		-16.00			712	792
		-16.50			734	820
		-17.00			764	852
		-17.50			773	860
		-18.00			799	900
		-18.50			1185	1355
		-19.00			1271	1448
		-19.50			1119	1213
		-20.00			1079	1201
		-6.00			174	229
		-6.50			337	412
		-7.00			463	555
		-7.50			640	728
		-8.00			632	641
		-8.50			321	373
		-9.00			342	387
		-9.50			330	377
		-10.00			365	413
		-10.50			364	401
		-11.00			367	415
9	4.08	-11.50			378	427
		-12.00			413	475
		-12.50			781	921
		-13.00			660	725
		-13.50			582	647
		-14.00			543	604
		-14.50			547	608
		-15.00			552	614
		-15.50			560	623
		-16.00			569	633
		-16.50			726	823
		-17.00			745	846
		-17.50			1169	1346
		-18.00			1298	1432
		-18.50			1284	1287
		-19.00			990	1098
		-19.50			929	1029
		-6.00			5	22
		-6.50			53	75
		-7.00			139	177
		-7.50			280	337
		-8.00			249	244
		-8.50			258	310
		-9.00			261	309
		-9.50			309	369
		-10.00			299	315
		-10.50			293	318
		-11.00			295	335



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig							
Alle niveaus/hogtes/peilmaten zijn t.o.v.: N.A.P.							
sondering	niveau	paalpunt niveau	$R_{c, netto, d}$ [kN]				
			G5	G3	290	G5	G3
		-11.50			294		332
		-12.00			353		408
		-12.50			779		928
		-13.00			734		714
		-13.50			559		621
		-14.00			503		560
		-14.50			498		554
		-15.00			501		558
		-15.50			511		569
		-16.00			519		578
		-16.50			566		638
		-17.00			598		671
		-17.50			609		680
		-18.00			759		874
		-18.50			1076		1155
		-19.00			843		936
		-19.50			818		910
		-20.00			800		
10	4.01	-6.00			160		178
		-6.50			207		252
		-7.00			274		325
		-7.50			354		420
		-8.00			579		693
		-8.50			707		752
		-9.00			356		395
		-9.50			317		355
		-10.00			315		354
		-10.50			318		356
		-11.00			370		419
		-11.50			379		426
		-12.00			446		516
		-12.50			963		1021
		-13.00			694		772
		-13.50			604		665
		-14.00			558		620
		-14.50			564		627
		-15.00			566		630
		-15.50			576		641
		-16.00			588		654
		-16.50			610		680
		-17.00			616		687
		-17.50			880		1018
		-18.00			1195		1374
		-18.50			1278		1464
		-19.00			1353		1555
		-19.50			1164		1291
		-20.00			1064		1197
11	4.03	-6.00			235		292
		-6.50			331		398



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig							
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.							
sondering	niveau	niveau	maaiveld		paalpunt		[kN]
			G5	G3	290	G5 G3	
		-7.00			430		508
		-7.50			618		729
		-8.00			840		993
		-8.50			687		607
		-9.00			456		518
		-9.50			412		473
		-10.00			383		434
		-10.50			464		538
		-11.00			619		714
		-11.50			600		684
		-12.00			733		856
		-12.50			1160		1276
		-13.00			811		883
		-13.50			730		811
		-14.00			685		762
		-14.50			689		766
		-15.00			693		770
		-15.50			701		780
		-16.00			710		789
		-16.50			765		855
		-17.00			770		861
12	4.04	-17.50			909		1048
		-18.00			1122		1276
		-18.50			1155		1306
		-19.00			1511		1645
		-19.50			1508		1720
		-20.00			1277		1445
		-6.00			317		389
		-6.50			426		514
		-7.00			525		622
		-7.50			668		783
		-8.00			780		746
		-8.50			395		448
		-9.00			370		430
		-9.50			370		423
		-10.00			363		412
		-10.50			368		418
		-11.00			370		415
		-11.50			381		431
		-12.00			597		700
		-12.50			900		861
		-13.00			660		733
		-13.50			584		648
		-14.00			560		623
		-14.50			563		625
		-15.00			570		633
		-15.50			579		644
		-16.00			585		651
		-16.50			800		922
		-17.00			966		1119



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig						
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.						
sondering	niveau	maaiveld niveau	paalpunt niveau	$R_{c, netto, d}$ [kN]		
				G5	G3	290
13	4.06		-17.50	1307	1423	
			-18.00	1290	1285	
			-18.50	1015	1108	
			-19.00	936	1026	
			-19.50	921	1024	
			-20.00	928		
			-6.00	140	186	
			-6.50	258	318	
			-7.00	359	431	
			-7.50	423	456	
			-8.00	436	486	
			-8.50	459	544	
			-9.00	435	387	
			-9.50	347	396	
			-10.00	346	396	
			-10.50	338	383	
			-11.00	402	468	
			-11.50	440	500	
			-12.00	472	551	
			-12.50	932	990	
14	4.06		-13.00	656	710	
			-13.50	585	651	
			-14.00	555	617	
			-14.50	560	623	
			-15.00	565	628	
			-15.50	571	635	
			-16.00	584	651	
			-16.50	762	878	
			-17.00	953	1095	
			-17.50	1168	1337	
			-18.00	1143	1243	
			-18.50	1063	1204	
			-19.00	1094	1232	
			-19.50	1023	1149	
			-20.00	993		
			-6.00	289	354	
			-6.50	372	444	
			-7.00	516	606	
			-7.50	619	721	
			-8.00	709	833	
			-8.50	769	915	
			-9.00	692	615	
			-9.50	509	596	
			-10.00	515	590	
			-10.50	502	574	
			-11.00	621	709	
			-11.50	633	720	
			-12.00	681	776	
			-12.50	1071	1210	



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig							
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.							
sondering	niveau	paalpunt niveau	$R_{c, netto, d}$ [kN]				
			G5	G3	290	G5	G3
		-13.00			788		
		-13.50			743		
		-14.00			719		
		-14.50			724		
		-15.00			729		
		-15.50			736		
		-16.00			744		
		-16.50			802		
		-17.00			1218		
		-17.50			1065		
		-18.00			1012		
		-18.50			977		
		-19.00			981		
		-19.50			996		
15	4.19	-6.00			208		
		-6.50			299		
		-7.00			367		
		-7.50			461		
		-8.00			464		
		-8.50			376		
		-9.00			316		
		-9.50			337		
		-10.00			344		
		-10.50			390		
		-11.00			412		
		-11.50			427		
		-12.00			547		
		-12.50			927		
		-13.00			669		
		-13.50			513		
		-14.00			517		
16	4.06	-14.50			522		
		-15.00			530		
		-15.50			537		
		-16.00			543		
		-16.50			942		
		-17.00			1046		
		-17.50			1152		
		-18.00			1154		
		-18.50			1017		
		-19.00			855		
		-6.00			219		
		-6.50			333		
		-7.00			262		
		-7.50			272		
		-8.00			274		
		-8.50			291		
		-9.00			266		
		-9.50			260		



Netto paal draagvermogen(s) zijn naar beneden toe afgerond op: 1.0 kN nauwkeurig						
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.						
sondering	maaiveld paalpunt		$R_{c, netto, d}$ [kN]			
	niveau	niveau	G5	G3	290	G5 G3 320
		-10.00			271	311
		-10.50			281	324
		-11.00			349	401
		-11.50			372	426
		-12.00			408	474
		-12.50			785	888
		-13.00			558	622
		-13.50			520	578
		-14.00			490	546
		-14.50			495	551
		-15.00			499	556
		-15.50			508	566
		-16.00			521	583
		-16.50			626	706
		-17.00			931	1072
		-17.50			1090	1182
		-18.00			1041	1115
		-18.50			932	1005
		-19.00			887	991
		-19.50			846	941

4.2.3 Indicatie zettingen en veerconstanten

Uitgaande van de karakteristieke waarde voor het paal draagvermogen ($R_{c,k}$) en de representatieve paalbelasting ($F_k + F_{nk,rep}$) is de veerconstante voor de paalkopzakking te bepalen. Hierbij wordt voor de karakteristieke paalkopbelasting uitgegaan van de waarde bepaald uit $F_k = F_{c,d} / 1,35$.

Ten behoeve van het bepalen van de orde grootte van de veerconstante is uitgegaan van uitgenutte paal draagvermogens voor palen met een paalpunt niveau van N.A.P. -13,0 m bij sondering 1.

- ▶ Prefabpaal #290 mm 56 MN/m¹
- ▶ Prefabpaal #320 mm 64 MN/m¹

Gelet op het niet-lineaire karakter van de verticale beddingsconstante moet een range worden aangegeven door middel van een minimale ($k_v / \sqrt{2}$) en maximale ($k_v \cdot \sqrt{2}$) verticale beddingconstante.



5 Aanbevelingen voor de uitvoering

5.1 Paalfundering

5.1.1 Controle uitgangspunten

Voorafgaand aan de uitvoering moet worden gecontroleerd:

- ▶ de relatie tussen: maaiveldhoogte, werkhoogte, bouwpeil t.o.v. Ref/NAP,
- ▶ diameter average en te realiseren paallengte in relatie tot grondonderzoek en funderingsadvies,
- ▶ overige relevante uitgangspunten geotechnische rapportages.

5.1.2 Werkterrein/bouwput

Het werkterrein dient dermate droog en stabiel te zijn dat verantwoord kan worden gewerkt. Voorkomen moet worden dat eenmaal gemaakte palen beschadigen doordat deze horizontaal worden belast door bijvoorbeeld het manoeuvreren van materieel of door graafwerk rond de paal. Dit geldt vooral bij gedeeltelijk gewapende palen. Let op: in beginsel dienen de palen gemaakt te worden vanaf een zodanig werkniveau dat er geen potentiaalsprong is tussen de freatische grondwaterspiegel en de stijghoogte van het grondwater in dieper gelegen watervoerende lagen (hydrostatisch verloop vanaf het werkniveau). De ondergrond dient vrij te zijn van obstakels en verstoringen die van invloed kunnen zijn op de uiteindelijke paalkwaliteit. De ligging van kabels en leidingen dient in beeld te zijn gebracht.

Hieronder staan enkele aandachtspunten t.a.v. de uitvoering van de geadviseerde paaltype (n). Onder meer wordt ingegaan op het belang van de uitvoering en controle van de paalkwaliteit. Geadviseerd wordt hiervan kennis te nemen.

5.1.3 Palen nabij belending – invloed draagvermogen

Bij een belending op palen is het wenselijk om een zekere afstand aan te houden tussen de palen onder de nieuwbouw en de belending. Voor wat betreft de minimaal te hanteren afstand zijn geen landelijke normen of officiële richtlijnen voorhanden.

5.1.4 Controle paal integriteit

Door middel van akoestisch doormeten dient de integriteit van palen te worden beoordeeld. Deze metingen kunnen desgewenst door ons bureau worden uitgevoerd vanaf 5 dagen na productie. De meetgegevens geven informatie over o.a. discontinuïteiten, zoals scheuren, insnoeringen en uitstulpingen, over de lengte van de paal en over de kwaliteit van de paalkop. Aan palen waarbij tijdens de uitvoering bijzonderheden werden geconstateerd dient tijdens de kwaliteitscontrole extra aandacht te worden besteed. Visuele controle van de paalkop kan plaatsvinden door deze vrij te graven. Hiervoor dient de paal wel voldoende te zijn gewapend. Indien twijfel bestaat ten aanzien van het draagvermogen van een paal kan afhankelijk van de situatie worden nagesondeerd binnen 1,0 m van de paal, of kan een paal worden proefbelast.



5.2 Heien

Uitvoering dient bij voorkeur te geschieden door een gerenommeerd heibedrijf en dient uitgevoerd te worden conform de NEN-EN 12699.

Het heiwerk dient uitgevoerd te worden geschikt valgewicht met voldoende massa. Definitieve blokkeus te maken nadat het palenplan gereed is en in overleg met de heier, ons bureau en de Dienst bouw- en woningtoezicht van de betreffende gemeente. Het energieniveau (gewicht en valhoogte) dient zodanig te worden gekozen dat op het geadviseerde paalpuntniveau goed interpreteerbare kalenderwaardes kunnen worden gerealiseerd. Goed interpreteerbare kalenderwaardes zijn kalenderwaardes waarbij voor een zakking van de paalkop van 0,25 m 15 à 25 slagen nodig zijn. Geadviseerd wordt de eerste paal te heien ter plaatse van een sondering en deze, voor zover praktisch over de volle lengte van de paal te kalenderen. De op het geadviseerde paalpuntniveau geconstateerde kalender kan in combinatie met de sonderingen als maatstaf worden gebruikt voor de bepaling van het paalpuntniveau van de tussen de sonderingen te heien palen. Bij elke volgende sondering is het noodzakelijk om het kalenderbeeld te controleren en deze maatstaf eventueel te wijzigen.

Indicatief valt voor een heiblok te denken aan minimaal een HHK4A voor de palen #290mm en een HHK5A voor de palen #320mm. Wij verwachten dan met name bij de zware sonderingen wel hoge kalenderwaarden. Het valt derhalve te overwegen om een 7 tons blok te gebruiken voor de zwaar belaste palen en middels de valhoogte de energieafgifte te regelen.

Bij een verschil in paalpuntniveau tussen de sonderingen wordt aanbevolen het heiwerk aan te vangen bij het diepst voorgeschreven paalpuntniveau en vervolgens 'van laag naar hoog' te heien. Van elke paal dienen de kalenders over tenminste de laatste 2,0 m à 2,5 m te worden vastgelegd en in de directe omgeving van sonderingen, voor zover praktisch, over de volle lengte van de paal. Tevens dient te worden genoteerd het heimiddel (i.g.v. hydroblok: valgewicht en valhoogte en aantal slagen per minuut), het paalnummer, de paalafmeting en het bereikte inheinniveau.

Geadviseerd wordt om gedurende het kalenderen het aantal slagen tot ca. 60 per minuut te beperken en de valhoogte voor palen met gelijke schachtdiameter gelijk te houden.

5.3 Heibegleiding / Paalinstallatie

Gezien de variabele bodemgesteldheid en het belang van een betrouwbare fundering voor het bouwwerk is deskundig toezicht tijdens de uitvoering van het heiwerk / het installeren van de palen noodzakelijk. Voor wat betreft de taken en verantwoordelijkheden van de toezichthouder wordt verwezen naar CUR aanbeveling 114 (Toezicht op de realisatie van paalfunderingen, 2009).

Heibegleiding betekent controle en vastleggen van de gegevens elke paal:

- ▶ Paalnummer en paal positie.
- ▶ Afhei-hoogte.
- ▶ Paaldimensies.
- ▶ Bereikte puntniveau.
- ▶ Type heihamer toegepaste valhoogte.
- ▶ Aantal slagen van de heihamer per minuut.

De rapportage van de heibegleiding geeft dan duidelijke informatie voor de constructeur, adviseur geotechniek en bouw- en woningtoezicht.

6 Slotopmerking

Indien in de loop van het project veranderingen optreden in het beschreven bouwplan of in de in dit advies gehanteerde uitgangspunten verzoeken wij u contact met ons bureau op te nemen, zodat wij ons rapport hierop kunnen toetsen.



Bijlage A (Voorbeeld) berekening draagvermogen

Technosoft Paalfunderingen release 6.72d

13 feb 2024

DETAIL BER. DRAAGVERMOGEN vb; 1; N.A.P.-13.00

Uitgangspunten

- gehanteerde sondering : 1
- gehanteerde paal : #290
- paalpuntniveau : N.A.P.-13.00 m
- traject positieve kleef : N.A.P. -5.30 m
tot: N.A.P.-13.00 m

Maximale draagkracht van de paalpunt

De maximale puntweerstand volgens art. 7.6.2.3 (e) bedraagt :

$$Q_{b,max} = 0.5 * \alpha_p * \beta * s * ((q_{c,I,gem} + q_{c,II,gem})/2 + q_{c,III,gem})$$

$$= 6.425 \text{ MPa}$$

waarin : in dit geval :

$q_{c,I,gem}$	= de gemiddelde waarde van de conusweerstand over traject I	= 25.55 MPa
$q_{c,II,gem}$	= de gemiddelde waarde van de conusweerstand over traject II	= 5.49 MPa
$q_{c,III,gem}$	= de gemiddelde waarde van de conusweerstand over traject III	= 2.84 MPa
α_p	= paalklassefactor	= 0.70 -
β	= factor voor de paalvoetvorm	= 1.00 -
ϕ	= hoek van de inwendige wrijving	= 32.5 -
r	= verhouding b/a	= 1.00 -
s	= factor voor de vorm van de voet	= 1.00 -

Voor een uitgebreide beschrijving van het bepalen van de gemiddelde conusweerstand in de gebieden I, II en III wordt verwezen naar art. 7.6.2.3 (e) in de norm.

De maximale draagkracht van de paalpunt volgens art. 7.6.2.3 (c) bedraagt:

$$R_{b,cal,max,i} = A_b * Q_{b,max,i}$$

$$= 540 \text{ kN}$$

waarin : in dit geval :
 A_b = oppervlak van de paalvoet = 0.0841 m²

Maximale paalschachtwrijving

De maximale paalschachtwrijving volgens art. 7.6.2.3 (i) bedraagt:

$$Q_{s,max,z} = \alpha_s * q_{c,z,a}$$

De maximale schachtwrijvingskracht volgens art. 7.6.2.3 (c) bedraagt:

$$R_{s,cal,max,i} = O_{s,\Delta l,gem} * \sum Q_{s,max,z,i} * d_z$$

$$= 964 \text{ kN}$$



Per laag

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

Nr	Laag	Nivo [m]	$O_{s,gem}$ [m ³]	α_s	Perc. [%]	$q_{c,z;a}$ [MPa]	$q_{s,max}$ [MPa]	d_z [m]	$R_{c,cal}$ [kN]
--	----	-5.30	--	--	--	--	--	--	--
1	Zand - Schoon - Matig	-10.35	1.16	0.0100	100	14.20	0.142	5.05	831.9
2	Klei - Schoon - Vast	-12.15	1.16	0.0000	0	2.83	0.000	1.80	0.0
3	Zand - Schoon - Matig	-13.00	1.16	0.0100	100	13.38	0.134	0.85	132.0
totaal			1.16	0.0094		11.45	0.108	7.70	963.8

Maximale draagkracht

De maximale draagkracht van de paal volgens art. 7.6.2.3 (c) bedraagt:

$$R_{c,cal;i} = R_{b,cal,max;i} + R_{s,cal,max;i}$$

$$= 1504 \text{ kN } (= 540 + 964)$$

De karakteristieke waarde van de maximale draagkracht van de paal volgens art. 7.6.2.3 (b) bedraagt:

$$R_{c;k} = R_{c,cal} / \xi_{3(n-1)}$$

$$= 1082 \text{ kN}$$

waarin : in dit geval :

$$\xi_{3(n-1)} = \text{factor volgens art. A.3.3.3 bij 1 sondering} = 1.39 -$$

Voor de rekenwaarde van de maximale draagkracht van de paal kan volgens art. 2.4.7.3.3 worden aangehouden :

$$R_{c;d} = R_{c;k} / \gamma_R$$

$$= 902 \text{ kN}$$

waarin : in dit geval :

$$\gamma_R = \text{partiële weerstandsfactor volgens art. A.3.3.2}$$

$$\text{tabel A.6, A.7 of A.8} = 1.20 -$$



DETAIL BER. NEGATIEVE KLEEF vb; 1; N.A.P.-13.00

Uitgangspunten

- gehanteerde sondering : 1
- gehanteerde paal : #290
- paalpuntniveau : N.A.P.-13.00 m
- paalkopniveau : N.A.P. 4.00 m
- traject negatieve kleef : N.A.P. 4.20 m
- tot : N.A.P. -5.30 m
- $p_{surf; k}$: 11.40 kN/m²

Berekening negatieve kleef

De karakteristieke waarde van de maximale negatieve kleefbelasting v.e. alleenstaande paal volgens art. 7.3.2.2 (d) bedraagt:

$$F_{nk; k} = O_{s; gem} * \gamma_i d_j * K_{0; j; k} * \tan \delta_{j; k} * (\sigma'_{v; j-1; k} + \sigma'_{v; j; k}) / 2.0$$

$$= -175.4 \text{ kN}$$

waarin :

- $O_{s; gem}$ = omtrek van de dwarsdoorsnede van de paalschacht
- d_j = de dikte van de grondlaag i
- $K_{0; j; k}$ = de karakteristieke waarde van de neutrale gronddrukfactor in laag i
- $\delta_{j; k}$ = de karakteristieke waarde van de wrijvingshoek
- $\sigma'_{v; j; k}$ = de karakteristieke waarde van de effectieve verticale spanning onder in laag j

Per laag

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

Nr Laag	Nivo [m]	Hoogte [m]	$O_{s; gem}$ [m ¹]	$K_{0; j} * \tan(\delta_i)$	$\sigma'_{v; j; k}$ [kN/m ²]
--	----	4.00	--	--	11.40
1 Zand - Sterk siltig - Kleiig	3.20	0.80	1.16	0.25	26.60
2 Zand - Sterk siltig - Kleiig	2.85	0.35	1.16	0.25	30.45
3 Klei - Sterk zandig	-4.80	7.65	1.16	0.25	106.95
4 Klei - Organisch - Matig	-5.20	0.40	1.16	0.25	109.35
5 Zand - Schoon - Matig	-5.30	0.10	1.16	0.25	110.45

Rekenwaarde

De rekenwaarde van de maximale negatieve kleefbelasting van een alleenstaande paal bedraagt :

$$F_{nk; d} = F_{nk; k} * \gamma_{f; nk} = -175.4 \text{ kN}$$

waarin :

- $\gamma_{f; nk}$ = belastingfactor voor de negatieve kleef (art. 7.3.2.2 (b))
- in dit geval : 1.0 -



LAST_ZAKKINGSDIAGRAM vb

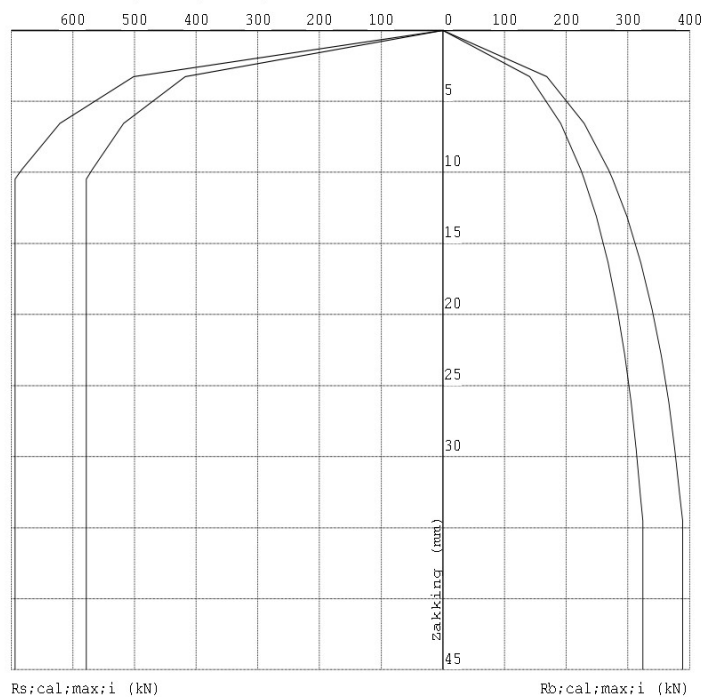
Uitgangspunten

- gehanteerde sondering : 1
- gehanteerde paal : #290
- paalpuntniveau : N.A.P.-13.00 m

Last-zakkingsgedrag paal

paalzakking 1B (mm)					paalzakking 2 (mm)				
voet	kop	punt	wrijving	totaal	voet	kop	punt	wrijving	totaal
0.0	0.0	0	0	0	0.0	0.0	0	0	0
3.3	8.0	141	417	558	3.3	8.9	169	501	670
6.5	12.5	191	517	708	6.5	13.7	229	621	850
9.8	16.5	224	569	793	9.8	17.9	269	683	951
10.5	17.3	229	578	807	10.5	18.7	275	693	968
13.1	20.1	249	578	826	13.1	21.5	298	693	992
16.4	23.6	268	578	845	16.4	25.0	321	693	1014
19.6	27.0	283	578	861	19.6	28.5	339	693	1033
22.9	30.4	295	578	873	22.9	31.9	354	693	1048
26.2	33.8	305	578	883	26.2	35.3	367	693	1060
29.5	37.1	313	578	891	29.5	38.7	376	693	1069
32.7	40.5	320	578	898	32.7	42.0	384	693	1078
34.5	42.3	324	578	902	34.5	43.9	389	693	1082
327.2	335.0	324	578	902	327.2	336.6	389	693	1082

Last-zakkingsdiagram grenstoestand 1B en 2





Bijlage B Detail uitvoer draagvermogen

Technosoft Paalfunderingen release 6.72d

13 feb 2024

ALGEMENE GEGEVENS

Project :
Onderdeel :
Datum : 07-02-2024
Bestand : C:\Users\Phuong\OneDrive - Grondgrip
B.V\5406\6 Berekeningen\5406 Harlingen.pvw
Berekeningstype : Verticaal belaste paal
Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

Toegepaste normen volgens Eurocode met Nederlandse NB

Geotechniek	EN 1997-1:2004	AC:2009	
	NEN-EN 1997-1:2005	C1+A1:2013	NB:2016
	NEN 9997-1:2016	C2:2017	

PAALGEGEVENS #290

Type : Geheide paal (beton)
Wijze van installeren : Heien
Afmeting a [m] : 0.290
Afmeting b [m] : 0.290
Elasticiteitsmodulus [N/mm²] : 20000 (Beton)
Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Factor α_t (tabel 7.c EC 7.1) : 0.0070 (zandlagen; voor kleilagen zie tabel 7.d)
Paalklassefactor α_p : 0.70
Paalvoetvormfactor β : 1.00
Type lastzakingsdiagram : Grondverdringende paal
Verm.factor * $\phi'_{j,k}$: 0.75

PAALGEGEVENS #320

Type : Geheide paal (beton)
Wijze van installeren : Heien
Afmeting a [m] : 0.320
Afmeting b [m] : 0.320
Elasticiteitsmodulus [N/mm²] : 20000 (Beton)
Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Factor α_t (tabel 7.c EC 7.1) : 0.0070 (zandlagen; voor kleilagen zie tabel 7.d)
Paalklassefactor α_p : 0.70
Paalvoetvormfactor β : 1.00
Type lastzakingsdiagram : Grondverdringende paal
Verm.factor * $\phi'_{j,k}$: 0.75

PAALGEGEVENS

Type : Geheide paal (beton)
Wijze van installeren : Heien
Afmeting a [m] : 0.320
Afmeting b [m] : 0.320



Elasticiteitsmodulus $[N/mm^2]$: 20000 (Beton)
Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Factor α_t (tabel 7.c EC 7.1) : 0.0070 (zandlagen; voor kleilagen zie tabel 7.d)
Paalklassefactor α_p : 0.70
Paalvoetvormfactor β : 1.00
Type lastzakkingsdiagram : Grondverdringende paal
Verm.factor * $\phi'_{j,k}$: 0.75

REKENEGEGEVENS G1 290

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 52, 53, 54, 55

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 4
Factor ξ_3 ($n=1$) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s,cal,max,i}$ begrenzen op $0.75 * R_{p,cal,max,i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #290
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. $[kN/m^2]$: 0.00

PAALPUNTNIVEAUS #290

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-18.00	0.50

**SAMENVATTINGSTABEL G1 290 (n=1)****Uitgangspunten**

- paal : #290
- paaltype : Geheide paal (beton)
- schachtafmeting : 290 x 290
Paalklassefactor α_p : 0.70
Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
52	4.16	-6.00	523.0	140.0	663.0	397.5	-162.8	234.6
		-6.50	528.2	215.3	743.5	445.8	-162.8	282.9
		-7.00	452.0	295.9	747.9	448.4	-162.8	285.5
		-7.50	445.9	376.2	822.1	492.9	-162.8	330.0
		-8.00	437.6	434.2	871.8	522.6	-162.8	359.8
		-8.50	385.3	478.5	863.8	517.8	-162.8	355.0
		-9.00	220.1	524.7	744.8	446.5	-162.8	283.7
		-9.50	151.0	577.7	728.7	436.9	-162.8	274.0
		-10.00	128.0	616.0	744.1	446.1	-162.8	283.2
		-10.50	151.9	636.2	788.1	472.5	-162.8	309.6
		-11.00	310.1	667.2	977.3	585.9	-162.8	423.1
		-11.50	306.2	732.8	1038.9	622.9	-162.8	460.0
		-12.00	245.5	802.4	1047.8	628.2	-162.8	465.4
		-12.50	290.6	840.3	1130.9	678.0	-162.8	515.1
		-13.00	208.0	893.8	1101.8	660.6	-162.8	497.7
		-13.50	96.1	963.4	1059.4	635.2	-162.8	472.3
		-14.00	65.1	995.3	1060.3	635.7	-162.8	472.8
		-14.50	67.3	1002.4	1069.7	641.3	-162.8	478.5
		-15.00	67.6	1009.8	1077.4	645.9	-162.8	483.1
		-15.50	72.6	1017.0	1089.6	653.3	-162.8	490.4
		-16.00	108.2	1025.2	1133.4	679.5	-162.8	516.7
53	4.12	-6.00	492.6	78.5	571.0	342.4	-172.1	170.3
		-6.50	607.7	158.4	766.1	459.3	-172.1	287.2
		-7.00	692.0	244.6	936.6	561.5	-172.1	389.5
		-7.50	850.1	331.6	1181.7	708.4	-172.1	536.4
		-8.00	1017.1	418.6	1435.7	860.7	-172.1	688.7
		-8.50	726.3	505.6	1231.9	738.6	-172.1	566.5
		-9.00	333.5	592.6	926.1	555.2	-172.1	383.2
		-9.50	248.9	679.3	928.2	556.4	-172.1	384.4
		-10.00	200.7	740.7	941.4	564.4	-172.1	392.3
		-10.50	247.0	763.4	1010.4	605.8	-172.1	433.7
		-11.00	315.6	813.1	1128.8	676.7	-172.1	504.7
		-11.50	230.4	882.2	1112.6	667.0	-172.1	495.0
		-12.00	295.1	919.6	1214.6	728.2	-172.1	556.2
		-12.50	748.2	979.8	1728.0	1036.0	-172.1	863.9
		-13.00	315.1	1066.8	1381.9	828.5	-172.1	656.4
		-13.50	163.0	1153.8	1316.8	789.4	-172.1	617.4
		-14.00	67.3	1223.4	1290.8	773.8	-172.1	601.8
		-14.50	64.3	1233.3	1297.6	777.9	-172.1	605.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
53	4.12	-15.00	65.4	1240.3	1305.7	782.8	-172.1	610.7
		-15.50	71.6	1247.5	1319.1	790.8	-172.1	618.8
		-16.00	80.3	1255.7	1335.9	800.9	-172.1	628.9
		-16.50	491.7	1285.6	1777.3	1065.5	-172.1	893.5
		-17.00	268.1	1363.6	1631.7	978.2	-172.1	806.2
		-17.50	221.4	1442.4	1663.8	997.5	-172.1	825.4
		-18.00	139.5	1520.3	1659.8	995.1	-172.1	823.0
54	4.27	-6.00	407.7	90.3	498.0	298.6	-172.4	126.2
		-6.50	456.1	155.2	611.3	366.5	-172.4	194.1
		-7.00	571.1	216.6	787.6	472.2	-172.4	299.8
		-7.50	691.1	296.5	987.6	592.1	-172.4	419.7
		-8.00	329.1	383.5	712.6	427.2	-172.4	254.8
		-8.50	237.0	469.4	706.4	423.5	-172.4	251.1
		-9.00	197.8	543.2	740.9	444.2	-172.4	271.8
		-9.50	190.9	579.0	770.0	461.6	-172.4	289.2
		-10.00	249.2	611.1	860.3	515.8	-172.4	343.4
		-10.50	288.7	657.0	945.7	567.0	-172.4	394.6
		-11.00	342.8	713.2	1056.0	633.1	-172.4	460.7
		-11.50	278.9	782.8	1061.7	636.5	-172.4	464.1
		-12.00	280.8	827.9	1108.7	664.7	-172.4	492.3
		-12.50	860.3	883.5	1743.8	1045.4	-172.4	873.1
		-13.00	356.4	970.5	1326.9	795.5	-172.4	623.1
		-13.50	203.4	1057.5	1260.9	755.9	-172.4	583.5
		-14.00	80.6	1131.7	1212.3	726.8	-172.4	554.4
		-14.50	80.7	1142.1	1222.8	733.1	-172.4	560.7
		-15.00	76.0	1152.7	1228.7	736.7	-172.4	564.3
		-15.50	81.6	1161.6	1243.2	745.3	-172.4	572.9
		-16.00	82.6	1170.7	1253.2	751.3	-172.4	578.9
		-16.50	138.6	1179.7	1318.3	790.3	-172.4	618.0
		-17.00	200.4	1212.7	1413.1	847.2	-172.4	674.8
		-17.50	180.5	1268.5	1448.9	868.7	-172.4	696.3
		-18.00	174.0	1305.8	1479.8	887.2	-172.4	714.8
55	4.12	-6.00	792.0	166.0	957.9	574.3	-159.7	414.6
		-6.50	910.0	253.0	1163.0	697.2	-159.7	537.5
		-7.00	1008.2	340.0	1348.2	808.3	-159.7	648.6
		-7.50	1110.7	427.0	1537.7	921.9	-159.7	762.2
		-8.00	1253.8	514.0	1767.8	1059.8	-159.7	900.1
		-8.50	1193.0	601.0	1794.0	1075.5	-159.7	915.8
		-9.00	617.4	688.0	1305.4	782.6	-159.7	622.9
		-9.50	418.2	775.0	1193.2	715.4	-159.7	555.7
		-10.00	336.7	857.5	1194.2	715.9	-159.7	556.2
		-10.50	330.0	903.3	1233.3	739.4	-159.7	579.7
		-11.00	329.4	943.7	1273.1	763.3	-159.7	603.6
		-11.50	295.0	1011.1	1306.1	783.0	-159.7	623.3
		-12.00	289.4	1057.7	1347.1	807.6	-159.7	647.9
		-12.50	463.0	1108.2	1571.2	942.0	-159.7	782.3
		-13.00	210.5	1195.2	1405.8	842.8	-159.7	683.1
		-13.50	106.7	1282.2	1389.0	832.7	-159.7	673.0
		-14.00	63.5	1328.3	1391.8	834.4	-159.7	674.7
		-14.50	62.5	1336.4	1398.9	838.7	-159.7	679.0
		-15.00	62.3	1343.9	1406.2	843.0	-159.7	683.3
		-15.50	66.6	1350.8	1417.4	849.8	-159.7	690.1
		-16.00	77.1	1358.3	1435.4	860.6	-159.7	700.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
55	4.12	-16.50	305.4	1374.0	1679.3	1006.8	-159.7	847.1
		-17.00	308.6	1438.1	1746.7	1047.2	-159.7	887.5
		-17.50	276.8	1512.9	1789.7	1072.9	-159.7	913.2
		-18.00	182.8	1580.0	1762.8	1056.8	-159.7	897.1

REKENGEGEVENS G1 320

Berekening : Ontwerpend
 Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
 Sondering(en) : 52, 53, 54, 55

Stijf bouwwerk : NEE
 Paalgroep : NEE
 Aantal sonderingen : 4
 Factor ξ_3 ($n=1$) : 1.39 (handmatig)
 Factor ξ_3 (gem) : 1.39 (handmatig)
 Factor ξ_4 (min) : 1.39 (handmatig)
 Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s;cal;max;i}$ begrenzen op $0.75 * R_{b;cal;max;i}$: NEE
 UGT draagvermogen zonder negatieve kleef : NEE

Paal : #320
 Niveau paalkop [m] : N.A.P. 4.60
 Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #320

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-18.00	0.50



SAMENVATTINGSTABEL G1 320 (n=1)

Uitgangspunten

- paal : #320
 - paaltype : Geheide paal (beton)
 - schachtafmeting : 320 x 320
 Paalklassefactor α_p : 0.70
 Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
 Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	maaiveld niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
				$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
52	4.16	-6.00		622.3	154.5	776.8	465.7	-179.7	286.0
		-6.50		599.8	237.6	837.4	502.0	-179.7	322.3
		-7.00		526.2	326.6	852.8	511.3	-179.7	331.6
		-7.50		522.9	415.1	938.0	562.3	-179.7	382.7
		-8.00		532.8	479.1	1011.9	606.6	-179.7	427.0
		-8.50		457.7	528.0	985.7	590.9	-179.7	411.2
		-9.00		209.4	579.0	788.4	472.7	-179.7	293.0
		-9.50		183.9	637.5	821.3	492.4	-179.7	312.7
		-10.00		155.9	679.8	835.6	501.0	-179.7	321.3
		-10.50		187.5	702.0	889.5	533.3	-179.7	353.6
		-11.00		376.3	736.2	1112.5	667.0	-179.7	487.3
		-11.50		372.5	808.6	1181.0	708.1	-179.7	528.4
		-12.00		295.0	885.4	1180.3	707.6	-179.7	527.9
		-12.50		302.3	927.2	1229.6	737.1	-179.7	557.4
		-13.00		237.6	986.2	1223.8	733.7	-179.7	554.0
		-13.50		113.3	1063.0	1176.3	705.2	-179.7	525.5
		-14.00		79.6	1098.2	1177.8	706.1	-179.7	526.4
		-14.50		81.9	1106.1	1188.0	712.2	-179.7	532.5
		-15.00		82.3	1114.3	1196.5	717.3	-179.7	537.6
		-15.50		88.6	1122.2	1210.8	725.9	-179.7	546.2
		-16.00		147.1	1131.3	1278.3	766.4	-179.7	586.7
		-16.50		369.4	1166.6	1536.0	920.9	-179.7	741.2
		-17.00		350.5	1239.0	1589.5	952.9	-179.7	773.2
		-17.50		327.1	1314.7	1641.8	984.3	-179.7	804.6
		-18.00		398.2	1364.0	1762.2	1056.5	-179.7	876.8
53	4.12	-6.00		592.3	86.6	678.9	407.0	-189.9	217.2
		-6.50		723.5	174.8	898.3	538.5	-189.9	348.7
		-7.00		817.1	269.9	1087.0	651.7	-189.9	461.8
		-7.50		1005.5	365.9	1371.4	822.2	-189.9	632.3
		-8.00		1125.8	461.9	1587.8	951.9	-189.9	762.0
		-8.50		800.4	557.9	1358.3	814.3	-189.9	624.5
		-9.00		391.5	653.9	1045.4	626.7	-189.9	436.9
		-9.50		303.1	749.5	1052.6	631.0	-189.9	441.2
		-10.00		244.3	817.3	1061.7	636.5	-189.9	446.6
		-10.50		313.4	842.4	1155.8	692.9	-189.9	503.1
		-11.00		384.5	897.3	1281.7	768.4	-189.9	578.6
		-11.50		278.5	973.5	1252.0	750.6	-189.9	560.7
		-12.00		362.1	1014.7	1376.8	825.4	-189.9	635.6
		-12.50		627.3	1081.1	1708.4	1024.2	-189.9	834.4
		-13.00		353.7	1177.1	1530.8	917.8	-189.9	727.9
		-13.50		185.2	1273.1	1458.3	874.3	-189.9	684.4
		-14.00		82.2	1350.0	1432.2	858.6	-189.9	668.8
		-14.50		78.3	1360.8	1439.1	862.8	-189.9	672.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
53	4.12	-15.00	79.9	1368.6	1448.5	868.4	-189.9	678.5
		-15.50	87.0	1376.5	1463.6	877.4	-189.9	687.6
		-16.00	101.0	1385.6	1486.6	891.2	-189.9	701.4
		-16.50	587.1	1418.6	2005.7	1202.5	-189.9	1012.6
		-17.00	292.2	1504.6	1796.8	1077.2	-189.9	887.4
		-17.50	267.9	1591.6	1859.5	1114.8	-189.9	925.0
		-18.00	168.4	1677.6	1846.0	1106.7	-189.9	916.9
54	4.27	-6.00	487.5	99.6	587.2	352.0	-190.2	161.8
		-6.50	540.4	171.2	711.6	426.6	-190.2	236.4
		-7.00	680.9	239.0	919.8	551.4	-190.2	361.2
		-7.50	769.0	327.2	1096.2	657.2	-190.2	466.9
		-8.00	387.6	423.2	810.8	486.1	-190.2	295.9
		-8.50	286.2	517.9	804.2	482.1	-190.2	291.9
		-9.00	240.8	599.4	840.2	503.7	-190.2	313.5
		-9.50	232.5	638.9	871.4	522.4	-190.2	332.2
		-10.00	303.2	674.3	977.5	586.0	-190.2	395.8
		-10.50	368.4	725.0	1093.4	655.5	-190.2	465.3
		-11.00	421.2	787.0	1208.2	724.4	-190.2	534.1
		-11.50	339.1	863.8	1203.0	721.2	-190.2	531.0
		-12.00	344.9	913.5	1258.5	754.5	-190.2	564.2
		-12.50	712.2	974.9	1687.1	1011.4	-190.2	821.2
		-13.00	404.1	1070.9	1475.0	884.3	-190.2	694.1
		-13.50	234.4	1166.9	1401.3	840.1	-190.2	649.9
		-14.00	98.6	1248.7	1347.3	807.8	-190.2	617.5
		-14.50	98.2	1260.3	1358.5	814.4	-190.2	624.2
		-15.00	92.6	1271.9	1364.5	818.0	-190.2	627.8
		-15.50	99.3	1281.8	1381.1	828.0	-190.2	637.8
		-16.00	100.3	1291.8	1392.1	834.6	-190.2	644.4
		-16.50	175.0	1301.8	1476.7	885.3	-190.2	695.1
		-17.00	240.7	1338.1	1578.8	946.6	-190.2	756.3
		-17.50	218.8	1399.7	1618.6	970.4	-190.2	780.1
		-18.00	198.3	1440.9	1639.2	982.7	-190.2	792.5
55	4.12	-6.00	943.5	183.2	1126.7	675.5	-176.2	499.3
		-6.50	1070.8	279.2	1350.0	809.4	-176.2	633.1
		-7.00	1182.8	375.2	1557.9	934.0	-176.2	757.8
		-7.50	1296.7	471.2	1767.9	1059.9	-176.2	883.6
		-8.00	1507.1	567.2	2074.3	1243.6	-176.2	1067.3
		-8.50	1097.2	663.2	1760.4	1055.4	-176.2	879.1
		-9.00	724.8	759.2	1484.0	889.7	-176.2	713.4
		-9.50	482.9	855.2	1338.1	802.2	-176.2	626.0
		-10.00	410.0	946.2	1356.1	813.0	-176.2	636.8
		-10.50	392.4	996.7	1389.1	832.8	-176.2	656.6
		-11.00	400.9	1041.3	1442.3	864.7	-176.2	688.4
		-11.50	359.2	1115.6	1474.8	884.2	-176.2	708.0
		-12.00	351.6	1167.1	1518.7	910.5	-176.2	734.2
		-12.50	384.8	1222.9	1607.7	963.8	-176.2	787.6
		-13.00	239.3	1318.9	1558.2	934.2	-176.2	757.9
		-13.50	123.9	1414.9	1538.8	922.5	-176.2	746.3
		-14.00	77.3	1465.8	1543.0	925.1	-176.2	748.9
		-14.50	76.1	1474.7	1550.8	929.7	-176.2	753.5
		-15.00	75.8	1482.9	1558.7	934.5	-176.2	758.3
		-15.50	80.9	1490.6	1571.5	942.1	-176.2	765.9
		-16.00	96.8	1498.8	1595.6	956.6	-176.2	780.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
55	4.12	-16.50	381.4	1516.1	1897.5	1137.6	-176.2	961.4
		-17.00	380.4	1586.9	1967.2	1179.4	-176.2	1003.2
		-17.50	316.3	1669.4	1985.7	1190.5	-176.2	1014.2
		-18.00	223.0	1743.5	1966.5	1179.0	-176.2	1002.7

REKENGEDEGENS G2 290

Berekening : Ontwerpend
 Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
 Sondering(en) : 58, 59, 60, 61

Stijf bouwwerk : NEE
 Paalgroep : NEE
 Aantal sonderingen : 4
 Factor ξ_3 ($n=1$) : 1.39 (handmatig)
 Factor ξ_3 (gem) : 1.39 (handmatig)
 Factor ξ_4 (min) : 1.39 (handmatig)
 Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s;cal;max;i}$ begrenzen op $0.75 * R_{b;cal;max;i}$: NEE
 UGT draagvermogen zonder negatieve kleef : NEE

Paal : #290
 Niveau paalkop [m] : N.A.P. 4.60
 Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #290

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-9.00	0.50



SAMENVATTINGSTABEL G2 290 (n=1)

Uitgangspunten

- paal : #290
 - paaltype : Geheide paal (beton)
 - schachtafmeting : 290 x 290
 Paalklassefactor α_p : 0.70
 Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
 Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	maaiveld niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
58	4.14	-6.00	684.9	147.7	832.6	499.2	-165.9	333.3
		-6.50	739.2	234.7	974.0	583.9	-165.9	418.0
		-7.00	815.5	321.7	1137.2	681.8	-165.9	515.9
		-7.50	893.7	408.7	1302.4	780.8	-165.9	615.0
		-8.00	1056.9	495.7	1552.7	930.9	-165.9	765.0
		-8.50	1190.3	582.7	1773.0	1063.0	-165.9	897.1
		-9.00	650.0	669.7	1319.8	791.2	-165.9	625.4
59	4.31	-6.00	714.1	143.9	858.0	514.4	-166.2	348.2
		-6.50	806.9	230.9	1037.8	622.2	-166.2	455.9
		-7.00	893.8	317.9	1211.7	726.5	-166.2	560.2
		-7.50	1053.3	404.9	1458.3	874.3	-166.2	708.0
		-8.00	911.7	491.9	1403.6	841.5	-166.2	675.3
		-8.50	723.4	578.9	1302.3	780.8	-166.2	614.6
		-9.00	265.5	665.9	931.4	558.4	-166.2	392.2
60	4.73	-6.00	811.1	142.1	953.1	571.4	-169.6	401.9
		-6.50	892.3	229.1	1121.4	672.3	-169.6	502.7
		-7.00	989.3	316.1	1305.4	782.6	-169.6	613.0
		-7.50	923.6	403.1	1326.7	795.4	-169.6	625.8
		-8.00	801.0	490.1	1291.1	774.0	-169.6	604.5
		-8.50	698.8	577.1	1275.9	764.9	-169.6	595.4
		-9.00	547.1	662.1	1209.2	724.9	-169.6	555.4
61	4.40	-6.00	697.5	101.1	798.6	478.8	-178.2	300.6
		-6.50	847.4	188.1	1035.5	620.8	-178.2	442.6
		-7.00	953.6	275.1	1228.7	736.6	-178.2	558.4
		-7.50	1090.8	362.1	1452.9	871.0	-178.2	692.8
		-8.00	970.2	449.1	1419.3	850.9	-178.2	672.7
		-8.50	543.7	536.1	1079.8	647.4	-178.2	469.2
		-9.00	272.4	623.1	895.5	536.9	-178.2	358.6

**REKENGEGEVENS G2 320**

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 58, 59, 60, 61

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 4
Factor ξ_3 (n=1) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f;nk}$: 1.0
 $R_{d;cal;max;i}$ begrenzen op $0.75 * R_{d;cal;max;i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #320
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #320

Alle niveaus/hogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-9.00	0.50



SAMENVATTINGSTABEL G2 320 (n=1)

Uitgangspunten

- paal : #320
 - paaltype : Geheide paal (beton)
 - schachtafmeting : 320 x 320
 Paalklassefactor α_p : 0.70
 Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
 Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	maaiveld niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
				$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
58	4.14	-6.00		810.0	163.0	973.0	583.4	-183.0	400.3
		-6.50		874.2	259.0	1133.2	679.4	-183.0	496.4
		-7.00		957.3	355.0	1312.3	786.8	-183.0	603.7
		-7.50		1042.9	451.0	1493.9	895.6	-183.0	712.6
		-8.00		1278.7	547.0	1825.7	1094.5	-183.0	911.5
		-8.50		1186.6	643.0	1829.6	1096.9	-183.0	913.9
		-9.00		765.9	739.0	1504.9	902.2	-183.0	719.2
59	4.31	-6.00		851.2	158.8	1010.0	605.5	-183.4	422.1
		-6.50		954.6	254.8	1209.4	725.1	-183.4	541.6
		-7.00		1051.1	350.8	1401.9	840.5	-183.4	657.1
		-7.50		1173.8	446.8	1620.6	971.6	-183.4	788.2
		-8.00		1072.7	542.8	1615.5	968.6	-183.4	785.1
		-8.50		814.7	638.8	1453.5	871.4	-183.4	688.0
		-9.00		316.4	734.8	1051.2	630.2	-183.4	446.8
60	4.73	-6.00		967.4	156.8	1124.2	674.0	-187.1	486.9
		-6.50		1057.7	252.8	1310.5	785.6	-187.1	598.5
		-7.00		1161.5	348.8	1510.3	905.5	-187.1	718.4
		-7.50		1012.1	444.8	1456.8	873.4	-187.1	686.3
		-8.00		891.9	540.8	1432.6	858.9	-187.1	671.8
		-8.50		850.9	636.8	1487.6	891.9	-187.1	704.8
		-9.00		642.4	730.6	1373.0	823.1	-187.1	636.0
61	4.40	-6.00		846.7	111.6	958.3	574.5	-196.7	377.8
		-6.50		1007.6	207.6	1215.2	728.5	-196.7	531.9
		-7.00		1124.5	303.6	1428.1	856.2	-196.7	659.5
		-7.50		1280.8	399.6	1680.4	1007.4	-196.7	810.7
		-8.00		1018.4	495.6	1514.0	907.7	-196.7	711.0
		-8.50		648.3	591.6	1239.9	743.3	-196.7	546.7
		-9.00		320.6	687.6	1008.2	604.4	-196.7	407.8

**REKENGEGEVENEN G6 290**

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 17, 18, 19, 20, 21, 22, 23, 24

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 8
Factor ξ_3 (n=1) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f;nk}$: 1.0
 $R_{d;cal;max;i}$ begrenzen op $0.75 * R_{d;cal;max;i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #290
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #290

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-17.00	-19.00	0.50



SAMENVATTINGSTABEL G6 290 (n=1)

Uitgangspunten

- paal : #290
 - paaltype : Geheide paal (beton)
 - schachtafmeting : 290 x 290
 Paalklassefactor α_p : 0.70
 Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
 Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
17	4.21	-17.00	318.6	1470.2	1788.7	1072.4	-166.0	906.3
		-17.50	720.9	1538.8	2259.7	1354.7	-166.0	1188.7
		-18.00	689.1	1625.8	2314.9	1387.8	-166.0	1221.8
		-18.50	471.2	1712.8	2184.0	1309.3	-166.0	1143.3
		-19.00	265.8	1793.7	2059.5	1234.7	-166.0	1068.7
18	4.22	-17.00	517.6	1280.7	1798.3	1078.1	-169.2	909.0
		-17.50	862.7	1361.8	2224.5	1333.7	-169.2	1164.5
		-18.00	527.7	1448.8	1976.6	1185.0	-169.2	1015.8
		-18.50	298.8	1535.8	1834.6	1099.9	-169.2	930.7
		-19.00	234.6	1612.4	1846.9	1107.3	-169.2	938.1
19	4.17	-17.00	906.6	1433.2	2339.9	1402.8	-159.8	1243.0
		-17.50	991.4	1520.2	2511.7	1505.8	-159.8	1346.0
		-18.00	333.1	1607.2	1940.3	1163.3	-159.8	1003.4
		-18.50	206.8	1694.2	1901.1	1139.7	-159.8	979.9
		-19.00	94.7	1772.4	1867.1	1119.4	-159.8	959.6
20	4.13	-17.00	820.6	1188.3	2008.9	1204.4	-181.7	1022.7
		-17.50	1019.0	1275.3	2294.3	1375.5	-181.7	1193.8
		-18.00	963.3	1362.3	2325.6	1394.2	-181.7	1212.5
		-18.50	1000.4	1449.3	2449.7	1468.7	-181.7	1287.0
		-19.00	919.1	1536.3	2455.4	1472.1	-181.7	1290.4
21	4.12	-17.00	583.0	1227.6	1810.6	1085.5	-178.4	907.1
		-17.50	622.7	1313.8	1936.5	1161.0	-178.4	982.6
		-18.00	419.7	1400.8	1820.5	1091.5	-178.4	913.0
		-18.50	348.4	1487.8	1836.2	1100.8	-178.4	922.4
		-19.00	278.0	1552.7	1830.7	1097.5	-178.4	919.1
22	4.23	-17.00	672.4	1349.2	2021.5	1212.0	-168.4	1043.6
		-17.50	842.9	1435.5	2278.4	1365.9	-168.4	1197.6
		-18.00	733.1	1522.5	2255.6	1352.3	-168.4	1183.9
		-18.50	388.5	1609.5	1998.0	1197.8	-168.4	1029.5
		-19.00	218.5	1695.2	1913.7	1147.3	-168.4	979.0
23	4.21	-17.00	352.1	1625.1	1977.3	1185.4	-151.0	1034.4
		-17.50	321.0	1684.7	2005.7	1202.4	-151.0	1051.5
		-18.00	751.6	1735.7	2487.2	1491.2	-151.0	1340.2
		-18.50	763.2	1822.5	2585.7	1550.2	-151.0	1399.2
		-19.00	640.4	1909.5	2549.9	1528.7	-151.0	1377.8
24	4.22	-17.00	471.9	1176.5	1648.4	988.2	-172.9	815.4
		-17.50	566.8	1256.2	1823.0	1093.0	-172.9	920.1
		-18.00	478.5	1343.2	1821.7	1092.1	-172.9	919.3
		-18.50	274.7	1428.7	1703.4	1021.2	-172.9	848.4
		-19.00	212.6	1495.4	1708.0	1024.0	-172.9	851.1

**REKENGEGEVENS G6 320**

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 17, 18, 19, 20, 21, 22, 23, 24

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 8
Factor ξ_3 (n=1) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f;nk}$: 1.0
 $R_{d;cal;max;i}$ begrenzen op $0.75 * R_{d;cal;max;i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #320
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #320

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-17.00	-19.00	0.50



SAMENVATTINGSTABEL G6 320 (n=1)

Uitgangspunten

- paal	: #320
- paaltype	: Geheide paal (beton)
- schachtafmeting	: 320 x 320
Paalklassefactor α_p	: 0.70
Factor α_s (tabel 7.c EC 7.1)	: 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
17	4.21	-17.00	412.0	1622.2	2034.2	1219.6	-183.2	1036.3
		-17.50	812.4	1698.0	2510.4	1505.0	-183.2	1321.8
		-18.00	708.5	1794.0	2502.5	1500.3	-183.2	1317.1
		-18.50	556.7	1890.0	2446.6	1466.8	-183.2	1283.6
		-19.00	307.6	1979.3	2286.9	1371.0	-183.2	1187.8
18	4.22	-17.00	666.5	1413.2	2079.7	1246.8	-186.7	1060.2
		-17.50	815.3	1502.7	2318.0	1389.7	-186.7	1203.0
		-18.00	554.1	1598.7	2152.8	1290.6	-186.7	1104.0
		-18.50	358.8	1694.7	2053.6	1231.1	-186.7	1044.5
		-19.00	283.6	1779.2	2062.7	1236.7	-186.7	1050.0
19	4.17	-17.00	1081.6	1581.5	2663.1	1596.6	-176.4	1420.2
		-17.50	758.1	1677.5	2435.6	1460.2	-176.4	1283.8
		-18.00	377.4	1773.5	2150.9	1289.5	-176.4	1113.2
		-18.50	238.7	1869.5	2108.2	1263.9	-176.4	1087.6
		-19.00	115.4	1955.7	2071.1	1241.7	-176.4	1065.3
20	4.13	-17.00	990.9	1311.2	2302.1	1380.2	-200.5	1179.7
		-17.50	1218.4	1407.2	2625.6	1574.1	-200.5	1373.6
		-18.00	1126.9	1503.2	2630.2	1576.8	-200.5	1376.4
		-18.50	1184.9	1599.2	2784.1	1669.1	-200.5	1468.7
		-19.00	1080.1	1695.2	2775.4	1663.9	-200.5	1463.4
21	4.12	-17.00	705.2	1354.6	2059.8	1234.9	-196.9	1038.0
		-17.50	519.2	1449.7	1968.9	1180.4	-196.9	983.5
		-18.00	487.2	1545.7	2033.0	1218.8	-196.9	1021.9
		-18.50	420.3	1641.7	2062.0	1236.2	-196.9	1039.3
		-19.00	363.1	1713.3	2076.5	1244.9	-196.9	1048.0
22	4.23	-17.00	839.5	1488.8	2328.2	1395.8	-185.8	1210.0
		-17.50	921.4	1584.0	2505.4	1502.0	-185.8	1316.3
		-18.00	813.9	1680.0	2493.8	1495.1	-185.8	1309.3
		-18.50	419.4	1776.0	2195.3	1316.1	-185.8	1130.4
		-19.00	236.2	1870.6	2106.8	1263.1	-185.8	1077.3
23	4.21	-17.00	433.6	1793.2	2226.8	1335.0	-166.6	1168.4
		-17.50	384.2	1859.0	2243.2	1344.9	-166.6	1178.3
		-18.00	904.9	1915.2	2820.1	1690.7	-166.6	1524.1
		-18.50	803.0	2011.0	2814.0	1687.1	-166.6	1520.5
		-19.00	761.5	2107.0	2868.6	1719.8	-166.6	1553.2
24	4.22	-17.00	599.5	1298.2	1897.7	1137.7	-190.7	947.0
		-17.50	685.9	1386.2	2072.1	1242.3	-190.7	1051.5
		-18.00	418.2	1482.2	1900.4	1139.3	-190.7	948.6
		-18.50	315.5	1576.5	1891.9	1134.3	-190.7	943.5
		-19.00	245.5	1650.1	1895.6	1136.4	-190.7	945.7

**REKENGEGEVENS G4 290**

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38
: 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 25
Factor ξ_3 (n=1) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s,cal,max,i}$ begrenzen op $0.75 * R_{b,cal,max,i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #290
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #290

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-21.00	0.50



SAMENVATTINGSTABEL G4 290 (n=1)

Uitgangspunten

- paal : #290
 - paaltype : Geheide paal (beton)
 - schachtafmeting : 290 x 290
 Paalklassefactor α_p : 0.70
 Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
 Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
25	4.30	-6.00	664.1	70.1	734.2	440.2	-182.7	257.5
		-6.50	894.2	157.1	1051.3	630.3	-182.7	447.6
		-7.00	860.6	244.1	1104.7	662.3	-182.7	479.6
		-7.50	920.0	331.1	1251.1	750.1	-182.7	567.4
		-8.00	868.5	418.1	1286.6	771.3	-182.7	588.7
		-8.50	1030.6	503.4	1534.0	919.7	-182.7	737.0
		-9.00	406.9	590.4	997.3	597.9	-182.7	415.2
		-9.50	201.9	677.4	879.3	527.1	-182.7	344.5
		-10.00	115.9	760.8	876.8	525.6	-182.7	343.0
		-10.50	90.9	780.7	871.6	522.6	-182.7	339.9
		-11.00	107.6	780.7	888.3	532.6	-182.7	349.9
		-11.50	104.0	780.7	884.7	530.4	-182.7	347.7
		-12.00	127.0	780.7	907.7	544.2	-182.7	361.5
		-12.50	533.2	801.8	1335.0	800.4	-182.7	617.7
		-13.00	329.5	887.5	1217.0	729.6	-182.7	547.0
		-13.50	187.1	974.5	1161.6	696.4	-182.7	513.8
		-14.00	72.0	1054.8	1126.8	675.5	-182.7	492.9
		-14.50	67.0	1067.5	1134.5	680.1	-182.7	497.5
		-15.00	65.8	1075.0	1140.8	683.9	-182.7	501.3
		-15.50	72.9	1082.1	1154.9	692.4	-182.7	509.8
		-16.00	75.6	1090.3	1165.9	699.0	-182.7	516.3
26	4.39	-16.50	141.3	1105.0	1246.3	747.2	-182.7	564.5
		-17.00	521.5	1146.6	1668.2	1000.1	-182.7	817.4
		-17.50	655.0	1229.0	1884.0	1129.5	-182.7	946.8
		-18.00	735.9	1313.4	2049.3	1228.6	-182.7	1045.9
		-18.50	617.0	1400.1	2017.1	1209.3	-182.7	1026.6
		-19.00	645.6	1485.9	2131.5	1277.9	-182.7	1095.2
		-6.00	694.1	126.9	821.0	492.2	-169.4	322.8
		-6.50	754.9	213.9	968.8	580.8	-169.4	411.4
		-7.00	818.5	300.9	1119.4	671.1	-169.4	501.7
		-7.50	588.8	387.9	976.6	585.5	-169.4	416.1
		-8.00	579.2	474.9	1054.1	631.9	-169.4	462.5
		-8.50	439.4	561.4	1000.7	600.0	-169.4	430.5
		-9.00	615.1	626.9	1242.0	744.6	-169.4	575.2
		-9.50	512.9	708.3	1221.2	732.1	-169.4	562.7
		-10.00	239.5	785.3	1024.8	614.4	-169.4	444.9
		-10.50	124.6	853.1	977.8	586.2	-169.4	416.8
		-11.00	95.6	896.6	992.3	594.9	-169.4	425.5
		-11.50	82.6	914.2	996.9	597.6	-169.4	428.2
		-12.00	129.5	924.1	1053.6	631.7	-169.4	462.2
		-12.50	607.4	956.1	1563.5	937.4	-169.4	767.9
		-13.00	595.3	1042.8	1638.2	982.1	-169.4	812.7
		-13.50	302.0	1129.8	1431.9	858.4	-169.4	689.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
26	4.39	-14.00	145.4	1216.8	1362.2	816.7	-169.4	647.2
		-14.50	73.1	1272.4	1345.5	806.7	-169.4	637.2
		-15.00	71.8	1281.0	1352.8	811.0	-169.4	641.6
		-15.50	72.2	1288.5	1360.7	815.8	-169.4	646.4
		-16.00	75.8	1296.3	1372.1	822.6	-169.4	653.2
		-16.50	239.9	1308.9	1548.8	928.5	-169.4	759.1
		-17.00	715.8	1373.0	2088.8	1252.3	-169.4	1082.8
		-17.50	366.1	1460.0	1826.1	1094.8	-169.4	925.3
		-18.00	252.5	1547.0	1799.5	1078.8	-169.4	909.4
		-18.50	148.1	1628.3	1776.3	1064.9	-169.4	895.5
		-19.00	379.3	1653.6	2032.9	1218.7	-169.4	1049.3
		-19.50	448.2	1718.6	2166.7	1299.0	-169.4	1129.6
27	4.33	-6.00	530.2	66.4	596.6	357.7	-182.1	175.6
		-6.50	643.6	153.3	796.9	477.7	-182.1	295.6
		-7.00	685.7	240.3	926.0	555.2	-182.1	373.1
		-7.50	753.0	327.3	1080.3	647.7	-182.1	465.6
		-8.00	820.7	413.3	1234.1	739.8	-182.1	557.8
		-8.50	1000.8	499.1	1499.9	899.2	-182.1	717.1
		-9.00	418.1	586.1	1004.2	602.0	-182.1	420.0
		-9.50	328.6	673.1	1001.7	600.5	-182.1	418.4
		-10.00	209.5	748.0	957.4	574.0	-182.1	391.9
		-10.50	266.6	785.7	1052.3	630.9	-182.1	448.8
		-11.00	245.3	835.0	1080.3	647.7	-182.1	465.6
		-11.50	186.8	897.9	1084.7	650.3	-182.1	468.2
		-12.00	245.9	925.1	1171.0	702.0	-182.1	520.0
		-12.50	589.3	979.4	1568.6	940.4	-182.1	758.4
		-13.00	301.5	1064.9	1366.4	819.2	-182.1	637.1
		-13.50	200.8	1150.5	1351.2	810.1	-182.1	628.0
		-14.00	94.3	1236.0	1330.3	797.6	-182.1	615.5
		-14.50	73.7	1263.3	1337.1	801.6	-182.1	619.5
		-15.00	75.7	1271.1	1346.8	807.4	-182.1	625.3
		-15.50	85.8	1279.7	1365.5	818.6	-182.1	636.6
		-16.00	86.3	1290.2	1376.5	825.2	-182.1	643.1
		-16.50	175.1	1301.5	1476.6	885.3	-182.1	703.2
		-17.00	442.9	1333.0	1775.9	1064.7	-182.1	882.6
		-17.50	465.3	1397.8	1863.1	1117.0	-182.1	934.9
		-18.00	734.4	1462.8	2197.3	1317.3	-182.1	1135.2
		-18.50	486.9	1547.8	2034.7	1219.8	-182.1	1037.7
		-19.00	299.4	1634.8	1934.2	1159.6	-182.1	977.5
		-19.50	252.7	1712.3	1965.0	1178.1	-182.1	996.0
28	4.37	-6.00	493.1	55.0	548.1	328.6	-182.7	145.9
		-6.50	628.2	139.7	767.9	460.4	-182.7	277.7
		-7.00	649.8	226.7	876.5	525.5	-182.7	342.8
		-7.50	717.9	313.7	1031.6	618.4	-182.7	435.7
		-8.00	785.7	400.5	1186.2	711.2	-182.7	528.5
		-8.50	897.5	485.8	1383.3	829.3	-182.7	646.6
		-9.00	629.2	572.8	1202.0	720.6	-182.7	537.9
		-9.50	417.4	659.8	1077.2	645.8	-182.7	463.1
		-10.00	284.1	740.9	1025.0	614.5	-182.7	431.8
		-10.50	138.9	793.9	932.8	559.2	-182.7	376.5
		-11.00	108.2	836.0	944.2	566.0	-182.7	383.3
		-11.50	85.9	851.9	937.8	562.2	-182.7	379.5
		-12.00	102.8	851.9	954.7	572.4	-182.7	389.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
28	4.37	-12.50	179.9	859.4	1039.3	623.1	-182.7	440.4
		-13.00	790.6	909.6	1700.3	1019.4	-182.7	836.7
		-13.50	390.6	996.6	1387.2	831.7	-182.7	649.0
		-14.00	197.7	1083.6	1281.3	768.2	-182.7	585.5
		-14.50	82.4	1153.5	1235.9	740.9	-182.7	558.3
		-15.00	79.5	1163.9	1243.4	745.4	-182.7	562.7
		-15.50	85.9	1172.4	1258.2	754.3	-182.7	571.6
		-16.00	86.1	1182.2	1268.2	760.3	-182.7	577.6
		-16.50	139.9	1192.2	1332.1	798.6	-182.7	615.9
		-17.00	183.2	1231.0	1414.2	847.8	-182.7	665.1
		-17.50	466.9	1268.2	1735.1	1040.2	-182.7	857.6
		-18.00	627.5	1341.4	1968.9	1180.4	-182.7	997.7
		-18.50	634.6	1428.4	2063.0	1236.8	-182.7	1054.1
		-19.00	506.1	1515.4	2021.5	1212.0	-182.7	1029.3
		-19.50	407.2	1583.3	1990.5	1193.4	-182.7	1010.7
29	4.28	-6.00	668.5	135.2	803.6	481.8	-166.2	315.6
		-6.50	678.5	222.2	900.7	540.0	-166.2	373.8
		-7.00	740.2	309.2	1049.4	629.1	-166.2	463.0
		-7.50	799.7	396.2	1195.9	717.0	-166.2	550.8
		-8.00	924.6	481.0	1405.5	842.6	-166.2	676.5
		-8.50	645.4	568.0	1213.4	727.4	-166.2	561.3
		-9.00	271.9	655.0	926.8	555.7	-166.2	389.5
		-9.50	196.1	741.9	938.0	562.4	-166.2	396.2
		-10.00	142.8	799.8	942.6	565.1	-166.2	398.9
		-10.50	188.2	817.9	1006.1	603.2	-166.2	437.0
		-11.00	124.5	863.3	987.7	592.2	-166.2	426.0
		-11.50	96.4	908.2	1004.6	602.3	-166.2	436.1
		-12.00	78.7	927.5	1006.1	603.2	-166.2	437.0
		-12.50	281.7	941.6	1223.3	733.4	-166.2	567.2
		-13.00	383.6	1007.0	1390.5	833.6	-166.2	667.5
		-13.50	240.2	1094.0	1334.2	799.9	-166.2	633.7
		-14.00	101.5	1181.0	1282.5	768.9	-166.2	602.7
		-14.50	72.7	1214.6	1287.3	771.8	-166.2	605.6
		-15.00	71.6	1222.9	1294.5	776.1	-166.2	609.9
		-15.50	79.3	1230.8	1310.1	785.4	-166.2	619.2
		-16.00	85.2	1240.8	1326.0	795.0	-166.2	628.8
		-16.50	193.9	1253.4	1447.3	867.7	-166.2	701.5
		-17.00	405.9	1295.0	1700.9	1019.7	-166.2	853.6
		-17.50	278.4	1366.1	1644.5	985.9	-166.2	819.7
		-18.00	269.2	1439.3	1708.6	1024.3	-166.2	858.1
		-18.50	137.1	1508.6	1645.7	986.6	-166.2	820.5
		-19.00	625.5	1545.4	2170.9	1301.5	-166.2	1135.3
		-19.50	831.1	1632.4	2463.6	1477.0	-166.2	1310.8
30	4.17	-6.00	511.3	38.5	549.8	329.6	-185.0	144.6
		-6.50	694.0	125.0	819.0	491.0	-185.0	306.0
		-7.00	776.4	212.0	988.4	592.6	-185.0	407.5
		-7.50	789.1	299.0	1088.1	652.4	-185.0	467.3
		-8.00	852.8	386.0	1238.8	742.7	-185.0	557.7
		-8.50	905.7	472.9	1378.6	826.5	-185.0	641.5
		-9.00	1032.1	559.9	1592.0	954.5	-185.0	769.4
		-9.50	1048.6	646.9	1695.5	1016.5	-185.0	831.4
		-10.00	534.2	733.9	1268.2	760.3	-185.0	575.2
		-10.50	362.9	820.9	1183.8	709.7	-185.0	524.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
30	4.17	-11.00	260.9	907.9	1168.9	700.8	-185.0	515.7
		-11.50	269.0	951.7	1220.7	731.8	-185.0	546.8
		-12.00	339.1	990.7	1329.9	797.3	-185.0	612.2
		-12.50	622.6	1046.0	1668.6	1000.4	-185.0	815.3
		-13.00	320.7	1130.6	1451.3	870.1	-185.0	685.0
		-13.50	164.8	1217.6	1382.4	828.8	-185.0	643.8
		-14.00	87.4	1287.4	1374.8	824.2	-185.0	639.2
		-14.50	84.0	1299.9	1383.9	829.7	-185.0	644.6
		-15.00	84.0	1308.7	1392.7	834.9	-185.0	649.9
		-15.50	92.5	1317.5	1410.0	845.3	-185.0	660.3
		-16.00	107.7	1327.9	1435.6	860.7	-185.0	675.6
		-16.50	256.6	1366.4	1623.0	973.0	-185.0	788.0
		-17.00	640.6	1427.9	2068.5	1240.1	-185.0	1055.1
		-17.50	845.7	1514.9	2360.6	1415.2	-185.0	1230.2
		-18.00	841.4	1601.9	2443.3	1464.8	-185.0	1279.8
		-18.50	858.6	1688.9	2547.5	1527.3	-185.0	1342.2
		-19.00	1225.4	1775.9	3001.4	1799.4	-185.0	1614.4
		-19.50	1225.3	1862.9	3088.2	1851.4	-185.0	1666.4
		-20.00	838.8	1949.9	2788.7	1671.9	-185.0	1486.9
31	4.21	-6.00	534.4	53.8	588.2	352.6	-181.9	170.8
		-6.50	788.4	140.4	928.8	556.8	-181.9	375.0
		-7.00	891.5	227.4	1118.9	670.8	-181.9	488.9
		-7.50	1007.2	314.4	1321.6	792.4	-181.9	610.5
		-8.00	1107.2	401.4	1508.6	904.4	-181.9	722.6
		-8.50	1158.4	488.4	1646.8	987.3	-181.9	805.5
		-9.00	1261.5	575.4	1836.9	1101.3	-181.9	919.4
		-9.50	1261.5	662.4	1923.9	1153.4	-181.9	971.6
		-10.00	1101.2	749.4	1850.6	1109.5	-181.9	927.6
		-10.50	563.7	836.4	1400.1	839.4	-181.9	657.5
		-11.00	319.7	923.4	1243.1	745.2	-181.9	563.4
		-11.50	246.0	1010.4	1256.4	753.2	-181.9	571.4
		-12.00	213.0	1058.6	1271.6	762.3	-181.9	580.5
		-12.50	310.0	1085.9	1396.0	836.9	-181.9	655.1
		-13.00	257.8	1144.6	1402.5	840.8	-181.9	658.9
		-13.50	143.1	1218.8	1361.9	816.5	-181.9	634.6
		-14.00	74.4	1275.4	1349.8	809.2	-181.9	627.4
		-14.50	71.0	1286.6	1357.6	813.9	-181.9	632.0
		-15.00	73.8	1294.7	1368.6	820.5	-181.9	638.6
		-15.50	78.2	1303.0	1381.2	828.1	-181.9	646.2
		-16.00	83.3	1311.7	1395.0	836.3	-181.9	654.5
		-16.50	331.1	1341.3	1672.4	1002.6	-181.9	820.8
		-17.00	650.3	1414.7	2065.0	1238.0	-181.9	1056.1
		-17.50	737.9	1501.7	2239.5	1342.7	-181.9	1160.8
		-18.00	469.9	1588.7	2058.5	1234.1	-181.9	1052.3
		-18.50	461.6	1675.7	2137.3	1281.4	-181.9	1099.5
		-19.00	338.5	1759.2	2097.7	1257.6	-181.9	1075.7
32	4.22	-6.00	939.7	87.0	1026.7	615.5	-169.7	445.9
		-6.50	965.7	174.0	1139.7	683.3	-169.7	513.6
		-7.00	1036.3	261.0	1297.3	777.7	-169.7	608.0
		-7.50	1042.2	348.0	1390.2	833.4	-169.7	663.7
		-8.00	1099.7	435.0	1534.7	920.1	-169.7	750.4
		-8.50	566.2	522.0	1088.2	652.4	-169.7	482.7
		-9.00	397.8	609.0	1006.8	603.6	-169.7	433.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
32	4.22	-9.50	338.8	696.0	1034.8	620.4	-169.7	450.7
		-10.00	137.3	752.9	890.2	533.7	-169.7	364.0
		-10.50	99.5	789.5	889.1	533.0	-169.7	363.3
		-11.00	74.9	823.9	898.8	538.9	-169.7	369.2
		-11.50	71.2	827.8	899.0	539.0	-169.7	369.3
		-12.00	128.3	827.8	956.1	573.2	-169.7	403.5
		-12.50	328.5	840.2	1168.7	700.7	-169.7	531.0
		-13.00	388.0	900.8	1288.8	772.7	-169.7	603.0
		-13.50	269.3	976.1	1245.4	746.6	-169.7	576.9
		-14.00	98.4	1051.6	1150.0	689.4	-169.7	519.7
		-14.50	66.8	1083.0	1149.8	689.3	-169.7	519.6
		-15.00	67.3	1090.2	1157.5	694.0	-169.7	524.3
		-15.50	71.1	1097.3	1168.4	700.5	-169.7	530.8
		-16.00	70.8	1105.4	1176.2	705.1	-169.7	535.4
		-16.50	332.6	1120.7	1453.3	871.3	-169.7	701.6
		-17.00	458.6	1194.1	1652.6	990.8	-169.7	821.1
		-17.50	405.4	1281.1	1686.5	1011.1	-169.7	841.4
		-18.00	337.1	1368.1	1705.2	1022.3	-169.7	852.6
		-18.50	493.5	1424.3	1917.8	1149.8	-169.7	980.1
		-19.00	334.0	1493.9	1827.9	1095.9	-169.7	926.2
		-19.50	272.2	1555.7	1827.9	1095.8	-169.7	926.2
33	4.19	-6.00	543.5	59.6	603.2	361.6	-178.6	183.0
		-6.50	720.0	146.0	866.0	519.2	-178.6	340.6
		-7.00	627.6	233.0	860.6	515.9	-178.6	337.4
		-7.50	564.0	320.0	884.0	530.0	-178.6	351.4
		-8.00	539.7	407.0	946.7	567.6	-178.6	389.0
		-8.50	485.3	477.3	962.5	577.1	-178.6	398.5
		-9.00	421.6	547.9	969.6	581.3	-178.6	402.7
		-9.50	373.7	619.3	992.9	595.3	-178.6	416.7
		-10.00	476.7	666.4	1143.2	685.4	-178.6	506.8
		-10.50	257.1	729.8	986.9	591.7	-178.6	413.1
		-11.00	213.7	797.8	1011.5	606.4	-178.6	427.8
		-11.50	142.9	851.9	994.8	596.4	-178.6	417.8
		-12.00	343.5	869.2	1212.8	727.1	-178.6	548.5
		-12.50	449.7	940.8	1390.5	833.6	-178.6	655.0
		-13.00	276.4	1027.8	1304.2	781.9	-178.6	603.3
		-13.50	124.3	1114.8	1239.1	742.9	-178.6	564.3
		-14.00	83.8	1157.5	1241.3	744.2	-178.6	565.6
		-14.50	81.0	1168.0	1248.9	748.8	-178.6	570.2
		-15.00	87.3	1177.6	1264.9	758.3	-178.6	579.7
		-15.50	87.6	1188.0	1275.6	764.7	-178.6	586.2
		-16.00	88.8	1197.7	1286.5	771.3	-178.6	592.7
		-16.50	238.2	1210.2	1448.5	868.4	-178.6	689.8
		-17.00	494.7	1260.1	1754.8	1052.1	-178.6	873.5
		-17.50	485.3	1329.7	1815.0	1088.2	-178.6	909.6
		-18.00	451.5	1399.2	1850.7	1109.5	-178.6	930.9
		-18.50	253.5	1464.5	1718.0	1030.0	-178.6	851.4
		-19.00	231.3	1531.5	1762.8	1056.8	-178.6	878.3
		-19.50	186.8	1582.6	1769.4	1060.8	-178.6	882.2
34	4.18	-6.00	638.9	128.2	767.0	459.8	-166.0	293.9
		-6.50	657.8	215.2	873.0	523.4	-166.0	357.4
		-7.00	247.2	302.2	549.4	329.4	-166.0	163.4
		-7.50	197.1	389.2	586.3	351.5	-166.0	185.5



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
34	4.18	-8.00	112.4	466.2	578.7	346.9	-166.0	181.0
		-8.50	252.2	484.0	736.2	441.4	-166.0	275.4
		-9.00	346.2	530.1	876.3	525.4	-166.0	359.4
		-9.50	320.2	591.9	912.1	546.8	-166.0	380.9
		-10.00	319.0	649.0	968.0	580.3	-166.0	414.4
		-10.50	308.0	700.8	1008.8	604.8	-166.0	438.8
		-11.00	331.2	739.1	1070.4	641.7	-166.0	475.7
		-11.50	331.2	785.5	1116.7	669.5	-166.0	503.5
		-12.00	283.4	846.8	1130.2	677.6	-166.0	511.6
		-12.50	492.9	880.3	1373.2	823.3	-166.0	657.3
		-13.00	257.1	946.8	1203.9	721.7	-166.0	555.8
		-13.50	170.8	1015.4	1186.2	711.1	-166.0	545.2
		-14.00	93.8	1079.6	1173.5	703.5	-166.0	537.6
		-14.50	81.1	1102.2	1183.3	709.4	-166.0	543.4
		-15.00	78.7	1111.8	1190.6	713.8	-166.0	547.8
		-15.50	84.7	1120.2	1204.9	722.4	-166.0	556.4
		-16.00	89.5	1130.0	1219.5	731.1	-166.0	565.2
		-16.50	574.0	1157.8	1731.8	1038.2	-166.0	872.3
		-17.00	807.7	1244.7	2052.4	1230.5	-166.0	1064.5
		-17.50	480.9	1331.7	1812.6	1086.7	-166.0	920.7
		-18.00	382.3	1418.7	1801.0	1079.7	-166.0	913.8
		-18.50	300.7	1505.7	1806.4	1083.0	-166.0	917.0
35	4.13	-19.00	298.2	1558.7	1856.9	1113.2	-166.0	947.3
		-19.50	401.5	1622.5	2024.0	1213.5	-166.0	1047.5
		-6.00	921.4	196.3	1117.7	670.1	-160.1	510.0
		-6.50	1015.0	283.3	1298.4	778.4	-160.1	618.3
		-7.00	1261.5	370.3	1631.8	978.3	-160.1	818.2
		-7.50	1261.5	457.3	1718.8	1030.5	-160.1	870.4
		-8.00	1186.7	544.3	1731.0	1037.8	-160.1	877.7
		-8.50	1000.5	631.3	1631.8	978.3	-160.1	818.2
		-9.00	464.1	718.3	1182.4	708.9	-160.1	548.8
		-9.50	247.5	805.3	1052.8	631.2	-160.1	471.1
		-10.00	173.5	888.5	1062.1	636.7	-160.1	476.6
		-10.50	156.5	929.1	1085.6	650.9	-160.1	490.8
		-11.00	156.2	965.6	1121.8	672.6	-160.1	512.5
		-11.50	129.9	989.6	1119.5	671.2	-160.1	511.1
		-12.00	300.0	989.6	1289.6	773.2	-160.1	613.1
		-12.50	621.2	1041.6	1662.8	996.9	-160.1	836.8
		-13.00	621.5	1128.6	1750.1	1049.2	-160.1	889.1
		-13.50	680.2	1213.0	1893.2	1135.0	-160.1	974.9
		-14.00	83.9	1294.3	1378.2	826.3	-160.1	666.2
		-14.50	55.6	1319.8	1375.5	824.6	-160.1	664.5
		-15.00	54.2	1326.8	1380.9	827.9	-160.1	667.8
		-15.50	54.5	1332.3	1386.8	831.4	-160.1	671.3
		-16.00	68.0	1338.1	1406.2	843.0	-160.1	682.9
		-16.50	188.8	1355.4	1544.1	925.7	-160.1	765.6
		-17.00	510.8	1402.0	1912.8	1146.8	-160.1	986.7
		-17.50	256.4	1489.0	1745.4	1046.4	-160.1	886.3
		-18.00	161.5	1574.9	1736.4	1041.0	-160.1	880.9
		-18.50	123.2	1622.0	1745.2	1046.3	-160.1	886.2
		-19.00	178.2	1641.3	1819.5	1090.9	-160.1	930.8
		-19.50	232.5	1689.3	1921.7	1152.1	-160.1	992.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
36	4.19	-6.00	599.5	80.6	680.2	407.8	-175.4	232.4
		-6.50	732.4	167.6	900.0	539.6	-175.4	364.2
		-7.00	812.4	254.6	1067.0	639.7	-175.4	464.3
		-7.50	915.0	341.6	1256.6	753.4	-175.4	578.0
		-8.00	730.3	428.6	1159.0	694.8	-175.4	519.4
		-8.50	578.3	515.6	1093.9	655.8	-175.4	480.4
		-9.00	371.6	602.6	974.2	584.1	-175.4	408.7
		-9.50	350.6	672.8	1023.4	613.6	-175.4	438.2
		-10.00	316.6	734.0	1050.5	629.8	-175.4	454.4
		-10.50	373.5	770.8	1144.3	686.0	-175.4	510.6
		-11.00	311.5	835.2	1146.6	687.4	-175.4	512.0
		-11.50	244.7	889.1	1133.7	679.7	-175.4	504.3
		-12.00	426.6	928.6	1355.2	812.5	-175.4	637.1
		-12.50	1040.4	1003.0	2043.5	1225.1	-175.4	1049.7
		-13.00	453.2	1090.0	1543.3	925.2	-175.4	749.8
		-13.50	273.6	1177.0	1450.6	869.6	-175.4	694.3
		-14.00	98.5	1264.0	1362.5	816.8	-175.4	641.4
		-14.50	69.3	1298.0	1367.3	819.7	-175.4	644.3
		-15.00	71.7	1306.1	1377.7	826.0	-175.4	650.6
		-15.50	72.9	1314.1	1387.0	831.5	-175.4	656.1
		-16.00	79.4	1322.9	1402.3	840.7	-175.4	665.3
37	4.23	-6.00	696.6	90.5	787.1	471.9	-175.5	296.4
		-6.50	728.3	177.5	905.7	543.0	-175.5	367.5
		-7.00	779.7	264.5	1044.2	626.0	-175.5	450.5
		-7.50	862.3	351.5	1213.8	727.7	-175.5	552.2
		-8.00	710.3	438.5	1148.8	688.7	-175.5	513.3
		-8.50	424.4	525.5	949.9	569.5	-175.5	394.0
		-9.00	292.6	609.9	902.5	541.1	-175.5	365.6
		-9.50	265.8	672.0	937.7	562.2	-175.5	386.7
		-10.00	265.6	711.6	977.2	585.9	-175.5	410.4
		-10.50	247.4	751.3	998.8	598.8	-175.5	423.3
		-11.00	379.4	795.9	1175.3	704.6	-175.5	529.1
		-11.50	322.7	865.5	1188.2	712.3	-175.5	536.9
		-12.00	289.3	933.6	1222.9	733.1	-175.5	557.7
		-12.50	279.6	974.9	1254.5	752.1	-175.5	576.6
		-13.00	460.5	1025.9	1486.4	891.1	-175.5	715.7
		-13.50	230.4	1112.9	1343.3	805.3	-175.5	629.9
		-14.00	82.6	1199.6	1282.2	768.7	-175.5	593.3
		-14.50	61.9	1227.0	1288.9	772.7	-175.5	597.2
		-15.00	63.0	1233.7	1296.7	777.4	-175.5	601.9
		-15.50	64.7	1240.4	1305.1	782.5	-175.5	607.0
		-16.00	69.7	1247.3	1317.0	789.5	-175.5	614.1
38	4.20	-16.50	135.2	1264.2	1399.4	838.9	-175.5	663.5
		-17.00	111.1	1298.1	1409.2	844.9	-175.5	669.4
		-17.50	234.0	1333.9	1567.9	940.0	-175.5	764.5
		-18.00	173.2	1400.9	1574.1	943.7	-175.5	768.2
		-18.50	191.2	1426.0	1617.1	969.5	-175.5	794.0
		-19.00	149.7	1479.5	1629.2	976.7	-175.5	801.2
		-19.50	129.9	1509.4	1639.4	982.8	-175.5	807.3
		-6.00	582.6	124.8	707.4	424.1	-169.1	255.0
		-6.50	670.7	211.5	882.2	528.9	-169.1	359.8
		-7.00	926.2	298.5	1224.6	734.2	-169.1	565.1
		-7.50	1076.5	385.5	1462.0	876.5	-169.1	707.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
38	4.20	-8.00	1261.5	472.5	1734.0	1039.5	-169.1	870.4
		-8.50	1261.5	559.5	1821.0	1091.7	-169.1	922.6
		-9.00	1014.7	646.5	1661.1	995.9	-169.1	826.8
		-9.50	739.7	733.5	1473.2	883.2	-169.1	714.1
		-10.00	463.9	820.4	1284.3	770.0	-169.1	600.9
		-10.50	429.3	903.2	1332.5	798.9	-169.1	629.8
		-11.00	301.0	965.2	1266.1	759.1	-169.1	590.0
		-11.50	285.0	1020.1	1305.0	782.4	-169.1	613.3
		-12.00	213.0	1071.6	1284.6	770.2	-169.1	601.0
		-12.50	428.9	1102.4	1531.4	918.1	-169.1	749.0
		-13.00	247.7	1168.2	1415.9	848.9	-169.1	679.7
		-13.50	105.2	1237.8	1343.0	805.2	-169.1	636.1
		-14.00	78.2	1274.0	1352.2	810.7	-169.1	641.5
		-14.50	76.0	1284.2	1360.2	815.4	-169.1	646.3
		-15.00	81.0	1292.4	1373.4	823.4	-169.1	654.3
		-15.50	82.0	1301.6	1383.6	829.5	-169.1	660.4
		-16.00	101.6	1310.6	1412.2	846.6	-169.1	677.5
		-16.50	705.9	1333.7	2039.6	1222.8	-169.1	1053.6
		-17.00	526.5	1414.1	1940.6	1163.5	-169.1	994.3
		-17.50	459.9	1495.6	1955.5	1172.4	-169.1	1003.3
		-18.00	728.9	1570.6	2299.5	1378.6	-169.1	1209.5
39	4.20	-18.50	927.0	1655.3	2582.3	1548.1	-169.1	1379.0
		-19.00	774.4	1742.3	2516.7	1508.8	-169.1	1339.7
		-19.50	1183.0	1828.4	3011.4	1805.4	-169.1	1636.3
		-6.00	662.2	159.5	821.7	492.6	-162.9	329.7
		-6.50	863.6	246.5	1110.1	665.5	-162.9	502.6
		-7.00	954.4	333.5	1288.0	772.2	-162.9	609.2
		-7.50	1032.8	420.5	1453.3	871.3	-162.9	708.3
		-8.00	1101.8	507.5	1609.3	964.8	-162.9	801.9
		-8.50	1261.5	594.5	1856.0	1112.7	-162.9	949.8
		-9.00	1261.5	681.5	1943.0	1164.9	-162.9	1001.9
		-9.50	975.9	768.5	1744.4	1045.8	-162.9	882.9
		-10.00	510.1	855.5	1365.6	818.7	-162.9	655.8
		-10.50	298.4	942.5	1241.0	744.0	-162.9	581.1
		-11.00	241.6	1027.0	1268.7	760.6	-162.9	597.7
		-11.50	214.2	1065.7	1279.9	767.3	-162.9	604.4
		-12.00	367.2	1093.4	1460.6	875.7	-162.9	712.7
		-12.50	616.4	1163.7	1780.1	1067.2	-162.9	904.2
		-13.00	343.3	1250.7	1594.0	955.6	-162.9	792.7
		-13.50	132.8	1337.7	1470.5	881.6	-162.9	718.7
		-14.00	75.9	1384.1	1460.0	875.3	-162.9	712.4
		-14.50	82.9	1391.9	1474.8	884.2	-162.9	721.3
		-15.00	84.7	1401.1	1485.7	890.7	-162.9	727.8
		-15.50	88.8	1410.4	1499.2	898.8	-162.9	735.9
		-16.00	157.5	1420.2	1577.7	945.9	-162.9	782.9
		-16.50	837.2	1474.5	2311.6	1385.9	-162.9	1222.9
		-17.00	711.5	1561.5	2272.9	1362.7	-162.9	1199.7
		-17.50	581.8	1648.5	2230.3	1337.1	-162.9	1174.2
		-18.00	594.7	1735.4	2330.1	1396.9	-162.9	1234.0
		-18.50	497.2	1813.2	2310.4	1385.1	-162.9	1222.2
		-19.00	314.3	1882.8	2197.1	1317.2	-162.9	1154.2
		-19.50	191.4	1950.8	2142.2	1284.3	-162.9	1121.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
40	4.15	-6.00	747.5	192.7	940.2	563.7	-114.2	449.4
		-6.50	804.8	279.7	1084.5	650.2	-114.2	535.9
		-7.00	845.3	366.7	1212.0	726.6	-114.2	612.4
		-7.50	927.1	453.7	1380.8	827.8	-114.2	713.6
		-8.00	779.3	540.7	1319.9	791.3	-114.2	677.1
		-8.50	633.8	627.7	1261.5	756.3	-114.2	642.0
		-9.00	598.4	714.7	1313.1	787.2	-114.2	673.0
		-9.50	411.6	789.8	1201.4	720.2	-114.2	606.0
		-10.00	226.7	859.1	1085.9	651.0	-114.2	536.8
		-10.50	178.1	924.8	1102.9	661.2	-114.2	547.0
		-11.00	174.5	958.5	1133.0	679.3	-114.2	565.0
		-11.50	248.0	992.0	1240.0	743.4	-114.2	629.2
		-12.00	259.8	1031.7	1291.5	774.3	-114.2	660.0
		-12.50	731.6	1076.4	1808.0	1083.9	-114.2	969.7
		-13.00	379.2	1163.4	1542.5	924.8	-114.2	810.5
		-13.50	220.4	1250.4	1470.8	881.8	-114.2	767.5
		-14.00	84.6	1336.9	1421.5	852.2	-114.2	738.0
		-14.50	73.6	1355.0	1428.5	856.4	-114.2	742.2
		-15.00	77.2	1362.7	1439.9	863.2	-114.2	749.0
		-15.50	78.4	1370.9	1449.4	868.9	-114.2	754.7
		-16.00	86.6	1379.6	1466.2	879.0	-114.2	764.8
		-16.50	117.9	1394.8	1512.7	906.9	-114.2	792.6
		-17.00	211.7	1418.5	1630.2	977.3	-114.2	863.1
		-17.50	188.0	1473.3	1661.3	996.0	-114.2	881.7
		-18.00	105.8	1533.6	1639.4	982.8	-114.2	868.6
		-18.50	189.4	1561.4	1750.7	1049.6	-114.2	935.4
		-19.00	117.6	1611.4	1729.0	1036.6	-114.2	922.4
		-19.50	153.9	1625.9	1779.8	1067.0	-114.2	952.8
41	4.19	-6.00	612.4	121.8	734.1	440.1	-166.0	274.1
		-6.50	693.6	208.8	902.3	541.0	-166.0	375.0
		-7.00	762.7	295.8	1058.5	634.6	-166.0	468.6
		-7.50	683.2	382.8	1066.0	639.1	-166.0	473.1
		-8.00	547.2	469.8	1016.9	609.7	-166.0	443.7
		-8.50	518.7	553.1	1071.8	642.6	-166.0	476.6
		-9.00	461.2	617.2	1078.5	646.6	-166.0	480.6
		-9.50	339.6	669.2	1008.8	604.8	-166.0	438.8
		-10.00	311.6	735.2	1046.8	627.6	-166.0	461.6
		-10.50	245.7	785.1	1030.8	618.0	-166.0	452.0
		-11.00	178.8	836.3	1015.2	608.6	-166.0	442.6
		-11.50	110.2	904.7	1015.0	608.5	-166.0	442.5
		-12.00	100.6	927.3	1027.9	616.2	-166.0	450.2
		-12.50	114.0	939.0	1053.0	631.3	-166.0	465.3
		-13.00	219.7	968.7	1188.3	712.4	-166.0	546.4
		-13.50	142.7	1038.2	1180.9	708.0	-166.0	542.0
		-14.00	70.2	1092.1	1162.2	696.8	-166.0	530.8
		-14.50	69.3	1101.2	1170.4	701.7	-166.0	535.7
		-15.00	70.0	1108.5	1178.4	706.5	-166.0	540.5
		-15.50	73.3	1115.7	1189.0	712.8	-166.0	546.9
		-16.00	75.0	1123.7	1198.7	718.7	-166.0	552.7
		-16.50	215.4	1134.8	1350.1	809.4	-166.0	643.4
		-17.00	426.7	1182.9	1609.6	965.0	-166.0	799.0
		-17.50	271.9	1269.9	1541.9	924.4	-166.0	758.4
		-18.00	187.5	1356.9	1544.4	925.9	-166.0	759.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
41	4.19	-18.50	148.4	1409.4	1557.8	933.9	-166.0	768.0
		-19.00	181.0	1429.2	1610.2	965.3	-166.0	799.3
		-19.50	214.3	1452.1	1666.4	999.0	-166.0	833.0
42	4.20	-6.00	533.8	106.5	640.3	383.9	-171.6	212.3
		-6.50	602.2	184.8	787.0	471.8	-171.6	300.2
		-7.00	802.8	268.4	1071.3	642.2	-171.6	470.7
		-7.50	947.2	355.4	1302.6	780.9	-171.6	609.4
		-8.00	1015.2	442.4	1457.6	873.9	-171.6	702.3
		-8.50	1021.0	529.4	1550.5	929.5	-171.6	758.0
		-9.00	379.4	616.4	995.8	597.0	-171.6	425.4
		-9.50	197.8	703.4	901.2	540.3	-171.6	368.7
		-10.00	117.2	789.1	906.3	543.4	-171.6	371.8
		-10.50	89.5	812.0	901.5	540.5	-171.6	368.9
		-11.00	175.5	812.0	987.5	592.0	-171.6	420.5
		-11.50	136.0	859.5	995.5	596.8	-171.6	425.2
		-12.00	229.4	892.3	1121.7	672.5	-171.6	500.9
		-12.50	598.6	947.9	1546.5	927.1	-171.6	755.6
		-13.00	308.7	1034.9	1343.6	805.5	-171.6	634.0
		-13.50	148.4	1121.9	1270.3	761.6	-171.6	590.0
		-14.00	70.3	1180.3	1250.6	749.7	-171.6	578.2
		-14.50	69.5	1188.1	1257.6	754.0	-171.6	582.4
		-15.00	70.1	1195.3	1265.3	758.6	-171.6	587.0
		-15.50	76.4	1202.6	1279.0	766.8	-171.6	595.2
		-16.00	84.0	1211.5	1295.5	776.7	-171.6	605.1
		-16.50	192.8	1235.6	1428.4	856.4	-171.6	684.8
		-17.00	172.7	1279.2	1451.8	870.4	-171.6	698.8
		-17.50	568.1	1310.5	1878.6	1126.2	-171.6	954.7
		-18.00	701.3	1394.8	2096.2	1256.7	-171.6	1085.1
		-18.50	893.2	1481.8	2375.0	1423.9	-171.6	1252.3
		-19.00	1005.6	1568.8	2574.4	1543.4	-171.6	1371.9
		-19.50	788.7	1655.8	2444.5	1465.6	-171.6	1294.0
43	4.20	-6.00	455.2	61.8	517.1	310.0	-169.1	140.9
		-6.50	597.5	141.7	739.2	443.2	-169.1	274.1
		-7.00	894.8	228.6	1123.4	673.5	-169.1	504.4
		-7.50	1011.8	315.6	1327.4	795.8	-169.1	626.7
		-8.00	1016.8	402.6	1419.4	851.0	-169.1	681.9
		-8.50	981.1	489.6	1470.6	881.7	-169.1	712.6
		-9.00	896.6	576.6	1473.2	883.2	-169.1	714.1
		-9.50	452.8	663.6	1116.4	669.3	-169.1	500.2
		-10.00	392.3	750.6	1142.8	685.2	-169.1	516.0
		-10.50	312.4	822.8	1135.3	680.6	-169.1	511.5
		-11.00	246.4	882.6	1129.0	676.9	-169.1	507.8
		-11.50	194.2	945.8	1140.0	683.5	-169.1	514.4
		-12.00	261.2	969.0	1230.3	737.6	-169.1	568.4
		-12.50	1189.4	1030.8	2220.2	1331.1	-169.1	1162.0
		-13.00	486.6	1117.8	1604.4	961.9	-169.1	792.8
		-13.50	282.7	1204.8	1487.5	891.8	-169.1	722.7
		-14.00	87.4	1291.3	1378.7	826.5	-169.1	657.4
		-14.50	78.6	1308.1	1386.6	831.3	-169.1	662.2
		-15.00	80.0	1316.3	1396.3	837.1	-169.1	668.0
		-15.50	92.3	1324.6	1416.9	849.5	-169.1	680.3
		-16.00	89.6	1337.7	1427.3	855.7	-169.1	686.6
		-16.50	241.0	1360.6	1601.7	960.2	-169.1	791.1



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
43	4.20	-17.00	739.5	1424.7	2164.2	1297.5	-169.1	1128.4
		-17.50	776.6	1511.7	2288.3	1371.9	-169.1	1202.8
		-18.00	828.8	1598.7	2427.6	1455.4	-169.1	1286.3
		-18.50	859.3	1685.7	2545.1	1525.8	-169.1	1356.7
		-19.00	1127.2	1772.7	2900.0	1738.6	-169.1	1569.5
		-19.50	1170.0	1859.7	3029.8	1816.4	-169.1	1647.3
44	4.14	-6.00	937.8	177.7	1115.5	668.8	-162.8	506.0
		-6.50	1041.7	264.7	1306.4	783.2	-162.8	620.4
		-7.00	918.0	351.7	1269.7	761.2	-162.8	598.4
		-7.50	497.5	438.7	936.2	561.2	-162.8	398.4
		-8.00	435.2	525.7	960.9	576.1	-162.8	413.3
		-8.50	351.2	606.9	958.1	574.4	-162.8	411.6
		-9.00	558.0	652.3	1210.4	725.6	-162.8	562.8
		-9.50	321.9	731.3	1053.2	631.4	-162.8	468.6
		-10.00	171.0	812.9	983.9	589.9	-162.8	427.1
		-10.50	90.6	885.4	976.0	585.1	-162.8	422.3
		-11.00	94.3	904.2	998.4	598.6	-162.8	435.8
		-11.50	88.8	929.6	1018.4	610.5	-162.8	447.7
		-12.00	130.4	941.3	1071.7	642.5	-162.8	479.7
		-12.50	302.8	961.3	1264.2	757.9	-162.8	595.1
		-13.00	438.6	1031.3	1469.9	881.2	-162.8	718.4
		-13.50	290.2	1118.3	1408.5	844.4	-162.8	681.6
		-14.00	96.0	1205.3	1301.3	780.1	-162.8	617.3
		-14.50	70.9	1236.1	1307.1	783.6	-162.8	620.8
		-15.00	68.4	1244.8	1313.2	787.3	-162.8	624.5
		-15.50	80.9	1251.9	1332.8	799.1	-162.8	636.3
		-16.00	94.4	1261.6	1355.9	812.9	-162.8	650.1
		-16.50	526.9	1290.0	1816.9	1089.3	-162.8	926.5
		-17.00	443.7	1375.2	1818.9	1090.4	-162.8	927.6
		-17.50	312.6	1462.2	1774.7	1064.0	-162.8	901.2
		-18.00	219.1	1549.2	1768.3	1060.1	-162.8	897.3
		-18.50	217.5	1584.9	1802.4	1080.6	-162.8	917.8
		-19.00	509.3	1611.4	2120.7	1271.4	-162.8	1108.6
		-19.50	861.8	1690.7	2552.5	1530.3	-162.8	1367.5
45	4.18	-6.00	663.3	160.9	824.2	494.1	-166.5	327.6
		-6.50	701.0	247.9	948.9	568.9	-166.5	402.4
		-7.00	888.0	334.9	1222.9	733.2	-166.5	566.7
		-7.50	1196.9	421.9	1618.9	970.5	-166.5	804.1
		-8.00	1238.0	508.9	1746.9	1047.3	-166.5	880.8
		-8.50	588.5	595.9	1184.4	710.1	-166.5	543.6
		-9.00	363.1	682.9	1046.0	627.1	-166.5	460.6
		-9.50	218.3	769.9	988.2	592.5	-166.5	426.0
		-10.00	191.8	819.7	1011.5	606.4	-166.5	439.9
		-10.50	140.7	843.1	983.8	589.8	-166.5	423.3
		-11.00	137.0	866.5	1003.5	601.6	-166.5	435.2
		-11.50	118.2	877.1	995.3	596.7	-166.5	430.2
		-12.00	273.0	877.1	1150.1	689.5	-166.5	523.0
		-12.50	486.4	918.5	1405.0	842.3	-166.5	675.8
		-13.00	382.6	996.4	1378.9	826.7	-166.5	660.2
		-13.50	194.1	1083.4	1277.5	765.9	-166.5	599.4
		-14.00	70.1	1166.4	1236.5	741.3	-166.5	574.8
		-14.50	60.9	1181.3	1242.2	744.7	-166.5	578.2
		-15.00	62.2	1187.9	1250.1	749.5	-166.5	583.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
45	4.18	-15.50	81.7	1194.8	1276.5	765.3	-166.5	598.8
		-16.00	87.1	1205.9	1292.9	775.1	-166.5	608.7
		-16.50	105.7	1219.0	1324.8	794.2	-166.5	627.7
		-17.00	79.7	1244.9	1324.6	794.1	-166.5	627.6
		-17.50	335.0	1261.0	1596.0	956.9	-166.5	790.4
		-18.00	526.8	1323.0	1849.8	1109.0	-166.5	942.5
		-18.50	599.7	1398.1	1997.8	1197.7	-166.5	1031.2
		-19.00	959.8	1483.1	2442.9	1464.6	-166.5	1298.1
		-19.50	1068.8	1570.1	2638.8	1582.0	-166.5	1415.6
46	4.10	-6.00	801.2	150.6	951.8	570.6	-166.3	404.3
		-6.50	893.9	237.6	1131.5	678.4	-166.3	512.1
		-7.00	1074.4	324.6	1399.0	838.8	-166.3	672.5
		-7.50	1261.5	411.6	1673.1	1003.1	-166.3	836.8
		-8.00	1261.5	498.6	1760.1	1055.2	-166.3	889.0
		-8.50	646.7	585.6	1232.3	738.8	-166.3	572.5
		-9.00	427.4	672.6	1100.1	659.5	-166.3	493.2
		-9.50	300.0	759.6	1059.6	635.2	-166.3	469.0
		-10.00	266.1	820.5	1086.6	651.5	-166.3	485.2
		-10.50	204.3	858.6	1063.0	637.3	-166.3	471.0
		-11.00	159.7	910.5	1070.2	641.6	-166.3	475.3
		-11.50	116.9	930.5	1047.4	628.0	-166.3	461.7
		-12.00	182.6	930.5	1113.1	667.3	-166.3	501.0
		-12.50	1108.3	979.4	2087.7	1251.6	-166.3	1085.3
		-13.00	444.9	1066.4	1511.3	906.1	-166.3	739.8
		-13.50	252.7	1153.4	1406.1	843.0	-166.3	676.7
		-14.00	75.7	1240.2	1315.9	788.9	-166.3	622.7
		-14.50	69.1	1254.6	1323.6	793.5	-166.3	627.3
		-15.00	69.9	1261.9	1331.7	798.4	-166.3	632.1
		-15.50	77.2	1269.2	1346.5	807.2	-166.3	640.9
		-16.00	86.3	1278.2	1364.5	818.0	-166.3	651.8
		-16.50	208.9	1298.1	1507.0	903.5	-166.3	737.2
		-17.00	651.4	1352.3	2003.7	1201.3	-166.3	1035.0
		-17.50	726.8	1439.3	2166.1	1298.6	-166.3	1132.3
		-18.00	776.1	1526.3	2302.4	1380.3	-166.3	1214.1
		-18.50	954.4	1613.3	2567.7	1539.4	-166.3	1373.1
		-19.00	1261.5	1700.3	2961.8	1775.7	-166.3	1609.4
		-19.50	1261.5	1787.3	3048.8	1827.8	-166.3	1661.5
		-20.00	1261.5	1874.3	3135.8	1880.0	-166.3	1713.7
		-20.50	1261.5	1961.3	3222.8	1932.1	-166.3	1765.8
47	4.16	-6.00	641.5	120.6	762.1	456.9	-165.9	291.0
		-6.50	719.7	207.6	927.3	555.9	-165.9	390.0
		-7.00	905.4	294.6	1199.9	719.4	-165.9	553.5
		-7.50	1080.2	381.6	1461.7	876.3	-165.9	710.4
		-8.00	1122.3	468.6	1590.8	953.7	-165.9	787.8
		-8.50	814.2	555.6	1369.8	821.2	-165.9	655.3
		-9.00	455.5	642.6	1098.1	658.3	-165.9	492.4
		-9.50	241.0	729.6	970.6	581.9	-165.9	415.9
		-10.00	197.2	799.1	996.3	597.3	-165.9	431.4
		-10.50	182.1	835.9	1018.0	610.3	-165.9	444.4
		-11.00	471.3	869.4	1340.7	803.8	-165.9	637.9
		-11.50	335.8	956.4	1292.2	774.7	-165.9	608.8
		-12.00	261.4	1043.4	1304.7	782.2	-165.9	616.3
		-12.50	249.8	1088.6	1338.4	802.4	-165.9	636.5



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
47	4.16	-13.00	203.3	1116.4	1319.7	791.2	-165.9	625.3
		-13.50	129.5	1170.0	1299.5	779.1	-165.9	613.2
		-14.00	60.3	1220.3	1280.6	767.7	-165.9	601.8
		-14.50	58.7	1227.4	1286.1	771.1	-165.9	605.1
		-15.00	60.3	1233.6	1293.9	775.7	-165.9	609.8
		-15.50	67.3	1240.2	1307.5	783.9	-165.9	618.0
		-16.00	68.5	1248.8	1317.3	789.8	-165.9	623.9
		-16.50	91.6	1261.6	1353.2	811.2	-165.9	645.3
		-17.00	70.1	1286.8	1356.8	813.5	-165.9	647.5
		-17.50	395.3	1295.7	1691.0	1013.8	-165.9	847.8
		-18.00	665.8	1372.3	2038.2	1221.9	-165.9	1056.0
		-18.50	708.7	1459.3	2168.0	1299.8	-165.9	1133.9
		-19.00	308.0	1546.3	1854.3	1111.7	-165.9	945.8
		-19.50	242.8	1633.3	1876.1	1124.8	-165.9	958.9
		-20.00	150.9	1702.4	1853.3	1111.1	-165.9	945.2
48	4.15	-6.00	558.8	123.6	682.4	409.1	-165.9	243.2
		-6.50	639.8	205.3	845.2	506.7	-165.9	340.8
		-7.00	839.1	291.3	1130.4	677.7	-165.9	511.8
		-7.50	1134.8	378.3	1513.1	907.1	-165.9	741.2
		-8.00	1221.7	465.3	1687.0	1011.4	-165.9	845.5
		-8.50	1237.6	552.3	1789.9	1073.1	-165.9	907.2
		-9.00	509.7	639.3	1149.0	688.9	-165.9	523.0
		-9.50	410.5	726.3	1136.8	681.5	-165.9	515.6
		-10.00	319.8	813.2	1133.0	679.2	-165.9	513.3
		-10.50	260.7	854.4	1115.1	668.6	-165.9	502.7
		-11.00	249.4	902.0	1151.5	690.3	-165.9	524.4
		-11.50	189.0	971.2	1160.2	695.6	-165.9	529.7
		-12.00	229.2	1000.9	1230.1	737.5	-165.9	571.6
		-12.50	532.2	1041.0	1573.1	943.1	-165.9	777.2
		-13.00	298.1	1128.0	1426.1	855.0	-165.9	689.1
		-13.50	139.1	1215.0	1354.1	811.8	-165.9	645.9
		-14.00	69.5	1268.3	1337.8	802.0	-165.9	636.1
		-14.50	69.0	1276.2	1345.1	806.4	-165.9	640.5
		-15.00	68.2	1283.8	1351.9	810.5	-165.9	644.6
		-15.50	76.6	1290.7	1367.4	819.8	-165.9	653.9
		-16.00	88.8	1299.4	1388.2	832.3	-165.9	666.4
		-16.50	150.7	1315.4	1466.0	878.9	-165.9	713.0
		-17.00	415.6	1371.0	1786.6	1071.1	-165.9	905.2
		-17.50	241.8	1458.0	1699.8	1019.1	-165.9	853.2
		-18.00	164.4	1545.0	1709.4	1024.8	-165.9	858.9
		-18.50	117.5	1588.6	1706.0	1022.8	-165.9	856.9
		-19.00	148.1	1605.0	1753.1	1051.0	-165.9	885.1
		-19.50	122.7	1635.3	1758.0	1054.0	-165.9	888.1
49	4.12	-6.00	908.3	82.5	990.7	594.0	-181.7	412.3
		-6.50	1025.5	169.5	1195.0	716.4	-181.7	534.8
		-7.00	1200.6	256.5	1457.1	873.5	-181.7	691.9
		-7.50	1261.5	343.5	1605.0	962.2	-181.7	780.6
		-8.00	1261.5	430.5	1692.0	1014.4	-181.7	832.7
		-8.50	651.9	517.5	1169.4	701.1	-181.7	519.4
		-9.00	406.5	604.5	1011.0	606.1	-181.7	424.5
		-9.50	259.7	691.5	951.2	570.2	-181.7	388.6
		-10.00	231.0	739.6	970.6	581.9	-181.7	400.3
		-10.50	402.9	770.5	1173.4	703.5	-181.7	521.8



Alle niveaus/hogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
49	4.12	-11.00	480.5	843.4	1324.0	793.7	-181.7	612.1
		-11.50	328.3	930.4	1258.7	754.6	-181.7	572.9
		-12.00	244.7	1012.5	1257.2	753.7	-181.7	572.1
		-12.50	223.8	1050.0	1273.8	763.6	-181.7	582.0
		-13.00	180.5	1092.7	1273.2	763.3	-181.7	581.7
		-13.50	68.1	1162.3	1230.4	737.6	-181.7	556.0
		-14.00	56.7	1179.0	1235.7	740.8	-181.7	559.2
		-14.50	60.4	1184.9	1245.3	746.6	-181.7	564.9
		-15.00	68.3	1191.5	1259.8	755.3	-181.7	573.6
		-15.50	80.3	1199.9	1280.2	767.5	-181.7	585.8
		-16.00	101.3	1210.0	1311.3	786.2	-181.7	604.5
		-16.50	278.7	1245.6	1524.3	913.9	-181.7	732.2
		-17.00	426.0	1302.3	1728.3	1036.1	-181.7	854.5
		-17.50	322.8	1387.4	1710.3	1025.3	-181.7	843.7
		-18.00	269.4	1472.2	1741.7	1044.2	-181.7	862.5
		-18.50	278.5	1512.4	1790.9	1073.7	-181.7	892.0
		-19.00	431.9	1550.3	1982.1	1188.3	-181.7	1006.7
		-19.50	243.4	1613.7	1857.1	1113.3	-181.7	931.7

REKENGEDEEVENS G4 320

Berekening : Ontwerpend
 Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
 Sondering(en) : 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38
 : 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49

Stijf bouwwerk : NEE
 Paalgroep : NEE
 Aantal sonderingen : 25
 Factor $\xi_{3(n=1)}$: 1.39 (handmatig)
 Factor $\xi_{3(gem)}$: 1.39 (handmatig)
 Factor $\xi_{4(min)}$: 1.39 (handmatig)
 Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s;cal;max;i}$ begrenzen op $0.75 * R_{b;cal;max;i}$: NEE
 UGT draagvermogen zonder negatieve kleef : NEE

Paal : #320
 Niveau paalkop [m] : N.A.P. 4.60
 Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #320

Alle niveaus/hogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-21.00	0.50

**SAMENVATTINGSTABEL G4 320 (n=1)****Uitgangspunten**

- paal	: #320
- paaltype	: Geheide paal (beton)
- schachtafmeting	: 320 x 320
Paalklassefactor α_p	: 0.70
Factor α_s (tabel 7.c EC 7.1)	: 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
25	4.30	-6.00	805.1	77.3	882.4	529.0	-201.6	327.5
		-6.50	1068.6	173.3	1242.0	744.6	-201.6	543.0
		-7.00	1025.5	269.3	1294.9	776.3	-201.6	574.7
		-7.50	1109.8	365.3	1475.2	884.4	-201.6	682.8
		-8.00	1019.8	461.3	1481.2	888.0	-201.6	686.4
		-8.50	1083.3	555.4	1638.7	982.5	-201.6	780.9
		-9.00	431.8	651.4	1083.3	649.4	-201.6	447.9
		-9.50	242.7	747.4	990.1	593.6	-201.6	392.0
		-10.00	141.1	839.5	980.7	587.9	-201.6	386.4
		-10.50	110.9	861.5	972.4	583.0	-201.6	381.4
		-11.00	130.9	861.5	992.4	595.0	-201.6	393.4
		-11.50	126.4	861.5	987.9	592.3	-201.6	390.7
		-12.00	155.9	861.5	1017.4	610.0	-201.6	408.4
		-12.50	625.8	884.8	1510.6	905.7	-201.6	704.1
		-13.00	357.9	979.4	1337.2	801.7	-201.6	600.1
		-13.50	214.3	1075.4	1289.6	773.2	-201.6	571.6
		-14.00	87.2	1163.9	1251.2	750.1	-201.6	548.6
		-14.50	81.5	1177.9	1259.5	755.1	-201.6	553.5
		-15.00	80.5	1186.2	1266.7	759.4	-201.6	557.8
		-15.50	88.7	1194.0	1282.7	769.0	-201.6	567.5
		-16.00	92.7	1203.1	1295.8	776.8	-201.6	575.3
26	4.39	-16.50	171.2	1219.3	1390.4	833.6	-201.6	632.0
		-17.00	650.3	1265.3	1915.6	1148.4	-201.6	946.9
		-17.50	784.5	1356.1	2140.7	1283.4	-201.6	1081.8
		-18.00	876.5	1449.3	2325.8	1394.4	-201.6	1192.8
		-18.50	735.9	1545.0	2280.9	1367.4	-201.6	1165.9
		-19.00	687.4	1639.6	2327.0	1395.1	-201.6	1193.5
		-6.00	832.8	140.0	972.8	583.2	-187.0	396.3
		-6.50	895.1	236.0	1131.1	678.1	-187.0	491.2
		-7.00	963.7	332.0	1295.7	776.8	-187.0	589.9
		-7.50	703.4	428.0	1131.4	678.3	-187.0	491.4
		-8.00	699.5	524.0	1223.5	733.5	-187.0	546.6
		-8.50	541.4	619.4	1160.9	696.0	-187.0	509.0
		-9.00	742.1	691.8	1433.9	859.6	-187.0	672.7
		-9.50	575.3	781.5	1356.8	813.4	-187.0	626.5
		-10.00	258.1	866.6	1124.6	674.2	-187.0	487.3
		-10.50	147.8	941.4	1089.2	653.0	-187.0	466.0
		-11.00	116.5	989.4	1105.8	663.0	-187.0	476.0
		-11.50	100.6	1008.8	1109.4	665.1	-187.0	478.2
		-12.00	157.6	1019.7	1177.3	705.8	-187.0	518.8
		-12.50	753.3	1055.0	1808.4	1084.2	-187.0	897.2
		-13.00	576.8	1150.7	1727.5	1035.7	-187.0	848.7
		-13.50	340.5	1246.7	1587.2	951.6	-187.0	764.6



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
26	4.39	-14.00	168.7	1342.7	1511.4	906.1	-187.0	719.2
		-14.50	89.1	1404.0	1493.1	895.1	-187.0	708.2
		-15.00	87.4	1413.5	1500.9	899.8	-187.0	712.9
		-15.50	88.3	1421.8	1510.1	905.4	-187.0	718.4
		-16.00	92.8	1430.4	1523.2	913.2	-187.0	726.2
		-16.50	310.8	1444.3	1755.0	1052.2	-187.0	865.2
		-17.00	746.0	1515.0	2261.0	1355.5	-187.0	1168.5
		-17.50	390.3	1611.0	2001.3	1199.8	-187.0	1012.9
		-18.00	305.7	1707.0	2012.7	1206.7	-187.0	1019.7
		-18.50	178.5	1796.7	1975.2	1184.2	-187.0	997.2
27	4.33	-19.00	479.3	1824.6	2304.0	1381.3	-187.0	1194.3
		-6.00	638.2	73.3	711.5	426.5	-200.9	225.6
		-6.50	761.4	169.1	930.5	557.9	-200.9	356.9
		-7.00	810.3	265.1	1075.5	644.8	-200.9	443.8
		-7.50	883.5	361.1	1244.6	746.2	-200.9	545.3
		-8.00	960.3	456.1	1416.4	849.1	-200.9	648.2
		-8.50	841.6	550.7	1392.3	834.7	-200.9	633.8
		-9.00	500.6	646.7	1147.3	687.8	-200.9	486.9
		-9.50	393.8	742.7	1136.5	681.3	-200.9	480.4
		-10.00	259.3	825.4	1084.7	650.3	-200.9	449.4
		-10.50	300.8	867.0	1167.9	700.2	-200.9	499.2
		-11.00	298.7	921.3	1220.0	731.4	-200.9	530.5
		-11.50	227.5	990.8	1218.3	730.4	-200.9	529.5
		-12.00	304.4	1020.8	1325.2	794.5	-200.9	593.6
		-12.50	713.0	1080.7	1793.7	1075.4	-200.9	874.5
		-13.00	339.0	1175.1	1514.1	907.7	-200.9	706.8
		-13.50	230.1	1269.5	1499.6	899.1	-200.9	698.1
		-14.00	113.0	1363.9	1476.9	885.4	-200.9	684.5
		-14.50	89.8	1394.0	1483.8	889.6	-200.9	688.6
		-15.00	93.2	1402.6	1495.8	896.8	-200.9	695.8
		-15.50	104.1	1412.1	1516.2	909.0	-200.9	708.1
		-16.00	104.7	1423.7	1528.4	916.3	-200.9	715.4
		-16.50	216.5	1436.1	1652.7	990.8	-200.9	789.9
		-17.00	547.7	1470.9	2018.6	1210.2	-200.9	1009.3
		-17.50	559.0	1542.4	2101.3	1259.8	-200.9	1058.9
		-18.00	813.7	1614.2	2427.8	1455.5	-200.9	1254.6
		-18.50	581.6	1707.9	2289.5	1372.6	-200.9	1171.7
		-19.00	353.3	1803.9	2157.2	1293.3	-200.9	1092.4
		-19.50	297.3	1889.4	2186.7	1311.0	-200.9	1110.0
28	4.37	-6.00	596.0	60.7	656.6	393.7	-201.6	192.1
		-6.50	737.1	154.1	891.3	534.3	-201.6	332.7
		-7.00	769.5	250.1	1019.7	611.3	-201.6	409.7
		-7.50	844.4	346.1	1190.5	713.7	-201.6	512.1
		-8.00	928.2	442.0	1370.2	821.5	-201.6	619.9
		-8.50	969.0	536.1	1505.0	902.3	-201.6	700.7
		-9.00	738.1	632.1	1370.2	821.5	-201.6	619.9
		-9.50	501.3	728.1	1229.3	737.0	-201.6	535.4
		-10.00	222.7	817.6	1040.2	623.6	-201.6	422.0
		-10.50	158.5	876.0	1034.5	620.2	-201.6	418.6
		-11.00	132.4	922.4	1054.8	632.4	-201.6	430.8
		-11.50	104.6	940.0	1044.6	626.2	-201.6	424.7
		-12.00	126.8	940.0	1066.8	639.6	-201.6	438.0
		-12.50	225.2	948.3	1173.5	703.5	-201.6	501.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
28	4.37	-13.00	693.8	1003.7	1697.5	1017.7	-201.6	816.1
		-13.50	435.5	1099.7	1535.2	920.4	-201.6	718.8
		-14.00	227.7	1195.7	1423.4	853.4	-201.6	651.8
		-14.50	100.3	1272.9	1373.2	823.2	-201.6	621.6
		-15.00	96.8	1284.3	1381.1	828.0	-201.6	626.4
		-15.50	104.5	1293.7	1398.1	838.2	-201.6	636.6
		-16.00	104.7	1304.5	1409.2	844.8	-201.6	643.2
		-16.50	183.9	1315.5	1499.5	899.0	-201.6	697.4
		-17.00	221.4	1358.3	1579.7	947.1	-201.6	745.5
		-17.50	564.1	1399.4	1963.5	1177.2	-201.6	975.6
		-18.00	756.1	1480.2	2236.2	1340.7	-201.6	1139.1
		-18.50	753.0	1576.2	2329.1	1396.4	-201.6	1194.8
		-19.00	610.5	1672.2	2282.7	1368.5	-201.6	1166.9
		-19.50	475.4	1747.0	2222.4	1332.4	-201.6	1130.8
29	4.28	-6.00	798.9	149.1	948.0	568.4	-183.4	385.0
		-6.50	799.7	245.1	1044.8	626.4	-183.4	443.0
		-7.00	870.9	341.1	1212.0	726.6	-183.4	543.3
		-7.50	934.8	437.1	1372.0	822.5	-183.4	639.2
		-8.00	1111.6	530.7	1642.4	984.6	-183.4	801.3
		-8.50	649.9	626.7	1276.6	765.3	-183.4	582.0
		-9.00	314.7	722.7	1037.4	621.9	-183.4	438.6
		-9.50	238.8	818.7	1057.5	634.0	-183.4	450.6
		-10.00	173.9	882.5	1056.4	633.4	-183.4	450.0
		-10.50	203.2	902.5	1105.7	662.9	-183.4	479.5
		-11.00	152.6	952.6	1105.2	662.6	-183.4	479.2
		-11.50	117.4	1002.2	1119.6	671.2	-183.4	487.8
		-12.00	95.8	1023.4	1119.2	671.0	-183.4	487.6
		-12.50	351.5	1039.0	1390.5	833.6	-183.4	650.3
		-13.00	425.4	1111.1	1536.5	921.2	-183.4	737.8
		-13.50	274.6	1207.1	1481.7	888.3	-183.4	705.0
		-14.00	120.7	1303.1	1423.9	853.6	-183.4	670.3
		-14.50	88.5	1340.3	1428.8	856.6	-183.4	673.2
		-15.00	87.3	1349.4	1436.7	861.3	-183.4	678.0
		-15.50	96.4	1358.1	1454.6	872.0	-183.4	688.7
		-16.00	103.5	1369.2	1472.6	882.9	-183.4	699.5
		-16.50	235.5	1383.0	1618.5	970.3	-183.4	786.9
		-17.00	503.6	1429.0	1932.6	1158.6	-183.4	975.3
		-17.50	338.7	1507.4	1846.1	1106.7	-183.4	923.4
		-18.00	325.9	1588.2	1914.1	1147.6	-183.4	964.2
		-18.50	165.0	1664.6	1829.7	1096.9	-183.4	913.6
		-19.00	768.2	1705.3	2473.5	1482.9	-183.4	1299.5
30	4.17	-6.00	622.6	42.4	665.0	398.7	-204.2	194.5
		-6.50	831.3	137.9	969.3	581.1	-204.2	376.9
		-7.00	863.5	233.9	1097.5	657.9	-204.2	453.8
		-7.50	932.6	329.9	1262.5	756.9	-204.2	552.7
		-8.00	998.9	425.9	1424.9	854.2	-204.2	650.1
		-8.50	1075.5	521.9	1597.4	957.6	-204.2	753.5
		-9.00	1255.4	617.9	1873.3	1123.1	-204.2	918.9
		-9.50	1274.4	713.9	1988.2	1192.0	-204.2	987.8
		-10.00	536.5	809.9	1346.3	807.2	-204.2	603.0
		-10.50	434.0	905.9	1339.9	803.3	-204.2	599.1
		-11.00	317.7	1001.9	1319.6	791.1	-204.2	586.9
		-11.50	327.5	1050.1	1377.6	825.9	-204.2	621.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
30	4.17	-12.00	411.6	1093.2	1504.8	902.1	-204.2	697.9
		-12.50	594.1	1154.2	1748.3	1048.2	-204.2	844.0
		-13.00	343.3	1247.6	1590.9	953.8	-204.2	749.6
		-13.50	191.4	1343.6	1534.9	920.2	-204.2	716.0
		-14.00	106.3	1420.6	1526.9	915.4	-204.2	711.2
		-14.50	102.3	1434.4	1536.6	921.3	-204.2	717.1
		-15.00	102.2	1444.1	1546.3	927.0	-204.2	722.9
		-15.50	112.5	1453.8	1566.3	939.1	-204.2	734.9
		-16.00	141.9	1465.3	1607.2	963.6	-204.2	759.4
		-16.50	310.6	1507.7	1818.4	1090.2	-204.2	886.0
		-17.00	772.6	1575.7	2348.2	1407.8	-204.2	1203.6
		-17.50	987.9	1671.7	2659.5	1594.5	-204.2	1390.3
		-18.00	999.3	1767.7	2767.0	1658.9	-204.2	1454.7
		-18.50	1012.0	1863.7	2875.7	1724.0	-204.2	1519.9
		-19.00	1508.9	1959.7	3468.6	2079.5	-204.2	1875.3
		-19.50	1468.0	2055.7	3523.7	2112.5	-204.2	1908.3
31	4.21	-6.00	651.3	59.4	710.6	426.0	-200.7	225.3
		-6.50	943.7	154.9	1098.6	658.6	-200.7	458.0
		-7.00	1057.4	250.9	1308.4	784.4	-200.7	583.7
		-7.50	1185.8	346.9	1532.7	918.9	-200.7	718.2
		-8.00	1295.3	442.9	1738.3	1042.1	-200.7	841.4
		-8.50	1378.0	538.9	1916.9	1149.2	-200.7	948.6
		-9.00	1536.0	634.9	2170.9	1301.5	-200.7	1100.8
		-9.50	1536.0	730.9	2266.9	1359.1	-200.7	1158.4
		-10.00	1332.9	826.9	2159.8	1294.9	-200.7	1094.2
		-10.50	547.0	922.9	1469.9	881.2	-200.7	680.6
		-11.00	378.7	1018.9	1397.6	837.9	-200.7	637.2
		-11.50	299.5	1114.9	1414.4	848.0	-200.7	647.3
		-12.00	262.7	1168.1	1430.8	857.8	-200.7	657.1
		-12.50	388.1	1198.3	1586.4	951.1	-200.7	750.4
		-13.00	276.5	1263.0	1539.5	923.0	-200.7	722.3
		-13.50	161.7	1344.9	1506.6	903.3	-200.7	702.6
		-14.00	90.6	1407.4	1497.9	898.0	-200.7	697.4
		-14.50	86.5	1419.7	1506.1	903.0	-200.7	702.3
		-15.00	89.9	1428.7	1518.6	910.4	-200.7	709.7
		-15.50	95.2	1437.8	1533.0	919.1	-200.7	718.4
		-16.00	102.4	1447.4	1549.9	929.2	-200.7	728.5
32	4.22	-16.50	409.4	1480.0	1889.4	1132.7	-200.7	932.1
		-17.00	782.7	1561.0	2343.7	1405.1	-200.7	1204.4
		-17.50	881.0	1657.0	2538.0	1521.6	-200.7	1320.9
		-18.00	565.3	1753.0	2318.3	1389.9	-200.7	1189.2
		-18.50	537.3	1849.0	2386.3	1430.6	-200.7	1229.9
		-19.00	424.1	1941.2	2365.3	1418.0	-200.7	1217.4
		-6.00	1110.6	96.0	1206.6	723.4	-187.2	536.1
		-6.50	1129.3	192.0	1321.3	792.2	-187.2	604.9
		-7.00	1187.8	288.0	1475.8	884.8	-187.2	697.5
		-7.50	1217.5	384.0	1601.5	960.1	-187.2	772.9
		-8.00	1239.0	480.0	1719.0	1030.6	-187.2	843.3
		-8.50	614.8	576.0	1190.8	713.9	-187.2	526.6
		-9.00	479.9	672.0	1151.9	690.6	-187.2	503.4
		-9.50	331.1	768.0	1099.1	658.9	-187.2	471.7
		-10.00	161.5	830.8	992.3	594.9	-187.2	407.7
		-10.50	120.2	871.2	991.4	594.4	-187.2	407.1



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
32	4.22	-11.00	91.2	909.1	1000.4	599.7	-187.2	412.5
		-11.50	87.2	913.4	1000.6	599.9	-187.2	412.7
		-12.00	157.1	913.4	1070.5	641.8	-187.2	454.6
		-12.50	403.2	927.2	1330.4	797.6	-187.2	610.3
		-13.00	425.1	994.0	1419.1	850.8	-187.2	663.5
		-13.50	305.0	1077.1	1382.1	828.6	-187.2	641.3
		-14.00	116.2	1160.4	1276.6	765.3	-187.2	578.1
		-14.50	81.4	1195.0	1276.4	765.2	-187.2	578.0
		-15.00	82.3	1203.0	1285.4	770.6	-187.2	583.4
		-15.50	86.5	1210.8	1297.3	777.8	-187.2	590.5
		-16.00	86.2	1219.7	1305.9	782.9	-187.2	595.7
		-16.50	431.7	1236.6	1668.3	1000.2	-187.2	813.0
		-17.00	540.1	1317.6	1857.7	1113.7	-187.2	926.5
		-17.50	486.9	1413.6	1900.5	1139.4	-187.2	952.1
		-18.00	401.3	1509.6	1910.9	1145.6	-187.2	958.4
		-18.50	494.5	1571.6	2066.1	1238.7	-187.2	1051.4
		-19.00	400.9	1648.4	2049.3	1228.6	-187.2	1041.4
		-19.50	331.4	1716.6	2048.0	1227.8	-187.2	1040.6
33	4.19	-6.00	663.0	65.8	728.8	436.9	-197.1	239.9
		-6.50	860.4	161.1	1021.5	612.4	-197.1	415.3
		-7.00	640.0	257.1	897.1	537.9	-197.1	340.8
		-7.50	676.5	353.1	1029.6	617.3	-197.1	420.2
		-8.00	635.4	449.1	1084.5	650.2	-197.1	453.1
		-8.50	530.6	526.7	1057.2	633.8	-197.1	436.8
		-9.00	513.4	604.6	1118.0	670.3	-197.1	473.2
		-9.50	455.0	683.4	1138.3	682.4	-197.1	485.4
		-10.00	449.9	735.4	1185.3	710.6	-197.1	513.5
		-10.50	302.6	805.3	1108.0	664.3	-197.1	467.2
		-11.00	260.3	880.3	1140.6	683.8	-197.1	486.7
		-11.50	173.9	940.0	1114.0	667.9	-197.1	470.8
		-12.00	440.5	959.2	1399.7	839.1	-197.1	642.1
		-12.50	466.8	1038.1	1505.0	902.3	-197.1	705.2
		-13.00	311.2	1134.1	1445.4	866.5	-197.1	669.5
		-13.50	147.6	1230.1	1377.7	826.0	-197.1	628.9
		-14.00	102.0	1277.3	1379.3	826.9	-197.1	629.8
		-14.50	99.9	1288.8	1388.7	832.6	-197.1	635.5
		-15.00	106.3	1299.4	1405.6	842.7	-197.1	645.6
		-15.50	106.5	1310.9	1417.4	849.7	-197.1	652.7
		-16.00	107.8	1321.6	1429.4	857.0	-197.1	659.9
		-16.50	289.3	1335.4	1624.7	974.1	-197.1	777.0
		-17.00	579.5	1390.5	1969.9	1181.0	-197.1	983.9
		-17.50	556.3	1467.3	2023.6	1213.2	-197.1	1016.1
		-18.00	401.0	1544.0	1945.0	1166.1	-197.1	969.0
		-18.50	306.7	1616.0	1922.7	1152.7	-197.1	955.6
		-19.00	279.8	1689.9	1969.7	1180.9	-197.1	983.8
		-19.50	249.3	1746.3	1995.6	1196.4	-197.1	999.3
34	4.18	-6.00	759.7	141.4	901.1	540.3	-183.1	357.1
		-6.50	664.4	237.4	901.8	540.6	-183.1	357.5
		-7.00	277.9	333.4	611.4	366.5	-183.1	183.4
		-7.50	239.1	429.4	668.5	400.8	-183.1	217.7
		-8.00	136.9	514.4	651.4	390.5	-183.1	207.4
		-8.50	312.3	534.1	846.3	507.4	-183.1	324.3
		-9.00	380.1	584.9	965.1	578.6	-183.1	395.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
34	4.18	-9.50	389.2	653.2	1042.3	624.9	-183.1	441.8
		-10.00	383.4	716.1	1099.5	659.2	-183.1	476.0
		-10.50	365.7	773.3	1139.0	682.9	-183.1	499.7
		-11.00	393.4	815.6	1209.0	724.8	-183.1	541.7
		-11.50	403.2	866.8	1270.0	761.4	-183.1	578.2
		-12.00	346.9	934.4	1281.3	768.1	-183.1	585.0
		-12.50	605.3	971.3	1576.7	945.2	-183.1	762.1
		-13.00	278.0	1044.7	1322.7	793.0	-183.1	609.8
		-13.50	184.2	1120.4	1304.6	782.1	-183.1	599.0
		-14.00	112.7	1191.3	1304.0	781.8	-183.1	598.6
		-14.50	98.7	1216.2	1314.9	788.3	-183.1	605.2
		-15.00	96.4	1226.9	1323.2	793.3	-183.1	610.2
		-15.50	104.2	1236.1	1340.3	803.5	-183.1	620.4
		-16.00	109.9	1246.9	1356.8	813.4	-183.1	630.3
		-16.50	716.1	1277.5	1993.6	1195.2	-183.1	1012.1
		-17.00	968.4	1373.5	2341.9	1404.0	-183.1	1220.9
		-17.50	546.4	1469.5	2015.9	1208.6	-183.1	1025.4
		-18.00	459.9	1565.5	2025.4	1214.2	-183.1	1031.1
		-18.50	359.3	1661.5	2020.8	1211.5	-183.1	1028.4
		-19.00	401.3	1720.0	2121.2	1271.7	-183.1	1088.6
		-19.50	452.5	1790.4	2242.9	1344.7	-183.1	1161.5
35	4.13	-6.00	1094.7	216.7	1311.3	786.2	-176.7	609.5
		-6.50	1196.1	312.7	1508.8	904.5	-176.7	727.9
		-7.00	1501.3	408.7	1910.0	1145.1	-176.7	968.4
		-7.50	1536.0	504.7	2040.7	1223.4	-176.7	1046.8
		-8.00	1444.5	600.7	2045.1	1226.1	-176.7	1049.4
		-8.50	1095.2	696.7	1791.8	1074.2	-176.7	897.6
		-9.00	443.3	792.7	1235.9	741.0	-176.7	564.3
		-9.50	308.3	888.7	1197.0	717.6	-176.7	540.9
		-10.00	211.3	980.5	1191.7	714.5	-176.7	537.8
		-10.50	200.7	1025.2	1225.9	735.0	-176.7	558.3
		-11.00	190.0	1065.5	1255.4	752.7	-176.7	576.0
		-11.50	158.2	1092.0	1250.2	749.5	-176.7	572.9
		-12.00	396.8	1092.0	1488.7	892.5	-176.7	715.9
		-12.50	749.2	1149.3	1898.6	1138.2	-176.7	961.6
		-13.00	741.8	1245.3	1987.1	1191.3	-176.7	1014.6
		-13.50	749.1	1338.5	2087.5	1251.5	-176.7	1074.9
		-14.00	98.1	1428.2	1526.4	915.1	-176.7	738.4
		-14.50	67.7	1456.4	1524.1	913.7	-176.7	737.1
		-15.00	66.0	1464.0	1530.0	917.2	-176.7	740.6
		-15.50	66.5	1470.1	1536.6	921.2	-176.7	744.6
		-16.00	84.4	1476.6	1561.0	935.8	-176.7	759.2
		-16.50	228.7	1495.6	1724.3	1033.7	-176.7	857.1
		-17.00	458.6	1547.0	2005.6	1202.4	-176.7	1025.7
		-17.50	300.6	1643.0	1943.7	1165.3	-176.7	988.6
		-18.00	194.0	1737.8	1931.8	1158.2	-176.7	981.5
		-18.50	148.6	1789.8	1938.4	1162.1	-176.7	985.4
		-19.00	236.0	1811.1	2047.2	1227.3	-176.7	1050.6
		-19.50	248.5	1864.0	2112.5	1266.5	-176.7	1089.8
36	4.19	-6.00	726.6	89.0	815.5	488.9	-193.5	295.4
		-6.50	873.3	185.0	1058.3	634.5	-193.5	440.9
		-7.00	960.2	281.0	1241.2	744.1	-193.5	550.6
		-7.50	1077.4	377.0	1454.4	871.9	-193.5	678.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
36	4.19	-8.00	847.0	473.0	1320.0	791.4	-193.5	597.8
		-8.50	708.7	569.0	1277.7	766.0	-193.5	572.5
		-9.00	445.5	665.0	1110.5	665.8	-193.5	472.3
		-9.50	426.9	742.5	1169.3	701.0	-193.5	507.5
		-10.00	385.4	809.9	1195.3	716.6	-193.5	523.1
		-10.50	454.8	850.5	1305.3	782.5	-193.5	589.0
		-11.00	379.2	921.6	1300.8	779.9	-193.5	586.3
		-11.50	310.1	981.1	1291.1	774.1	-193.5	580.5
		-12.00	551.8	1024.6	1576.4	945.1	-193.5	751.6
		-12.50	1255.9	1106.8	2362.7	1416.5	-193.5	1222.9
		-13.00	502.5	1202.8	1705.3	1022.3	-193.5	828.8
		-13.50	303.0	1298.8	1601.8	960.3	-193.5	766.8
		-14.00	116.5	1394.8	1511.2	906.0	-193.5	712.5
		-14.50	84.3	1432.3	1516.6	909.3	-193.5	715.7
		-15.00	87.2	1441.2	1528.4	916.3	-193.5	722.8
		-15.50	88.9	1450.0	1538.9	922.6	-193.5	729.1
		-16.00	98.0	1459.7	1557.8	933.9	-193.5	740.4
37	4.23	-6.00	811.3	99.9	911.1	546.2	-193.6	352.6
		-6.50	861.4	195.9	1057.2	633.8	-193.6	440.2
		-7.00	920.1	291.9	1211.9	726.6	-193.6	532.9
		-7.50	900.3	387.9	1288.1	772.2	-193.6	578.6
		-8.00	739.4	483.9	1223.3	733.4	-193.6	539.7
		-8.50	509.9	579.9	1089.7	653.3	-193.6	459.7
		-9.00	350.9	673.0	1023.9	613.8	-193.6	420.2
		-9.50	323.7	741.5	1065.2	638.6	-193.6	445.0
		-10.00	323.4	785.2	1108.6	664.6	-193.6	471.0
		-10.50	303.6	829.0	1132.7	679.1	-193.6	485.4
		-11.00	456.1	878.3	1334.4	800.0	-193.6	606.4
		-11.50	393.1	955.1	1348.1	808.2	-193.6	614.6
		-12.00	350.7	1030.2	1380.9	827.9	-193.6	634.2
		-12.50	342.5	1075.7	1418.3	850.3	-193.6	656.6
		-13.00	452.3	1132.0	1584.3	949.8	-193.6	756.2
		-13.50	261.1	1228.0	1489.2	892.8	-193.6	699.1
		-14.00	98.0	1323.7	1421.8	852.4	-193.6	658.7
		-14.50	75.3	1354.0	1429.3	856.9	-193.6	663.3
		-15.00	76.7	1361.3	1438.0	862.1	-193.6	668.5
		-15.50	78.8	1368.7	1447.6	867.8	-193.6	674.2
		-16.00	85.7	1376.3	1462.0	876.5	-193.6	682.9
38	4.20	-16.50	164.1	1395.0	1559.0	934.7	-193.6	741.0
		-17.00	134.6	1432.4	1567.0	939.5	-193.6	745.8
		-17.50	282.8	1471.9	1754.7	1052.0	-193.6	858.3
		-18.00	207.3	1545.8	1753.1	1051.0	-193.6	857.4
		-18.50	221.1	1573.5	1794.5	1075.9	-193.6	882.2
		-19.00	174.4	1632.5	1806.9	1083.3	-193.6	889.7
		-19.50	157.6	1665.6	1823.2	1093.0	-193.6	899.4
		-6.00	698.2	137.8	836.0	501.2	-186.6	314.6
		-6.50	797.3	233.3	1030.6	617.9	-186.6	431.3
		-7.00	1100.5	329.3	1429.8	857.2	-186.6	670.6
		-7.50	1265.9	425.3	1691.3	1014.0	-186.6	827.3
		-8.00	1536.0	521.3	2057.3	1233.4	-186.6	1046.8
		-8.50	1353.1	617.3	1970.4	1181.3	-186.6	994.7
		-9.00	1212.4	713.3	1925.7	1154.5	-186.6	967.9
		-9.50	655.0	809.3	1464.4	877.9	-186.6	691.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
38	4.20	-10.00	565.4	905.3	1470.7	881.7	-186.6	695.1
		-10.50	391.6	996.6	1388.2	832.3	-186.6	645.7
		-11.00	366.5	1065.0	1431.5	858.2	-186.6	671.6
		-11.50	347.0	1125.6	1472.6	882.8	-186.6	696.2
		-12.00	265.3	1182.5	1447.7	867.9	-186.6	681.3
		-12.50	408.4	1216.5	1624.8	974.1	-186.6	787.5
		-13.00	263.6	1289.1	1552.7	930.9	-186.6	744.3
		-13.50	124.4	1365.9	1490.3	893.5	-186.6	706.9
		-14.00	95.2	1405.8	1501.0	899.9	-186.6	713.3
		-14.50	92.5	1417.0	1509.5	905.0	-186.6	718.4
		-15.00	98.5	1426.1	1524.7	914.1	-186.6	727.5
		-15.50	99.6	1436.3	1535.9	920.8	-186.6	734.2
		-16.00	126.8	1446.2	1573.0	943.0	-186.6	756.4
		-16.50	673.0	1471.6	2144.7	1285.8	-186.6	1099.2
		-17.00	634.6	1560.4	2195.0	1316.0	-186.6	1129.4
		-17.50	549.4	1650.3	2199.7	1318.8	-186.6	1132.2
		-18.00	907.5	1733.1	2640.5	1583.1	-186.6	1396.5
		-18.50	1107.3	1826.6	2933.9	1758.9	-186.6	1572.3
		-19.00	912.3	1922.6	2834.9	1699.6	-186.6	1513.0
		-19.50	1455.4	2017.6	3473.0	2082.1	-186.6	1895.5
39	4.20	-6.00	794.8	176.0	970.8	582.0	-179.8	402.2
		-6.50	1009.9	272.0	1281.9	768.6	-179.8	588.8
		-7.00	1123.6	368.0	1491.6	894.2	-179.8	714.4
		-7.50	1208.0	464.0	1672.0	1002.4	-179.8	822.6
		-8.00	1337.4	560.0	1897.4	1137.5	-179.8	957.7
		-8.50	1536.0	656.0	2192.0	1314.2	-179.8	1134.4
		-9.00	1536.0	752.0	2288.0	1371.7	-179.8	1191.9
		-9.50	1179.0	848.0	2027.1	1215.3	-179.8	1035.5
		-10.00	533.3	944.0	1477.3	885.7	-179.8	705.9
		-10.50	357.6	1040.0	1397.6	837.9	-179.8	658.1
		-11.00	294.2	1133.3	1427.5	855.8	-179.8	676.0
		-11.50	267.1	1176.0	1443.0	865.1	-179.8	685.3
		-12.00	480.3	1206.5	1686.8	1011.3	-179.8	831.5
		-12.50	592.5	1284.1	1876.6	1125.1	-179.8	945.3
		-13.00	387.2	1380.1	1767.3	1059.5	-179.8	879.7
		-13.50	156.0	1476.1	1632.1	978.5	-179.8	798.7
		-14.00	92.5	1527.3	1619.7	971.1	-179.8	791.3
		-14.50	100.9	1535.9	1636.9	981.3	-179.8	801.5
		-15.00	102.9	1546.0	1648.9	988.6	-179.8	808.8
		-15.50	107.8	1556.3	1664.1	997.7	-179.8	817.9
40	4.15	-16.00	212.3	1567.2	1779.5	1066.8	-179.8	887.0
		-16.50	946.2	1627.0	2573.1	1542.6	-179.8	1362.8
		-17.00	732.4	1723.0	2455.4	1472.0	-179.8	1292.3
		-17.50	693.0	1819.0	2512.0	1506.0	-179.8	1326.2
		-18.00	703.1	1914.9	2618.0	1569.6	-179.8	1389.8
		-18.50	459.3	2000.8	2460.1	1474.9	-179.8	1295.1
		-19.00	368.8	2077.6	2446.3	1466.6	-179.8	1286.8
		-19.50	215.8	2152.6	2368.4	1419.9	-179.8	1240.1
		-6.00	891.4	212.6	1104.0	661.9	-126.1	535.8
		-6.50	956.0	308.6	1264.6	758.1	-126.1	632.1
		-7.00	995.4	404.6	1400.0	839.4	-126.1	713.3
		-7.50	1091.3	500.6	1591.9	954.4	-126.1	828.3
		-8.00	775.7	596.6	1372.3	822.7	-126.1	696.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
40	4.15	-8.50	771.7	692.6	1464.3	877.9	-126.1	751.8
		-9.00	728.6	788.6	1517.2	909.6	-126.1	783.6
		-9.50	354.0	871.5	1225.5	734.7	-126.1	608.6
		-10.00	282.0	948.0	1230.0	737.4	-126.1	611.4
		-10.50	216.8	1020.5	1237.3	741.8	-126.1	615.7
		-11.00	216.5	1057.7	1274.2	763.9	-126.1	637.8
		-11.50	300.6	1094.6	1395.1	836.4	-126.1	710.4
		-12.00	314.3	1138.4	1452.7	870.9	-126.1	744.9
		-12.50	886.4	1187.7	2074.1	1243.5	-126.1	1117.4
		-13.00	420.9	1283.7	1704.7	1022.0	-126.1	895.9
		-13.50	251.7	1379.7	1631.4	978.1	-126.1	852.0
		-14.00	102.1	1475.2	1577.3	945.6	-126.1	819.6
		-14.50	89.5	1495.1	1584.6	950.0	-126.1	824.0
		-15.00	94.0	1503.6	1597.7	957.8	-126.1	831.8
		-15.50	95.6	1512.7	1608.3	964.2	-126.1	838.2
		-16.00	105.8	1522.3	1628.2	976.1	-126.1	850.1
		-16.50	143.3	1539.0	1682.3	1008.6	-126.1	882.5
		-17.00	257.4	1565.2	1822.6	1092.7	-126.1	966.6
		-17.50	228.2	1625.7	1854.0	1111.5	-126.1	985.4
		-18.00	128.4	1692.2	1820.6	1091.5	-126.1	965.5
		-18.50	218.6	1722.9	1941.5	1163.9	-126.1	1037.9
		-19.00	143.5	1778.1	1921.6	1152.1	-126.1	1026.0
		-19.50	185.6	1794.1	1979.8	1186.9	-126.1	1060.9
41	4.19	-6.00	735.3	134.4	869.6	521.4	-183.2	338.2
		-6.50	821.8	230.4	1052.2	630.8	-183.2	447.7
		-7.00	846.1	326.4	1172.4	702.9	-183.2	519.7
		-7.50	764.9	422.4	1187.2	711.8	-183.2	528.6
		-8.00	654.0	518.4	1172.4	702.9	-183.2	519.7
		-8.50	631.6	610.3	1241.9	744.5	-183.2	561.4
		-9.00	406.7	681.1	1087.8	652.1	-183.2	469.0
		-9.50	414.3	738.4	1152.8	691.1	-183.2	507.9
		-10.00	379.4	811.3	1190.7	713.8	-183.2	530.7
		-10.50	258.6	866.3	1125.0	674.4	-183.2	491.3
		-11.00	208.7	922.9	1131.5	678.4	-183.2	495.2
		-11.50	134.2	998.3	1132.5	679.0	-183.2	495.8
		-12.00	122.7	1023.2	1145.9	687.0	-183.2	503.8
		-12.50	141.4	1036.2	1177.6	706.0	-183.2	522.8
		-13.00	252.6	1068.9	1321.5	792.2	-183.2	609.1
		-13.50	164.8	1145.6	1310.5	785.7	-183.2	602.5
		-14.00	85.8	1205.0	1290.9	773.9	-183.2	590.7
		-14.50	84.3	1215.1	1299.4	779.0	-183.2	595.9
		-15.00	85.2	1223.1	1308.3	784.3	-183.2	601.2
		-15.50	89.3	1231.1	1320.4	791.6	-183.2	608.4
		-16.00	91.6	1240.0	1331.6	798.3	-183.2	615.2
		-16.50	261.6	1252.1	1513.7	907.5	-183.2	724.4
		-17.00	408.0	1305.3	1713.3	1027.1	-183.2	844.0
		-17.50	316.5	1401.3	1717.8	1029.9	-183.2	846.7
		-18.00	225.0	1497.3	1722.3	1032.5	-183.2	849.4
		-18.50	180.2	1555.2	1735.4	1040.4	-183.2	857.2
		-19.00	217.4	1577.0	1794.4	1075.8	-183.2	892.6
		-19.50	271.7	1602.3	1874.0	1123.5	-183.2	940.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
42	4.20	-6.00	638.6	117.5	756.1	453.3	-189.3	264.0
		-6.50	716.7	203.9	920.6	551.9	-189.3	362.6
		-7.00	957.0	296.2	1253.2	751.3	-189.3	562.0
		-7.50	1116.1	392.2	1508.3	904.3	-189.3	715.0
		-8.00	1210.3	488.2	1698.5	1018.3	-189.3	829.0
		-8.50	1142.0	584.2	1726.2	1034.9	-189.3	845.6
		-9.00	402.4	680.2	1082.6	649.1	-189.3	459.7
		-9.50	238.7	776.2	1014.9	608.4	-189.3	419.1
		-10.00	142.8	870.7	1013.5	607.6	-189.3	418.3
		-10.50	108.9	896.0	1004.9	602.5	-189.3	413.1
		-11.00	213.5	896.0	1109.5	665.2	-189.3	475.9
		-11.50	178.4	948.4	1126.8	675.5	-189.3	486.2
		-12.00	283.2	984.6	1267.8	760.1	-189.3	570.8
		-12.50	533.5	1045.9	1579.4	946.9	-189.3	757.6
		-13.00	349.4	1141.9	1491.3	894.0	-189.3	704.7
		-13.50	170.6	1237.9	1408.5	844.4	-189.3	655.1
		-14.00	85.6	1302.4	1388.0	832.1	-189.3	642.8
		-14.50	84.6	1311.0	1395.6	836.7	-189.3	647.4
		-15.00	85.3	1318.9	1404.2	841.9	-189.3	652.5
		-15.50	93.2	1327.0	1420.2	851.4	-189.3	662.1
		-16.00	103.4	1336.9	1440.3	863.5	-189.3	674.2
		-16.50	233.6	1363.4	1597.1	957.5	-189.3	768.2
		-17.00	208.5	1411.5	1619.9	971.2	-189.3	781.9
43	4.20	-6.00	553.7	68.2	621.9	372.9	-186.6	186.3
		-6.50	718.0	156.4	874.4	524.2	-186.6	337.6
		-7.00	1077.5	252.2	1329.7	797.2	-186.6	610.6
		-7.50	1132.4	348.2	1480.6	887.6	-186.6	701.0
		-8.00	1134.6	444.2	1578.8	946.5	-186.6	759.9
		-8.50	1171.1	540.2	1711.4	1026.0	-186.6	839.4
		-9.00	711.8	636.2	1348.0	808.2	-186.6	621.6
		-9.50	557.6	732.2	1289.8	773.3	-186.6	586.7
		-10.00	477.6	828.2	1305.8	782.9	-186.6	596.3
		-10.50	338.2	908.0	1246.1	747.1	-186.6	560.5
		-11.00	300.0	973.9	1273.9	763.8	-186.6	577.1
		-11.50	236.5	1043.6	1280.1	767.5	-186.6	580.9
		-12.00	341.3	1069.3	1410.6	845.7	-186.6	659.1
		-12.50	1169.8	1137.5	2307.3	1383.3	-186.6	1196.7
		-13.00	548.1	1233.5	1781.6	1068.1	-186.6	881.5
		-13.50	318.1	1329.5	1647.6	987.8	-186.6	801.1
		-14.00	105.3	1424.9	1530.2	917.4	-186.6	730.8
		-14.50	95.7	1443.4	1539.0	922.7	-186.6	736.1
		-15.00	97.2	1452.5	1549.7	929.1	-186.6	742.5
		-15.50	112.3	1461.6	1574.0	943.6	-186.6	757.0
		-16.00	111.2	1476.1	1587.3	951.6	-186.6	765.0
		-16.50	300.5	1501.4	1801.9	1080.3	-186.6	893.7
		-17.00	901.9	1572.1	2474.0	1483.2	-186.6	1296.6
		-17.50	933.8	1668.1	2601.9	1559.9	-186.6	1373.3
		-18.00	982.6	1764.1	2746.7	1646.7	-186.6	1460.1



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
43	4.20	-18.50	1019.0	1860.1	2879.1	1726.1	-186.6	1539.5
		-19.00	1331.8	1956.1	3288.0	1971.2	-186.6	1784.6
		-19.50	1402.2	2052.1	3454.3	2070.9	-186.6	1884.3
44	4.14	-6.00	1115.1	196.1	1311.1	786.1	-179.6	606.4
		-6.50	1227.8	292.1	1519.9	911.2	-179.6	731.6
		-7.00	915.6	388.1	1303.7	781.6	-179.6	601.9
		-7.50	581.5	484.1	1065.6	638.8	-179.6	459.2
		-8.00	529.9	580.1	1110.0	665.4	-179.6	485.8
		-8.50	427.6	669.6	1097.3	657.8	-179.6	478.2
		-9.00	681.3	719.8	1401.1	840.0	-179.6	660.4
		-9.50	332.0	807.0	1139.0	682.8	-179.6	503.2
		-10.00	208.6	897.0	1105.7	662.9	-179.6	483.2
		-10.50	110.3	977.0	1087.3	651.9	-179.6	472.2
		-11.00	127.4	997.7	1125.1	674.5	-179.6	494.9
		-11.50	107.9	1025.7	1133.6	679.6	-179.6	500.0
		-12.00	158.0	1038.7	1196.7	717.5	-179.6	537.8
		-12.50	387.2	1060.8	1448.0	868.1	-179.6	688.5
		-13.00	492.6	1138.0	1630.5	977.5	-179.6	797.9
		-13.50	320.3	1234.0	1554.2	931.8	-179.6	752.2
		-14.00	113.9	1330.0	1443.8	865.6	-179.6	686.0
		-14.50	86.4	1364.0	1450.4	869.5	-179.6	689.9
		-15.00	83.3	1373.6	1456.8	873.4	-179.6	693.8
		-15.50	98.5	1381.4	1479.9	887.2	-179.6	707.6
		-16.00	117.7	1392.1	1509.7	905.1	-179.6	725.5
		-16.50	652.7	1423.4	2076.1	1244.7	-179.6	1065.0
		-17.00	507.5	1517.4	2024.9	1214.0	-179.6	1034.4
		-17.50	359.8	1613.4	1973.2	1183.0	-179.6	1003.3
		-18.00	260.9	1709.4	1970.4	1181.3	-179.6	1001.6
		-18.50	258.8	1748.8	2007.7	1203.6	-179.6	1024.0
		-19.00	648.1	1778.1	2426.2	1454.5	-179.6	1274.9
		-19.50	1039.8	1865.6	2905.4	1741.8	-179.6	1562.2
45	4.18	-6.00	790.2	177.6	967.7	580.2	-183.7	396.5
		-6.50	828.2	273.6	1101.7	660.5	-183.7	476.8
		-7.00	1056.2	369.6	1425.8	854.8	-183.7	671.1
		-7.50	1410.6	465.6	1876.1	1124.8	-183.7	941.1
		-8.00	1353.8	561.6	1915.4	1148.3	-183.7	964.6
		-8.50	555.6	657.6	1213.2	727.3	-183.7	543.6
		-9.00	386.4	753.6	1140.0	683.5	-183.7	499.7
		-9.50	265.4	849.6	1114.9	668.4	-183.7	484.7
		-10.00	229.1	904.5	1133.6	679.6	-183.7	495.9
		-10.50	170.2	930.4	1100.6	659.8	-183.7	476.1
		-11.00	166.8	956.2	1123.0	673.3	-183.7	489.6
		-11.50	144.0	967.8	1111.8	666.5	-183.7	482.8
		-12.00	344.7	967.8	1312.5	786.9	-183.7	603.2
		-12.50	586.9	1013.6	1600.5	959.5	-183.7	775.8
		-13.00	431.3	1099.5	1530.8	917.7	-183.7	734.0
		-13.50	221.5	1195.5	1417.0	849.5	-183.7	665.8
		-14.00	85.0	1287.1	1372.0	822.6	-183.7	638.9
		-14.50	74.6	1303.5	1378.0	826.2	-183.7	642.4
		-15.00	76.1	1310.8	1386.9	831.5	-183.7	647.8
		-15.50	99.4	1318.4	1417.8	850.0	-183.7	666.3
		-16.00	107.1	1330.6	1437.7	861.9	-183.7	678.2
		-16.50	128.4	1345.1	1473.5	883.4	-183.7	699.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
45	4.18	-17.00	96.3	1373.7	1470.1	881.3	-183.7	697.6
		-17.50	406.4	1391.5	1797.9	1077.9	-183.7	894.2
		-18.00	634.7	1459.9	2094.6	1255.7	-183.7	1072.0
		-18.50	729.7	1542.8	2272.5	1362.4	-183.7	1178.7
		-19.00	1143.6	1636.5	2780.1	1666.7	-183.7	1483.0
		-19.50	1263.0	1732.5	2995.5	1795.9	-183.7	1612.1
46	4.10	-6.00	957.6	166.2	1123.8	673.8	-183.5	490.3
		-6.50	1059.8	262.2	1322.0	792.6	-183.5	609.1
		-7.00	1278.7	358.2	1636.9	981.4	-183.5	797.9
		-7.50	1493.3	454.2	1947.5	1167.6	-183.5	984.1
		-8.00	1536.0	550.2	2086.2	1250.7	-183.5	1067.2
		-8.50	766.8	646.2	1413.0	847.1	-183.5	663.7
		-9.00	463.5	742.2	1205.7	722.9	-183.5	539.4
		-9.50	365.2	838.2	1203.4	721.5	-183.5	538.0
		-10.00	324.0	905.4	1229.4	737.1	-183.5	553.6
		-10.50	227.5	947.5	1174.9	704.4	-183.5	520.9
		-11.00	194.5	1004.7	1199.2	718.9	-183.5	535.4
		-11.50	142.4	1026.7	1169.1	700.9	-183.5	517.4
		-12.00	246.9	1026.7	1273.7	763.6	-183.5	580.1
		-12.50	1131.9	1080.8	2212.6	1326.5	-183.5	1143.0
		-13.00	498.6	1176.8	1675.4	1004.4	-183.5	820.9
		-13.50	286.4	1272.8	1559.1	934.7	-183.5	751.2
		-14.00	91.6	1368.6	1460.2	875.4	-183.5	691.9
		-14.50	83.9	1384.4	1468.2	880.2	-183.5	696.7
		-15.00	85.1	1392.4	1477.5	885.8	-183.5	702.3
		-15.50	93.9	1400.5	1494.5	896.0	-183.5	712.5
		-16.00	110.2	1410.4	1520.6	911.6	-183.5	728.2
		-16.50	258.6	1432.4	1691.0	1013.8	-183.5	830.3
		-17.00	781.4	1492.2	2273.6	1363.1	-183.5	1179.6
		-17.50	868.6	1588.2	2456.8	1472.9	-183.5	1289.4
		-18.00	929.7	1684.2	2613.9	1567.1	-183.5	1383.6
		-18.50	1126.8	1780.2	2907.0	1742.8	-183.5	1559.3
		-19.00	1536.0	1876.2	3412.2	2045.7	-183.5	1862.2
		-19.50	1536.0	1972.2	3508.2	2103.2	-183.5	1919.7
		-20.00	1536.0	2068.2	3604.2	2160.8	-183.5	1977.3
		-20.50	1536.0	2164.2	3700.2	2218.3	-183.5	2034.8
47	4.16	-6.00	768.4	133.0	901.5	540.4	-183.1	357.4
		-6.50	854.1	229.0	1083.1	649.4	-183.1	466.3
		-7.00	1075.6	325.0	1400.6	839.7	-183.1	656.6
		-7.50	1243.9	421.0	1664.9	998.1	-183.1	815.1
		-8.00	1327.1	517.0	1844.1	1105.6	-183.1	922.5
		-8.50	706.5	613.0	1319.6	791.1	-183.1	608.0
		-9.00	544.1	709.0	1253.2	751.3	-183.1	568.2
		-9.50	291.4	805.0	1096.4	657.3	-183.1	474.2
		-10.00	240.1	881.8	1121.9	672.6	-183.1	489.5
		-10.50	221.7	922.4	1144.1	685.9	-183.1	502.8
		-11.00	548.3	959.3	1507.6	903.8	-183.1	720.8
		-11.50	390.0	1055.3	1445.3	866.5	-183.1	683.4
		-12.00	315.4	1151.3	1466.7	879.3	-183.1	696.3
		-12.50	300.1	1201.3	1501.3	900.1	-183.1	717.0
		-13.00	247.6	1231.9	1479.5	887.0	-183.1	703.9
		-13.50	149.8	1291.0	1440.9	863.8	-183.1	680.7
		-14.00	73.4	1346.6	1420.0	851.3	-183.1	668.2



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
47	4.16	-14.50	71.7	1354.4	1426.1	855.0	-183.1	671.9
		-15.00	73.8	1361.3	1435.0	860.3	-183.1	677.3
		-15.50	83.0	1368.5	1451.6	870.2	-183.1	687.2
		-16.00	83.6	1378.0	1461.6	876.3	-183.1	693.2
		-16.50	111.2	1392.1	1503.3	901.3	-183.1	718.2
		-17.00	85.0	1419.9	1504.9	902.2	-183.1	719.1
		-17.50	497.0	1429.7	1926.7	1155.1	-183.1	972.0
		-18.00	820.8	1514.3	2335.1	1399.9	-183.1	1216.8
		-18.50	697.5	1610.3	2307.8	1383.6	-183.1	1200.5
		-19.00	353.6	1706.3	2059.9	1235.0	-183.1	1051.9
48	4.15	-19.50	292.4	1802.3	2094.7	1255.8	-183.1	1072.7
		-6.00	667.4	136.4	803.8	481.9	-183.1	298.8
		-6.50	760.1	226.6	986.7	591.5	-183.1	408.5
		-7.00	997.8	321.4	1319.2	790.9	-183.1	607.8
		-7.50	1338.2	417.4	1755.6	1052.5	-183.1	869.5
		-8.00	1417.5	513.4	1930.9	1157.6	-183.1	974.6
		-8.50	1355.5	609.4	1964.9	1178.0	-183.1	994.9
		-9.00	596.2	705.4	1301.7	780.4	-183.1	597.3
		-9.50	496.5	801.4	1297.9	778.1	-183.1	595.1
		-10.00	389.4	897.3	1286.7	771.4	-183.1	588.3
		-10.50	309.4	942.8	1252.2	750.7	-183.1	567.7
		-11.00	306.2	995.4	1301.5	780.3	-183.1	597.2
		-11.50	230.2	1071.7	1301.8	780.5	-183.1	597.4
		-12.00	278.7	1104.4	1383.2	829.2	-183.1	646.2
		-12.50	468.2	1148.7	1616.9	969.4	-183.1	786.3
		-13.00	337.9	1244.7	1582.5	948.8	-183.1	765.7
		-13.50	161.0	1340.7	1501.7	900.3	-183.1	717.2
		-14.00	84.9	1399.5	1484.5	890.0	-183.1	706.9
		-14.50	84.0	1408.2	1492.2	894.6	-183.1	711.5
		-15.00	83.0	1416.6	1499.6	899.0	-183.1	716.0
		-15.50	93.3	1424.3	1517.5	909.8	-183.1	726.7
		-16.00	109.6	1433.8	1543.4	925.3	-183.1	742.3
		-16.50	201.7	1451.4	1653.1	991.1	-183.1	808.0
		-17.00	434.7	1512.8	1947.5	1167.6	-183.1	984.5
		-17.50	282.9	1608.8	1891.7	1134.1	-183.1	951.1
		-18.00	198.1	1704.8	1903.0	1140.9	-183.1	957.8
		-18.50	142.9	1752.9	1895.8	1136.5	-183.1	953.5
		-19.00	179.3	1771.0	1950.3	1169.2	-183.1	986.2
		-19.50	149.5	1804.5	1954.0	1171.4	-183.1	988.4
49	4.12	-6.00	1093.8	91.0	1184.8	710.3	-200.4	509.9
		-6.50	1221.3	187.0	1408.3	844.3	-200.4	643.9
		-7.00	1428.6	283.0	1711.6	1026.1	-200.4	825.7
		-7.50	1536.0	379.0	1915.0	1148.1	-200.4	947.6
		-8.00	1536.0	475.0	2011.0	1205.6	-200.4	1005.2
		-8.50	691.4	571.0	1262.4	756.8	-200.4	556.4
		-9.00	459.7	667.0	1126.7	675.5	-200.4	475.0
		-9.50	316.2	763.0	1079.2	647.0	-200.4	446.6
		-10.00	281.3	816.1	1097.4	657.9	-200.4	457.5
		-10.50	499.3	850.2	1349.5	809.1	-200.4	608.6
		-11.00	514.7	930.7	1445.3	866.5	-200.4	666.1
		-11.50	400.5	1026.7	1427.1	855.6	-200.4	655.1
		-12.00	297.5	1117.3	1414.7	848.2	-200.4	647.7
		-12.50	277.2	1158.6	1435.8	860.8	-200.4	660.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
49	4.12	-13.00	205.7	1205.8	1411.4	846.2	-200.4	645.7
		-13.50	82.1	1282.5	1364.7	818.1	-200.4	617.7
		-14.00	69.0	1301.0	1370.0	821.4	-200.4	620.9
		-14.50	73.6	1307.4	1381.0	827.9	-200.4	627.5
		-15.00	83.6	1314.8	1398.4	838.4	-200.4	637.9
		-15.50	97.3	1324.0	1421.3	852.1	-200.4	651.7
		-16.00	125.4	1335.2	1460.6	875.6	-200.4	675.2
		-16.50	332.8	1374.5	1707.3	1023.6	-200.4	823.1
		-17.00	442.1	1437.0	1879.0	1126.5	-200.4	926.1
		-17.50	385.9	1530.9	1916.8	1149.2	-200.4	948.7
		-18.00	320.9	1624.5	1945.4	1166.3	-200.4	965.9
		-18.50	333.9	1668.8	2002.7	1200.7	-200.4	1000.2
		-19.00	428.3	1710.6	2138.9	1282.3	-200.4	1081.9
		-19.50	280.5	1780.6	2061.2	1235.7	-200.4	1035.3

REKENEGEGEVENS G5 G3 290

Berekening : Ontwerpend
 Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
 Sondering(en) : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Stijf bouwwerk : NEE
 Paalgroep : NEE
 Aantal sonderingen : 16
 Factor ξ_3 ($n=1$) : 1.39 (handmatig)
 Factor ξ_3 (gem) : 1.39 (handmatig)
 Factor ξ_4 (min) : 1.39 (handmatig)
 Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s;cal,max;i}$ begrenzen op $0.75 * R_{b;cal,max;i}$: NEE
 UGT draagvermogen zonder negatieve kleef : NEE

Paal : #290
 Niveau paalkop [m] : N.A.P. 4.60
 Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #290

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-21.00	0.50

**SAMENVATTINGSTABEL G5 G3 290 (n=1)****Uitgangspunten**

- paal : #290
- paaltype : Geheide paal (beton)
- schachtafmeting : 290 x 290
Paalklassefactor α_p : 0.70
Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
1	4.20	-6.00	763.0	100.7	863.7	517.8	-176.0	341.8
		-6.50	854.9	187.7	1042.6	625.0	-176.0	449.1
		-7.00	945.5	274.7	1220.2	731.5	-176.0	555.5
		-7.50	1142.4	361.7	1504.1	901.8	-176.0	725.8
		-8.00	1261.5	448.7	1710.2	1025.3	-176.0	849.3
		-8.50	997.0	535.7	1532.7	918.9	-176.0	742.9
		-9.00	512.0	622.7	1134.7	680.3	-176.0	504.3
		-9.50	211.4	709.7	921.1	552.2	-176.0	376.2
		-10.00	135.6	791.7	927.3	555.9	-176.0	379.9
		-10.50	92.0	831.9	923.8	553.8	-176.0	377.9
		-11.00	83.6	831.9	915.4	548.8	-176.0	372.8
		-11.50	80.8	831.9	912.6	547.1	-176.0	371.1
		-12.00	162.1	831.9	994.0	595.9	-176.0	419.9
		-12.50	848.1	876.8	1724.9	1034.1	-176.0	858.1
		-13.00	540.4	963.8	1504.2	901.8	-176.0	725.8
		-13.50	265.2	1050.8	1316.0	789.0	-176.0	613.0
		-14.00	104.8	1137.8	1242.7	745.0	-176.0	569.0
		-14.50	59.1	1188.0	1247.1	747.7	-176.0	571.7
		-15.00	56.1	1196.1	1252.1	750.7	-176.0	574.7
		-15.50	58.5	1201.8	1260.2	755.5	-176.0	579.5
		-16.00	61.7	1208.3	1270.0	761.4	-176.0	585.4
		-16.50	218.8	1217.7	1436.5	861.2	-176.0	685.2
		-17.00	320.1	1263.3	1583.4	949.3	-176.0	773.3
		-17.50	763.1	1335.0	2098.2	1257.9	-176.0	1081.9
		-18.00	768.1	1422.0	2190.1	1313.0	-176.0	1137.0
		-18.50	1072.7	1509.0	2581.7	1547.8	-176.0	1371.8
		-19.00	881.9	1596.0	2478.0	1485.6	-176.0	1309.6
		-19.50	903.6	1683.0	2586.6	1550.7	-176.0	1374.7
		-20.00	799.0	1770.0	2569.0	1540.2	-176.0	1364.2
		-20.50	1261.5	1852.8	3114.3	1867.1	-176.0	1691.1
		-21.00	1261.5	1939.8	3201.3	1919.2	-176.0	1743.2
2	4.20	-6.00	636.2	210.7	846.9	507.7	-156.9	350.8
		-6.50	732.9	295.0	1027.9	616.2	-156.9	459.4
		-7.00	874.5	381.7	1256.2	753.1	-156.9	596.2
		-7.50	1001.5	468.7	1470.2	881.4	-156.9	724.5
		-8.00	856.1	555.7	1411.7	846.4	-156.9	689.5
		-8.50	465.2	642.7	1107.9	664.2	-156.9	507.3
		-9.00	411.6	729.7	1141.2	684.2	-156.9	527.3
		-9.50	346.4	799.6	1146.0	687.1	-156.9	530.2
		-10.00	469.3	853.9	1323.3	793.3	-156.9	636.4
		-10.50	292.0	916.6	1208.6	724.6	-156.9	567.7
		-11.00	245.0	986.2	1231.1	738.1	-156.9	581.2
		-11.50	164.6	1040.5	1205.0	722.4	-156.9	565.5



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
2	4.20	-12.00	259.7	1060.5	1320.2	791.5	-156.9	634.6
		-12.50	741.4	1117.3	1858.6	1114.3	-156.9	957.4
		-13.00	468.1	1204.3	1672.4	1002.6	-156.9	845.7
		-13.50	236.4	1291.3	1527.6	915.8	-156.9	758.9
		-14.00	107.2	1378.3	1485.4	890.5	-156.9	733.7
		-14.50	69.3	1421.5	1490.8	893.7	-156.9	736.9
		-15.00	68.3	1428.9	1497.2	897.6	-156.9	740.7
		-15.50	73.4	1436.0	1509.4	904.9	-156.9	748.0
		-16.00	83.4	1444.1	1527.6	915.8	-156.9	758.9
		-16.50	133.2	1456.7	1589.8	953.1	-156.9	796.2
		-17.00	605.8	1478.7	2084.5	1249.7	-156.9	1092.8
		-17.50	494.2	1561.8	2055.9	1232.6	-156.9	1075.7
		-18.00	440.5	1648.8	2089.2	1252.5	-156.9	1095.7
		-18.50	370.0	1727.8	2097.7	1257.6	-156.9	1100.7
		-19.00	970.9	1785.9	2756.8	1652.8	-156.9	1495.9
		-19.50	1064.5	1872.9	2937.4	1761.0	-156.9	1604.1
3	4.22	-6.00	591.6	60.8	652.4	391.1	-182.5	208.6
		-6.50	663.8	147.8	811.6	486.6	-182.5	304.1
		-7.00	561.0	234.8	795.8	477.1	-182.5	294.6
		-7.50	455.1	321.8	776.9	465.7	-182.5	283.2
		-8.00	375.2	403.5	778.7	466.9	-182.5	284.4
		-8.50	308.1	461.7	769.9	461.5	-182.5	279.0
		-9.00	264.0	504.6	768.6	460.8	-182.5	278.3
		-9.50	278.2	539.3	817.4	490.1	-182.5	307.6
		-10.00	237.1	588.7	825.8	495.1	-182.5	312.6
		-10.50	152.0	625.1	777.1	465.9	-182.5	283.3
		-11.00	116.5	677.8	794.3	476.2	-182.5	293.7
		-11.50	98.1	693.9	792.0	474.8	-182.5	292.3
		-12.00	142.8	696.2	838.9	503.0	-182.5	320.5
		-12.50	360.0	724.0	1084.0	649.9	-182.5	467.4
		-13.00	269.3	786.4	1055.8	632.9	-182.5	450.4
		-13.50	182.2	855.3	1037.5	622.0	-182.5	439.5
		-14.00	92.0	924.9	1016.9	609.6	-182.5	427.1
		-14.50	65.0	955.9	1020.9	612.1	-182.5	429.6
		-15.00	65.9	962.8	1028.7	616.7	-182.5	434.2
		-15.50	70.2	969.8	1040.1	623.5	-182.5	441.0
		-16.00	77.3	977.7	1055.0	632.5	-182.5	450.0
		-16.50	92.0	987.2	1079.2	647.0	-182.5	464.5
		-17.00	74.1	1007.9	1082.0	648.7	-182.5	466.2
		-17.50	193.0	1017.6	1210.6	725.8	-182.5	543.3
		-18.00	668.1	1076.7	1744.9	1046.1	-182.5	863.6
		-18.50	1054.4	1163.7	2218.1	1329.8	-182.5	1147.3
		-19.00	576.4	1250.7	1827.1	1095.4	-182.5	912.9
		-19.50	330.7	1337.7	1668.4	1000.2	-182.5	817.7
		-20.00	139.9	1424.7	1564.6	938.0	-182.5	755.5
4	4.06	-6.00	779.5	139.2	918.7	550.8	-162.7	388.1
		-6.50	837.7	226.2	1063.9	637.8	-162.7	475.1
		-7.00	936.1	313.2	1249.3	749.0	-162.7	586.3
		-7.50	1103.4	400.2	1503.6	901.4	-162.7	738.7
		-8.00	419.4	487.2	906.6	543.5	-162.7	380.8
		-8.50	311.7	574.2	885.9	531.1	-162.7	368.4
		-9.00	216.2	654.0	870.2	521.7	-162.7	359.0
		-9.50	235.9	682.7	918.5	550.7	-162.7	388.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
4	4.06	-10.00	154.5	727.8	882.3	528.9	-162.7	366.2
		-10.50	89.8	781.7	871.5	522.5	-162.7	359.8
		-11.00	72.8	807.8	880.6	527.9	-162.7	365.2
		-11.50	68.7	812.5	881.2	528.3	-162.7	365.6
		-12.00	191.9	815.5	1007.3	603.9	-162.7	441.2
		-12.50	916.7	872.2	1789.0	1072.5	-162.7	909.8
		-13.00	379.7	959.2	1339.0	802.7	-162.7	640.0
		-13.50	216.6	1046.2	1262.8	757.1	-162.7	594.4
		-14.00	72.6	1132.5	1205.2	722.5	-162.7	559.8
		-14.50	62.0	1148.6	1210.6	725.8	-162.7	563.1
		-15.00	66.6	1155.0	1221.6	732.4	-162.7	569.7
		-15.50	71.3	1162.4	1233.7	739.6	-162.7	576.9
		-16.00	73.2	1170.5	1243.7	745.6	-162.7	582.9
		-16.50	152.2	1183.3	1335.5	800.6	-162.7	637.9
		-17.00	158.5	1211.9	1370.4	821.6	-162.7	658.9
		-17.50	468.2	1237.1	1705.3	1022.4	-162.7	859.7
		-18.00	796.9	1316.3	2113.2	1266.9	-162.7	1104.2
		-18.50	848.7	1403.3	2252.0	1350.1	-162.7	1187.4
		-19.00	1153.5	1490.3	2643.8	1585.0	-162.7	1422.3
		-19.50	492.8	1577.3	2070.1	1241.1	-162.7	1078.4
		-20.00	257.6	1664.3	1921.9	1152.2	-162.7	989.5
5	4.10	-6.00	926.1	170.8	1096.9	657.6	-165.8	491.8
		-6.50	949.6	257.8	1207.4	723.9	-165.8	558.1
		-7.00	992.4	344.8	1337.1	801.6	-165.8	635.9
		-7.50	1055.3	431.8	1487.1	891.5	-165.8	725.8
		-8.00	405.7	518.8	924.4	554.2	-165.8	388.5
		-8.50	302.4	605.8	908.2	544.5	-165.8	378.7
		-9.00	219.1	690.9	910.0	545.6	-165.8	379.8
		-9.50	230.0	722.1	952.1	570.8	-165.8	405.0
		-10.00	281.4	768.9	1050.2	629.6	-165.8	463.9
		-10.50	230.8	837.9	1068.7	640.7	-165.8	475.0
		-11.00	245.0	887.9	1133.0	679.2	-165.8	513.5
		-11.50	117.5	951.8	1069.3	641.1	-165.8	475.3
		-12.00	251.3	971.9	1223.1	733.3	-165.8	567.5
		-12.50	976.8	1029.5	2006.3	1202.8	-165.8	1037.1
		-13.00	502.7	1116.5	1619.2	970.7	-165.8	805.0
		-13.50	261.0	1203.5	1464.5	878.0	-165.8	712.2
		-14.00	116.7	1290.5	1407.2	843.7	-165.8	677.9
		-14.50	80.4	1334.4	1414.8	848.2	-165.8	682.5
		-15.00	76.7	1344.3	1421.0	851.9	-165.8	686.2
		-15.50	85.9	1352.3	1438.2	862.2	-165.8	696.5
		-16.00	86.1	1362.3	1448.4	868.3	-165.8	702.6
		-16.50	182.9	1376.7	1559.6	935.0	-165.8	769.2
		-17.00	178.7	1414.3	1593.0	955.0	-165.8	789.3
		-17.50	775.5	1445.7	2221.2	1331.7	-165.8	1165.9
		-18.00	1040.6	1532.7	2573.3	1542.7	-165.8	1377.0
		-18.50	1261.5	1619.7	2881.2	1727.3	-165.8	1561.6
		-19.00	1261.5	1706.7	2968.2	1779.5	-165.8	1613.7
		-19.50	1261.5	1793.7	3055.2	1831.7	-165.8	1665.9
		-20.00	1261.5	1880.7	3142.2	1883.8	-165.8	1718.1
6	4.01	-6.00	503.0	153.9	656.9	393.8	-162.4	231.4
		-6.50	519.0	237.6	756.6	453.6	-162.4	291.2
		-7.00	609.0	304.3	913.3	547.6	-162.4	385.1



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
6	4.01	-7.50	817.6	377.2	1194.8	716.3	-162.4	553.9
		-8.00	915.8	464.2	1379.9	827.3	-162.4	664.9
		-8.50	405.4	551.2	956.6	573.5	-162.4	411.1
		-9.00	288.8	638.2	927.0	555.7	-162.4	393.3
		-9.50	202.3	715.4	917.7	550.2	-162.4	387.7
		-10.00	226.9	759.2	986.1	591.2	-162.4	428.8
		-10.50	452.1	800.6	1252.7	751.0	-162.4	588.6
		-11.00	470.1	868.7	1338.9	802.7	-162.4	640.2
		-11.50	390.7	938.3	1329.0	796.8	-162.4	634.3
		-12.00	617.5	997.9	1615.3	968.4	-162.4	806.0
		-12.50	1261.5	1082.0	2343.5	1405.0	-162.4	1242.6
		-13.00	1040.2	1169.0	2209.2	1324.5	-162.4	1162.0
		-13.50	353.7	1256.0	1609.7	965.0	-162.4	802.6
		-14.00	176.8	1343.0	1519.8	911.1	-162.4	748.7
		-14.50	80.7	1423.7	1504.4	901.9	-162.4	739.5
		-15.00	75.1	1436.9	1512.0	906.5	-162.4	744.1
		-15.50	77.0	1444.8	1521.8	912.4	-162.4	749.9
		-16.00	86.1	1453.2	1539.2	922.8	-162.4	760.4
		-16.50	103.9	1464.3	1568.2	940.2	-162.4	777.7
		-17.00	170.1	1490.4	1660.5	995.5	-162.4	833.1
		-17.50	107.1	1553.5	1660.5	995.5	-162.4	833.1
		-18.00	88.7	1580.9	1669.5	1000.9	-162.4	838.5
		-18.50	181.7	1594.3	1776.0	1064.8	-162.4	902.4
		-19.00	687.4	1631.9	2319.3	1390.5	-162.4	1228.1
		-19.50	929.8	1716.8	2646.6	1586.7	-162.4	1424.3
7	4.05	-6.00	608.6	183.8	792.4	475.0	-161.6	313.4
		-6.50	647.6	268.9	916.5	549.4	-161.6	387.8
		-7.00	650.1	354.8	1005.0	602.5	-161.6	440.9
		-7.50	628.6	441.7	1070.3	641.7	-161.6	480.0
		-8.00	445.7	521.6	967.3	579.9	-161.6	418.3
		-8.50	431.7	589.6	1021.3	612.3	-161.6	450.7
		-9.00	407.3	650.9	1058.3	634.4	-161.6	472.8
		-9.50	366.0	695.1	1061.2	636.2	-161.6	474.6
		-10.00	364.8	748.0	1112.9	667.2	-161.6	505.5
		-10.50	310.3	803.2	1113.5	667.6	-161.6	505.9
		-11.00	220.7	853.9	1074.6	644.3	-161.6	482.6
		-11.50	167.5	923.5	1091.0	654.1	-161.6	492.4
		-12.00	142.8	953.4	1096.2	657.2	-161.6	495.6
		-12.50	768.6	965.8	1734.4	1039.8	-161.6	878.2
		-13.00	1110.7	1052.8	2163.5	1297.1	-161.6	1135.4
		-13.50	520.0	1139.8	1659.8	995.1	-161.6	833.4
		-14.00	253.9	1226.8	1480.6	887.7	-161.6	726.0
		-14.50	113.5	1313.8	1427.2	855.7	-161.6	694.0
		-15.00	79.7	1355.1	1434.8	860.2	-161.6	698.5
		-15.50	80.5	1363.6	1444.2	865.8	-161.6	704.2
		-16.00	85.8	1372.5	1458.2	874.2	-161.6	712.6
		-16.50	111.9	1382.1	1494.0	895.7	-161.6	734.1
		-17.00	131.8	1412.6	1544.4	925.9	-161.6	764.3
		-17.50	109.5	1449.7	1559.1	934.7	-161.6	773.1
		-18.00	138.7	1464.1	1602.8	960.9	-161.6	799.3
		-18.50	739.4	1507.0	2246.3	1346.7	-161.6	1185.1
		-19.00	796.5	1594.0	2390.4	1433.1	-161.6	1271.5
		-19.50	455.6	1681.0	2136.6	1280.9	-161.6	1119.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
7	4.05	-20.00	308.1	1762.7	2070.9	1241.5	-161.6	1079.9
8	4.05	-6.00	538.4	54.8	593.3	355.7	-181.5	174.2
		-6.50	724.9	141.2	866.1	519.3	-181.5	337.8
		-7.00	847.3	228.2	1075.5	644.8	-181.5	463.3
		-7.50	1055.7	315.2	1370.9	821.9	-181.5	640.4
		-8.00	954.8	402.2	1357.0	813.5	-181.5	632.1
		-8.50	349.4	489.2	838.6	502.7	-181.5	321.3
		-9.00	297.7	576.2	873.8	523.9	-181.5	342.4
		-9.50	194.3	659.2	853.5	511.7	-181.5	330.2
		-10.00	218.7	694.1	912.9	547.3	-181.5	365.8
		-10.50	168.0	743.0	911.0	546.2	-181.5	364.7
		-11.00	148.5	766.4	914.9	548.5	-181.5	367.1
		-11.50	141.8	792.3	934.1	560.0	-181.5	378.6
		-12.00	180.6	811.3	991.9	594.6	-181.5	413.2
		-12.50	744.8	862.1	1606.9	963.4	-181.5	781.9
		-13.00	454.7	949.1	1403.8	841.6	-181.5	660.2
		-13.50	238.8	1036.1	1275.0	764.4	-181.5	582.9
		-14.00	85.7	1123.0	1208.7	724.7	-181.5	543.2
		-14.50	69.0	1146.9	1215.8	728.9	-181.5	547.5
		-15.00	70.5	1154.0	1224.5	734.1	-181.5	552.7
		-15.50	75.4	1161.5	1236.9	741.5	-181.5	560.1
		-16.00	81.9	1170.8	1252.7	751.0	-181.5	569.6
		-16.50	330.3	1184.0	1514.3	907.8	-181.5	726.4
		-17.00	296.7	1249.0	1545.7	926.7	-181.5	745.2
		-17.50	937.3	1315.9	2253.2	1350.8	-181.5	1169.4
		-18.00	1065.6	1402.9	2468.5	1479.9	-181.5	1298.4
		-18.50	954.7	1489.9	2444.6	1465.6	-181.5	1284.1
		-19.00	377.8	1576.9	1954.6	1171.8	-181.5	990.4
		-19.50	189.3	1663.9	1853.2	1111.0	-181.5	929.6
9	4.08	-6.00	280.0	31.4	311.4	186.7	-181.5	5.1
		-6.50	307.5	84.1	391.6	234.8	-181.5	53.2
		-7.00	405.5	129.6	535.1	320.8	-181.5	139.3
		-7.50	575.0	194.9	769.9	461.6	-181.5	280.0
		-8.00	443.3	275.0	718.3	430.7	-181.5	249.1
		-8.50	374.5	359.5	734.1	440.1	-181.5	258.6
		-9.00	295.5	444.1	739.6	443.4	-181.5	261.9
		-9.50	326.8	493.1	819.9	491.5	-181.5	310.0
		-10.00	239.4	562.6	802.0	480.8	-181.5	299.3
		-10.50	191.8	599.9	791.7	474.7	-181.5	293.1
		-11.00	149.1	645.9	795.0	476.6	-181.5	295.1
		-11.50	114.5	679.5	794.0	476.0	-181.5	294.5
		-12.00	200.3	692.4	892.6	535.1	-181.5	353.6
		-12.50	861.5	741.2	1602.6	960.8	-181.5	779.3
		-13.00	699.5	828.2	1527.7	915.9	-181.5	734.3
		-13.50	320.3	915.2	1235.5	740.7	-181.5	559.2
		-14.00	140.1	1002.2	1142.3	684.8	-181.5	503.3
		-14.50	71.4	1062.4	1133.7	679.7	-181.5	498.2
		-15.00	68.7	1071.3	1140.0	683.5	-181.5	501.9
		-15.50	76.7	1078.6	1155.2	692.6	-181.5	511.1
		-16.00	82.3	1087.2	1169.5	701.1	-181.5	519.6
		-16.50	151.0	1096.8	1247.7	748.0	-181.5	566.5
		-17.00	174.9	1125.9	1300.9	779.9	-181.5	598.3
		-17.50	137.3	1181.4	1318.7	790.6	-181.5	609.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
9	4.08	-18.00	364.2	1205.5	1569.7	941.1	-181.5	759.6
		-18.50	818.3	1280.6	2098.9	1258.4	-181.5	1076.8
		-19.00	341.9	1367.6	1709.5	1024.9	-181.5	843.3
		-19.50	214.3	1454.6	1668.9	1000.5	-181.5	819.0
		-20.00	100.3	1538.2	1638.6	982.3	-181.5	800.8
10	4.01	-6.00	454.3	100.5	554.9	332.7	-171.7	160.9
		-6.50	464.8	167.9	632.7	379.3	-171.7	207.6
		-7.00	506.3	237.2	743.5	445.7	-171.7	274.0
		-7.50	575.5	301.7	877.2	525.9	-171.7	354.2
		-8.00	874.6	377.9	1252.4	750.8	-171.7	579.1
		-8.50	1001.6	464.9	1466.5	879.2	-171.7	707.5
		-9.00	328.5	551.9	880.3	527.8	-171.7	356.0
		-9.50	176.9	638.9	815.8	489.1	-171.7	317.3
		-10.00	90.2	723.3	813.5	487.7	-171.7	316.0
		-10.50	74.7	742.6	817.3	490.0	-171.7	318.3
		-11.00	152.9	751.9	904.8	542.4	-171.7	370.7
		-11.50	127.2	792.1	919.3	551.1	-171.7	379.4
		-12.00	218.8	811.7	1030.5	617.8	-171.7	446.1
		-12.50	1021.3	872.5	1893.9	1135.4	-171.7	963.7
		-13.00	484.6	959.5	1444.1	865.8	-171.7	694.0
		-13.50	248.8	1046.5	1295.3	776.5	-171.7	604.8
		-14.00	84.0	1133.3	1217.3	729.8	-171.7	558.1
		-14.50	71.0	1156.9	1227.9	736.1	-171.7	564.4
		-15.00	65.4	1166.4	1231.8	738.5	-171.7	566.7
		-15.50	74.3	1174.0	1248.3	748.4	-171.7	576.6
		-16.00	85.0	1182.8	1267.7	760.0	-171.7	588.3
		-16.50	109.5	1194.9	1304.4	782.0	-171.7	610.3
		-17.00	97.6	1216.9	1314.5	788.1	-171.7	616.3
		-17.50	508.9	1245.6	1754.5	1051.9	-171.7	880.1
		-18.00	951.4	1329.7	2281.1	1367.5	-171.7	1195.8
		-18.50	1001.9	1416.7	2418.5	1450.0	-171.7	1278.2
		-19.00	1040.7	1503.7	2544.3	1525.4	-171.7	1353.6
		-19.50	637.9	1590.7	2228.6	1336.1	-171.7	1164.4
		-20.00	383.8	1677.7	2061.4	1235.9	-171.7	1064.1
11	4.03	-6.00	577.6	106.4	684.0	410.1	-175.0	235.1
		-6.50	652.1	193.4	845.5	506.9	-175.0	331.9
		-7.00	729.5	280.4	1009.9	605.5	-175.0	430.5
		-7.50	955.7	367.4	1323.1	793.2	-175.0	618.3
		-8.00	1239.9	454.4	1694.3	1015.8	-175.0	840.8
		-8.50	897.3	541.4	1438.7	862.5	-175.0	687.6
		-9.00	424.9	628.4	1053.3	631.5	-175.0	456.5
		-9.50	265.1	715.4	980.4	587.8	-175.0	412.8
		-10.00	154.2	777.5	931.7	558.6	-175.0	383.6
		-10.50	266.6	800.5	1067.1	639.8	-175.0	464.8
		-11.00	470.8	855.1	1325.9	794.9	-175.0	620.0
		-11.50	369.0	924.7	1293.7	775.6	-175.0	600.6
		-12.00	537.3	978.3	1515.6	908.6	-175.0	733.6
		-12.50	1167.5	1059.3	2226.8	1335.0	-175.0	1160.0
		-13.00	499.4	1146.3	1645.7	986.6	-175.0	811.7
		-13.50	277.5	1233.3	1510.8	905.8	-175.0	730.8
		-14.00	114.6	1320.3	1434.9	860.2	-175.0	685.3
		-14.50	81.4	1360.0	1441.5	864.2	-175.0	689.2
		-15.00	79.2	1369.3	1448.5	868.4	-175.0	693.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
11	4.03	-15.50	84.5	1378.0	1462.5	876.8	-175.0	701.8
		-16.00	89.0	1387.9	1476.9	885.5	-175.0	710.5
		-16.50	167.4	1401.1	1568.5	940.3	-175.0	765.4
		-17.00	139.4	1438.4	1577.8	945.9	-175.0	771.0
		-17.50	345.2	1463.5	1808.7	1084.4	-175.0	909.4
		-18.00	629.5	1534.7	2164.1	1297.4	-175.0	1122.5
		-18.50	597.0	1621.7	2218.6	1330.1	-175.0	1155.2
		-19.00	1107.7	1705.5	2813.3	1686.6	-175.0	1511.7
		-19.50	1016.2	1792.5	2808.8	1683.9	-175.0	1509.0
		-20.00	543.7	1879.5	2423.2	1452.8	-175.0	1277.8
12	4.04	-6.00	734.7	86.5	821.2	492.4	-175.0	317.4
		-6.50	830.3	173.5	1003.9	601.8	-175.0	426.8
		-7.00	908.4	260.5	1168.9	700.8	-175.0	525.8
		-7.50	1058.9	347.5	1406.4	843.2	-175.0	668.2
		-8.00	1158.5	434.5	1593.0	955.0	-175.0	780.1
		-8.50	430.2	521.5	951.7	570.6	-175.0	395.6
		-9.00	300.9	608.5	909.4	545.2	-175.0	370.2
		-9.50	217.1	692.5	909.6	545.3	-175.0	370.3
		-10.00	177.4	720.4	897.7	538.2	-175.0	363.2
		-10.50	152.1	755.0	907.1	543.9	-175.0	368.9
		-11.00	102.0	807.3	909.3	545.1	-175.0	370.1
		-11.50	110.4	818.1	928.5	556.7	-175.0	381.7
		-12.00	451.0	837.4	1288.4	772.4	-175.0	597.5
		-12.50	876.0	918.3	1794.4	1075.8	-175.0	900.8
		-13.00	388.1	1005.3	1393.5	835.4	-175.0	660.4
		-13.50	174.8	1092.3	1267.1	759.7	-175.0	584.7
		-14.00	62.8	1164.0	1226.8	735.5	-175.0	560.5
		-14.50	58.4	1173.7	1232.0	738.6	-175.0	563.6
		-15.00	63.1	1179.8	1242.9	745.1	-175.0	570.1
		-15.50	71.8	1186.9	1258.7	754.6	-175.0	579.6
		-16.00	72.5	1195.8	1268.3	760.4	-175.0	585.4
		-16.50	416.5	1210.6	1627.1	975.5	-175.0	800.5
		-17.00	617.1	1286.6	1903.7	1141.3	-175.0	966.3
		-17.50	1099.1	1372.9	2472.0	1482.0	-175.0	1307.0
		-18.00	984.6	1459.9	2444.4	1465.5	-175.0	1290.5
		-18.50	439.4	1546.9	1986.2	1190.8	-175.0	1015.8
		-19.00	219.3	1633.9	1853.2	1111.0	-175.0	936.0
		-19.50	116.8	1711.5	1828.3	1096.1	-175.0	921.1
		-20.00	99.6	1741.5	1841.1	1103.8	-175.0	928.8
13	4.06	-6.00	491.4	49.3	540.6	324.1	-184.1	140.1
		-6.50	604.2	134.6	738.7	442.9	-184.1	258.8
		-7.00	685.3	221.6	906.8	543.7	-184.1	359.6
		-7.50	704.3	308.6	1012.8	607.2	-184.1	423.1
		-8.00	640.1	395.6	1035.7	620.9	-184.1	436.9
		-8.50	590.8	482.6	1073.3	643.5	-184.1	459.4
		-9.00	475.5	557.6	1033.1	619.4	-184.1	435.3
		-9.50	267.1	619.1	886.2	531.3	-184.1	347.2
		-10.00	197.0	688.7	885.7	531.0	-184.1	346.9
		-10.50	136.8	734.5	871.3	522.4	-184.1	338.3
		-11.00	222.8	755.8	978.6	586.7	-184.1	402.6
		-11.50	233.8	807.5	1041.2	624.2	-184.1	440.2
		-12.00	244.7	850.7	1095.4	656.7	-184.1	472.6
		-12.50	977.0	885.5	1862.5	1116.6	-184.1	932.6



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
13	4.06	-13.00	430.2	972.5	1402.7	840.9	-184.1	656.9
		-13.50	224.4	1059.5	1283.9	769.7	-184.1	585.7
		-14.00	87.3	1146.4	1233.7	739.6	-184.1	555.6
		-14.50	71.3	1170.2	1241.6	744.4	-184.1	560.3
		-15.00	71.3	1178.6	1249.9	749.3	-184.1	565.3
		-15.50	74.0	1186.0	1260.0	755.4	-184.1	571.3
		-16.00	88.4	1194.3	1282.8	769.1	-184.1	585.0
		-16.50	365.3	1213.6	1578.9	946.6	-184.1	762.5
		-17.00	609.0	1289.2	1898.2	1138.0	-184.1	953.9
		-17.50	880.0	1376.2	2256.2	1352.6	-184.1	1168.6
		-18.00	750.3	1463.2	2213.6	1327.1	-184.1	1143.0
		-18.50	530.2	1550.2	2080.4	1247.2	-184.1	1063.2
		-19.00	495.0	1637.2	2132.3	1278.3	-184.1	1094.3
		-19.50	300.4	1713.3	2013.7	1207.3	-184.1	1023.2
		-20.00	194.3	1770.6	1964.9	1178.0	-184.1	993.9
14	4.06	-6.00	628.4	130.7	759.1	455.1	-165.6	289.5
		-6.50	680.6	217.7	898.3	538.5	-165.6	372.9
		-7.00	833.3	304.7	1137.9	682.2	-165.6	516.6
		-7.50	917.4	391.7	1309.1	784.8	-165.6	619.2
		-8.00	980.8	478.7	1459.5	875.0	-165.6	709.3
		-8.50	994.6	565.7	1560.2	935.4	-165.6	769.7
		-9.00	778.0	652.7	1430.7	857.7	-165.6	692.1
		-9.50	386.2	739.7	1125.9	675.0	-165.6	509.3
		-10.00	309.7	826.7	1136.4	681.3	-165.6	515.6
		-10.50	222.6	891.9	1114.5	668.2	-165.6	502.5
		-11.00	376.3	937.3	1313.6	787.5	-165.6	621.9
		-11.50	326.6	1006.7	1333.3	799.4	-165.6	633.7
		-12.00	356.2	1056.5	1412.7	847.0	-165.6	681.3
		-12.50	944.0	1119.9	2063.9	1237.3	-165.6	1071.7
		-13.00	385.3	1206.9	1592.1	954.5	-165.6	788.9
		-13.50	223.1	1293.9	1517.0	909.5	-165.6	743.8
		-14.00	95.9	1380.9	1476.7	885.3	-165.6	719.7
		-14.50	73.0	1411.0	1484.0	889.7	-165.6	724.1
		-15.00	74.5	1418.9	1493.5	895.4	-165.6	729.7
		-15.50	76.9	1427.6	1504.5	902.0	-165.6	736.4
		-16.00	82.4	1435.9	1518.3	910.2	-165.6	744.6
		-16.50	169.9	1445.7	1615.6	968.6	-165.6	802.9
		-17.00	813.1	1495.6	2308.7	1384.1	-165.6	1218.5
		-17.50	471.3	1582.6	2054.0	1231.4	-165.6	1065.8
		-18.00	295.8	1669.6	1965.4	1178.3	-165.6	1012.6
		-18.50	150.2	1756.6	1906.8	1143.2	-165.6	977.5
		-19.00	125.6	1788.1	1913.7	1147.3	-165.6	981.7
		-19.50	132.1	1807.1	1939.2	1162.6	-165.6	997.0
15	4.19	-6.00	584.5	70.5	655.0	392.7	-184.4	208.3
		-6.50	649.9	157.5	807.4	484.1	-184.4	299.7
		-7.00	676.5	244.5	921.0	552.2	-184.4	367.8
		-7.50	745.6	331.5	1077.1	645.8	-184.4	461.4
		-8.00	663.8	417.8	1081.6	648.5	-184.4	464.1
		-8.50	436.1	498.9	935.0	560.6	-184.4	376.2
		-9.00	256.3	580.0	836.3	501.4	-184.4	317.0
		-9.50	226.3	643.4	869.7	521.4	-184.4	337.0
		-10.00	198.3	684.0	882.2	528.9	-184.4	344.5
		-10.50	249.7	710.1	959.7	575.4	-184.4	391.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
15	4.19	-11.00	234.7	760.6	995.3	596.7	-184.4	412.3
		-11.50	223.0	798.5	1021.5	612.4	-184.4	428.0
		-12.00	398.5	821.5	1220.0	731.4	-184.4	547.0
		-12.50	998.0	856.3	1854.3	1111.7	-184.4	927.3
		-13.00	481.2	943.3	1424.6	854.0	-184.4	669.6
		-13.50	134.0	1030.3	1164.3	698.0	-184.4	513.6
		-14.00	76.1	1095.2	1171.2	702.2	-184.4	517.8
		-14.50	74.7	1104.2	1178.9	706.8	-184.4	522.4
		-15.00	79.9	1112.0	1191.9	714.6	-184.4	530.2
		-15.50	83.3	1120.8	1204.1	721.9	-184.4	537.5
		-16.00	83.8	1130.3	1214.1	727.9	-184.4	543.5
		-16.50	705.0	1174.3	1879.3	1126.7	-184.4	942.3
		-17.00	792.5	1261.3	2053.8	1231.3	-184.4	1046.9
		-17.50	881.4	1348.3	2229.7	1336.7	-184.4	1152.3
		-18.00	797.3	1435.3	2232.6	1338.5	-184.4	1154.1
		-18.50	481.8	1522.3	2004.1	1201.5	-184.4	1017.1
		-19.00	126.0	1609.3	1735.3	1040.4	-184.4	855.9
16	4.06	-6.00	599.3	69.0	668.3	400.7	-181.5	219.2
		-6.50	702.3	156.0	858.3	514.6	-181.5	333.1
		-7.00	497.6	243.0	740.6	444.0	-181.5	262.5
		-7.50	427.9	330.0	757.9	454.4	-181.5	272.9
		-8.00	344.9	415.0	759.9	455.6	-181.5	274.1
		-8.50	323.2	465.4	788.7	472.8	-181.5	291.3
		-9.00	240.0	507.0	747.0	447.9	-181.5	266.4
		-9.50	194.0	543.5	737.6	442.2	-181.5	260.7
		-10.00	166.1	589.8	755.9	453.2	-181.5	271.7
		-10.50	161.9	611.0	772.8	463.3	-181.5	281.8
		-11.00	247.6	637.7	885.3	530.8	-181.5	349.3
		-11.50	236.6	687.4	924.0	553.9	-181.5	372.5
		-12.00	265.5	717.9	983.5	589.6	-181.5	408.1
		-12.50	836.3	775.8	1612.1	966.5	-181.5	785.0
		-13.00	372.1	862.8	1235.0	740.4	-181.5	558.9
		-13.50	221.2	949.8	1171.1	702.1	-181.5	520.6
		-14.00	84.4	1036.8	1121.2	672.2	-181.5	490.7
		-14.50	70.6	1058.6	1129.2	677.0	-181.5	495.5
		-15.00	69.6	1066.3	1135.8	681.0	-181.5	499.5
		-15.50	78.2	1073.4	1151.7	690.4	-181.5	509.0
		-16.00	90.6	1082.4	1173.1	703.3	-181.5	521.8
		-16.50	241.2	1105.9	1347.1	807.6	-181.5	626.1
		-17.00	701.0	1156.3	1857.3	1113.5	-181.5	932.0
		-17.50	878.8	1243.3	2122.1	1272.2	-181.5	1090.8
		-18.00	709.8	1330.3	2040.0	1223.0	-181.5	1041.6
		-18.50	441.6	1417.3	1858.9	1114.4	-181.5	932.9
		-19.00	279.6	1503.8	1783.4	1069.2	-181.5	887.7
		-19.50	142.1	1572.2	1714.3	1027.7	-181.5	846.3

**REKENGEGEVENS G5 G3 320**

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 16
Factor ξ_3 (n=1) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f;nk}$: 1.0
 $R_{d;cal;max;i}$ begrenzen op $0.75 * R_{d;cal;max;i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #320
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #320

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-21.00	0.50

**SAMENVATTINGSTABEL G5 G3 320 (n=1)****Uitgangspunten**

- paal	: #320
- paaltype	: Geheide paal (beton)
- schachtafmeting	: 320 x 320
Paalklassefactor α_p	: 0.70
Factor α_s (tabel 7.c EC 7.1)	: 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
1	4.20	-6.00	915.8	111.1	1026.9	615.6	-194.2	421.4
		-6.50	1018.0	207.1	1225.1	734.5	-194.2	540.3
		-7.00	1117.2	303.1	1420.4	851.5	-194.2	657.3
		-7.50	1356.0	399.1	1755.1	1052.2	-194.2	858.0
		-8.00	1536.0	495.1	2031.1	1217.7	-194.2	1023.5
		-8.50	1098.1	591.1	1689.3	1012.8	-194.2	818.6
		-9.00	416.9	687.1	1104.1	661.9	-194.2	467.7
		-9.50	257.2	783.1	1040.4	623.7	-194.2	429.5
		-10.00	160.4	873.6	1034.0	619.9	-194.2	425.7
		-10.50	113.6	917.9	1031.5	618.4	-194.2	424.2
		-11.00	101.8	917.9	1019.7	611.3	-194.2	417.1
		-11.50	98.0	917.9	1015.9	609.1	-194.2	414.9
		-12.00	206.8	917.9	1124.7	674.3	-194.2	480.1
		-12.50	1021.2	967.5	1988.8	1192.3	-194.2	998.1
		-13.00	558.8	1063.5	1622.4	972.6	-194.2	778.4
		-13.50	299.9	1159.5	1459.4	874.9	-194.2	680.7
		-14.00	121.5	1255.5	1377.0	825.5	-194.2	631.3
		-14.50	71.8	1310.9	1382.7	828.9	-194.2	634.7
		-15.00	68.3	1319.8	1388.1	832.2	-194.2	638.0
		-15.50	71.4	1326.1	1397.5	837.8	-194.2	643.6
		-16.00	75.1	1333.3	1408.4	844.3	-194.2	650.1
		-16.50	277.2	1343.7	1620.9	971.8	-194.2	777.6
		-17.00	418.9	1393.9	1812.8	1086.8	-194.2	892.6
		-17.50	917.4	1473.1	2390.5	1433.2	-194.2	1238.9
		-18.00	912.5	1569.1	2481.6	1487.8	-194.2	1293.6
		-18.50	1282.3	1665.1	2947.4	1767.0	-194.2	1572.8
		-19.00	1045.1	1761.1	2806.2	1682.4	-194.2	1488.2
		-19.50	1083.1	1857.1	2940.2	1762.7	-194.2	1568.5
		-20.00	969.3	1953.1	2922.4	1752.0	-194.2	1557.8
		-20.50	1536.0	2044.5	3580.5	2146.6	-194.2	1952.4
		-21.00	1536.0	2140.5	3676.5	2204.1	-194.2	2009.9
2	4.20	-6.00	755.0	232.5	987.5	592.0	-173.1	418.9
		-6.50	864.4	325.5	1189.9	713.4	-173.1	540.2
		-7.00	1025.4	421.1	1446.5	867.2	-173.1	694.1
		-7.50	1203.8	517.1	1720.9	1031.7	-173.1	858.6
		-8.00	669.0	613.1	1282.2	768.7	-173.1	595.6
		-8.50	575.5	709.1	1284.6	770.1	-173.1	597.0
		-9.00	501.1	805.1	1306.3	783.1	-173.1	610.0
		-9.50	432.0	882.4	1314.3	788.0	-173.1	614.9
		-10.00	505.6	942.3	1447.9	868.1	-173.1	694.9
		-10.50	342.2	1011.4	1353.6	811.5	-173.1	638.4
		-11.00	298.3	1088.2	1386.4	831.2	-173.1	658.1
		-11.50	200.4	1148.1	1348.5	808.4	-173.1	635.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
2	4.20	-12.00	321.3	1170.2	1491.5	894.2	-173.1	721.1
		-12.50	905.0	1232.8	2137.8	1281.7	-173.1	1108.5
		-13.00	452.0	1328.8	1780.8	1067.6	-173.1	894.5
		-13.50	268.6	1424.8	1693.4	1015.2	-173.1	842.1
		-14.00	126.3	1520.8	1647.1	987.5	-173.1	814.4
		-14.50	84.4	1568.5	1652.9	990.9	-173.1	817.8
		-15.00	83.3	1576.7	1660.0	995.2	-173.1	822.1
		-15.50	89.6	1584.5	1674.1	1003.6	-173.1	830.5
		-16.00	101.5	1593.5	1695.0	1016.2	-173.1	843.1
		-16.50	161.8	1607.4	1769.1	1060.6	-173.1	887.5
		-17.00	687.8	1631.7	2319.5	1390.6	-173.1	1217.4
		-17.50	592.7	1723.3	2316.0	1388.5	-173.1	1215.4
		-18.00	526.7	1819.3	2346.0	1406.5	-173.1	1233.4
		-18.50	445.7	1906.5	2352.2	1410.2	-173.1	1237.1
		-19.00	1164.9	1970.6	3135.5	1879.8	-173.1	1706.7
3	4.22	-6.00	715.9	67.0	783.0	469.4	-201.4	268.0
		-6.50	729.3	163.0	892.4	535.0	-201.4	333.6
		-7.00	617.9	259.0	877.0	525.8	-201.4	324.4
		-7.50	503.4	355.0	858.4	514.6	-201.4	313.2
		-8.00	397.7	445.3	842.9	505.4	-201.4	304.0
		-8.50	375.2	509.5	884.7	530.4	-201.4	329.0
		-9.00	321.4	556.8	878.2	526.5	-201.4	325.1
		-9.50	338.7	595.1	933.8	559.8	-201.4	358.4
		-10.00	219.7	649.6	869.3	521.2	-201.4	319.8
		-10.50	178.2	689.7	868.0	520.4	-201.4	319.0
		-11.00	141.8	747.9	889.8	533.4	-201.4	332.0
		-11.50	119.4	765.7	885.1	530.7	-201.4	329.3
		-12.00	177.5	768.2	945.7	566.9	-201.4	365.6
		-12.50	439.5	798.9	1238.4	742.5	-201.4	541.1
		-13.00	285.2	867.8	1153.0	691.3	-201.4	489.9
		-13.50	207.7	943.8	1151.4	690.3	-201.4	488.9
		-14.00	109.3	1020.6	1129.9	677.4	-201.4	476.0
		-14.50	79.2	1054.8	1134.0	679.8	-201.4	478.4
		-15.00	80.2	1062.4	1142.6	685.0	-201.4	483.6
		-15.50	85.6	1070.1	1155.8	692.9	-201.4	491.5
		-16.00	93.9	1078.8	1172.7	703.1	-201.4	501.7
		-16.50	111.7	1089.4	1201.1	720.1	-201.4	518.7
		-17.00	89.8	1112.2	1202.0	720.6	-201.4	519.2
		-17.50	254.1	1122.9	1377.0	825.5	-201.4	624.1
		-18.00	820.8	1188.1	2009.0	1204.4	-201.4	1003.0
		-18.50	1283.8	1284.1	2567.9	1539.5	-201.4	1338.1
		-19.00	631.7	1380.1	2011.8	1206.1	-201.4	1004.7
		-19.50	366.7	1476.1	1842.8	1104.8	-201.4	903.4
		-20.00	166.5	1572.1	1738.7	1042.4	-201.4	841.0
4	4.06	-6.00	927.4	153.6	1081.0	648.1	-179.5	468.6
		-6.50	987.9	249.6	1237.5	741.9	-179.5	562.4
		-7.00	1099.3	345.6	1444.9	866.3	-179.5	686.7
		-7.50	902.4	441.6	1344.0	805.8	-179.5	626.2
		-8.00	493.4	537.6	1031.0	618.1	-179.5	438.6
		-8.50	378.4	633.6	1012.0	606.7	-179.5	427.2
		-9.00	266.5	721.7	988.1	592.4	-179.5	412.9
		-9.50	240.3	753.3	993.6	595.7	-179.5	416.2
		-10.00	180.2	803.1	983.2	589.5	-179.5	409.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
4	4.06	-10.50	108.8	862.6	971.4	582.4	-179.5	402.8
		-11.00	88.6	891.4	980.0	587.5	-179.5	408.0
		-11.50	84.3	896.6	980.8	588.0	-179.5	408.5
		-12.00	247.1	899.8	1146.9	687.6	-179.5	508.0
		-12.50	936.4	962.5	1898.8	1138.4	-179.5	958.8
		-13.00	422.0	1058.5	1480.5	887.6	-179.5	708.0
		-13.50	244.7	1154.5	1399.1	838.8	-179.5	659.3
		-14.00	87.9	1249.7	1337.6	801.9	-179.5	622.4
		-14.50	75.4	1267.4	1342.9	805.1	-179.5	625.5
		-15.00	81.6	1274.5	1356.0	813.0	-179.5	633.4
		-15.50	86.8	1282.6	1369.5	821.0	-179.5	641.5
		-16.00	89.1	1291.6	1380.7	827.8	-179.5	648.2
		-16.50	184.5	1305.7	1490.1	893.4	-179.5	713.8
		-17.00	190.8	1337.3	1528.1	916.1	-179.5	736.6
		-17.50	597.0	1365.1	1962.1	1176.3	-179.5	996.8
		-18.00	957.3	1452.5	2409.8	1444.7	-179.5	1265.2
		-18.50	1009.1	1548.5	2557.6	1533.3	-179.5	1353.8
		-19.00	845.3	1644.5	2489.8	1492.7	-179.5	1313.2
		-19.50	551.1	1740.5	2291.6	1373.9	-179.5	1194.3
		-20.00	301.6	1836.5	2138.1	1281.8	-179.5	1102.3
5	4.10	-6.00	1095.4	188.4	1283.9	769.7	-182.9	586.8
		-6.50	1120.4	284.4	1404.8	842.2	-182.9	659.3
		-7.00	1158.5	380.4	1539.0	922.7	-182.9	739.7
		-7.50	1025.6	476.4	1502.0	900.5	-182.9	717.6
		-8.00	475.5	572.4	1048.0	628.3	-182.9	445.4
		-8.50	372.6	668.4	1041.0	624.1	-182.9	441.2
		-9.00	266.7	762.4	1029.1	617.0	-182.9	434.1
		-9.50	292.8	796.7	1089.6	653.2	-182.9	470.3
		-10.00	342.6	848.4	1191.0	714.0	-182.9	531.1
		-10.50	281.1	924.6	1205.7	722.8	-182.9	539.9
		-11.00	294.8	979.8	1274.6	764.2	-182.9	581.3
		-11.50	143.1	1050.2	1193.3	715.4	-182.9	532.5
		-12.00	305.8	1072.4	1378.2	826.2	-182.9	643.3
		-12.50	1107.8	1136.0	2243.8	1345.2	-182.9	1162.3
		-13.00	503.6	1232.0	1735.6	1040.5	-182.9	857.6
		-13.50	287.0	1328.0	1615.0	968.3	-182.9	785.3
		-14.00	138.0	1424.0	1562.0	936.4	-182.9	753.5
		-14.50	97.9	1472.5	1570.4	941.5	-182.9	758.6
		-15.00	93.7	1483.3	1577.0	945.5	-182.9	762.5
		-15.50	104.6	1492.1	1596.7	957.3	-182.9	774.4
		-16.00	104.6	1503.2	1607.9	963.9	-182.9	781.0
		-16.50	222.0	1519.1	1741.1	1043.8	-182.9	860.9
		-17.00	215.3	1560.6	1775.8	1064.7	-182.9	881.7
		-17.50	955.5	1595.3	2550.8	1529.3	-182.9	1346.3
		-18.00	1247.2	1691.3	2938.4	1761.7	-182.9	1578.7
		-18.50	1536.0	1787.3	3323.3	1992.4	-182.9	1809.5
		-19.00	1536.0	1883.3	3419.3	2049.9	-182.9	1867.0
		-19.50	1536.0	1979.3	3515.3	2107.5	-182.9	1924.6
		-20.00	1536.0	2075.3	3611.3	2165.0	-182.9	1982.1
6	4.01	-6.00	602.5	169.8	772.3	463.0	-179.2	283.8
		-6.50	614.9	262.2	877.1	525.9	-179.2	346.6
		-7.00	718.8	335.8	1054.6	632.2	-179.2	453.0
		-7.50	974.9	416.2	1391.1	834.0	-179.2	654.8



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
6	4.01	-8.00	958.6	512.2	1470.8	881.8	-179.2	702.5
		-8.50	497.3	608.2	1105.5	662.7	-179.2	483.5
		-9.00	360.0	704.2	1064.1	638.0	-179.2	458.7
		-9.50	249.5	789.4	1038.9	622.8	-179.2	443.6
		-10.00	275.9	837.7	1113.6	667.6	-179.2	488.4
		-10.50	540.0	883.4	1423.5	853.4	-179.2	674.2
		-11.00	568.5	958.6	1527.1	915.6	-179.2	736.3
		-11.50	469.6	1035.4	1505.0	902.3	-179.2	723.0
		-12.00	743.1	1101.1	1844.2	1105.7	-179.2	926.4
		-12.50	1456.0	1193.9	2650.0	1588.7	-179.2	1409.5
		-13.00	1036.2	1289.9	2326.1	1394.6	-179.2	1215.3
		-13.50	401.3	1385.9	1787.2	1071.5	-179.2	892.3
		-14.00	200.8	1481.9	1682.7	1008.8	-179.2	829.6
		-14.50	98.3	1571.0	1669.3	1000.8	-179.2	821.5
		-15.00	91.4	1585.6	1677.0	1005.4	-179.2	826.2
		-15.50	93.8	1594.3	1688.0	1012.0	-179.2	832.8
		-16.00	107.3	1603.5	1710.8	1025.7	-179.2	846.5
		-16.50	130.4	1615.8	1746.2	1046.9	-179.2	867.7
		-17.00	179.7	1644.6	1824.2	1093.7	-179.2	914.4
		-17.50	130.4	1714.2	1844.5	1105.8	-179.2	926.6
		-18.00	107.9	1744.4	1852.4	1110.5	-179.2	931.3
		-18.50	221.2	1759.2	1980.5	1187.3	-179.2	1008.1
7	4.05	-19.00	879.6	1800.7	2680.4	1606.9	-179.2	1427.7
		-19.50	1116.9	1894.4	3011.3	1805.3	-179.2	1626.1
		-6.00	722.6	202.8	925.5	554.8	-178.4	376.5
		-6.50	763.1	296.7	1059.9	635.4	-178.4	457.1
		-7.00	722.4	391.6	1113.9	667.8	-178.4	489.5
		-7.50	735.9	487.4	1223.4	733.4	-178.4	555.1
		-8.00	539.3	575.5	1114.8	668.3	-178.4	490.0
		-8.50	525.7	650.6	1176.3	705.2	-178.4	526.9
		-9.00	495.0	718.2	1213.2	727.4	-178.4	549.0
		-9.50	445.7	767.1	1212.7	727.1	-178.4	548.7
		-10.00	444.2	825.4	1269.6	761.2	-178.4	582.8
		-10.50	295.7	886.3	1181.9	708.6	-178.4	530.2
		-11.00	269.8	942.2	1212.1	726.7	-178.4	548.3
		-11.50	203.9	1019.0	1223.0	733.2	-178.4	554.8
		-12.00	179.0	1052.0	1231.0	738.0	-178.4	559.7
		-12.50	961.6	1065.7	2027.3	1215.4	-178.4	1037.1
		-13.00	1221.8	1161.7	2383.5	1428.9	-178.4	1250.6
		-13.50	530.9	1257.7	1788.6	1072.3	-178.4	893.9
		-14.00	288.9	1353.7	1642.6	984.8	-178.4	806.4
		-14.50	134.8	1449.7	1584.5	949.9	-178.4	771.6
		-15.00	96.4	1495.2	1591.6	954.2	-178.4	775.9
		-15.50	98.0	1504.7	1602.7	960.9	-178.4	782.5
		-16.00	104.4	1514.4	1618.8	970.5	-178.4	792.1
		-16.50	141.1	1525.1	1666.2	998.9	-178.4	820.6
		-17.00	159.9	1558.8	1718.7	1030.4	-178.4	852.0
		-17.50	132.4	1599.6	1732.0	1038.4	-178.4	860.0
		-18.00	183.3	1615.6	1798.9	1078.5	-178.4	900.1
		-18.50	895.7	1662.9	2558.6	1533.9	-178.4	1355.6
		-19.00	955.3	1758.9	2714.2	1627.2	-178.4	1448.8
		-19.50	466.3	1854.9	2321.2	1391.6	-178.4	1213.2
		-20.00	357.2	1945.1	2302.3	1380.3	-178.4	1201.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
8	4.05	-6.00	657.1	60.5	717.6	430.2	-200.2	230.0
		-6.50	866.1	155.8	1021.9	612.7	-200.2	412.4
		-7.00	1008.9	251.8	1260.7	755.8	-200.2	555.6
		-7.50	1202.1	347.8	1549.9	929.2	-200.2	729.0
		-8.00	960.2	443.8	1404.0	841.8	-200.2	641.5
		-8.50	417.5	539.8	957.3	573.9	-200.2	373.7
		-9.00	344.0	635.8	979.8	587.4	-200.2	387.2
		-9.50	236.5	727.4	963.9	577.9	-200.2	377.7
		-10.00	257.3	765.9	1023.3	613.5	-200.2	413.2
		-10.50	183.0	819.8	1002.9	601.3	-200.2	401.0
		-11.00	180.8	845.7	1026.5	615.4	-200.2	415.2
		-11.50	172.7	874.2	1046.9	627.7	-200.2	427.4
		-12.00	231.1	895.2	1126.3	675.2	-200.2	475.0
		-12.50	919.5	951.3	1870.8	1121.6	-200.2	921.4
		-13.00	497.3	1047.3	1544.6	926.0	-200.2	725.8
		-13.50	271.0	1143.3	1414.3	847.9	-200.2	647.7
		-14.00	102.5	1239.2	1341.7	804.4	-200.2	604.1
		-14.50	84.0	1265.5	1349.5	809.0	-200.2	608.8
		-15.00	86.2	1273.4	1359.6	815.1	-200.2	614.9
		-15.50	91.9	1281.6	1373.5	823.5	-200.2	623.2
		-16.00	99.5	1291.9	1391.4	834.2	-200.2	633.9
		-16.50	401.2	1306.5	1707.7	1023.8	-200.2	823.6
		-17.00	367.2	1378.2	1745.5	1046.4	-200.2	846.2
		-17.50	1128.7	1452.0	2580.6	1547.1	-200.2	1346.9
		-18.00	1175.0	1548.0	2723.0	1632.5	-200.2	1432.2
		-18.50	837.3	1644.0	2481.2	1487.6	-200.2	1287.3
		-19.00	425.8	1740.0	2165.8	1298.4	-200.2	1098.2
		-19.50	214.9	1836.0	2050.8	1229.5	-200.2	1029.3
9	4.08	-6.00	337.4	34.6	372.1	223.1	-200.3	22.7
		-6.50	367.0	92.8	459.8	275.7	-200.3	75.3
		-7.00	487.0	143.0	630.0	377.7	-200.3	177.4
		-7.50	682.2	215.1	897.3	538.0	-200.3	337.6
		-8.00	438.2	303.5	741.6	444.6	-200.3	244.3
		-8.50	456.0	396.7	852.7	511.2	-200.3	310.9
		-9.00	359.8	490.0	849.8	509.5	-200.3	309.2
		-9.50	407.0	544.1	951.1	570.2	-200.3	369.9
		-10.00	239.7	620.8	860.5	515.9	-200.3	315.6
		-10.50	203.4	662.0	865.4	518.8	-200.3	318.5
		-11.00	181.6	712.7	894.3	536.1	-200.3	335.8
		-11.50	139.7	749.8	889.5	533.3	-200.3	333.0
		-12.00	250.7	764.0	1014.7	608.3	-200.3	408.0
		-12.50	1064.3	817.9	1882.1	1128.4	-200.3	928.1
		-13.00	612.4	913.9	1526.3	915.0	-200.3	714.7
		-13.50	361.6	1009.9	1371.4	822.2	-200.3	621.9
		-14.00	162.6	1105.9	1268.4	760.4	-200.3	560.1
		-14.50	86.9	1172.3	1259.2	754.9	-200.3	554.6
		-15.00	83.6	1182.2	1265.8	758.9	-200.3	558.5
		-15.50	93.3	1190.2	1283.5	769.5	-200.3	569.1
		-16.00	99.9	1199.7	1299.6	779.1	-200.3	578.8
		-16.50	188.8	1210.2	1399.0	838.7	-200.3	638.4
		-17.00	212.0	1242.4	1454.4	872.0	-200.3	671.6
		-17.50	165.7	1303.6	1469.3	880.9	-200.3	680.6
		-18.00	462.8	1330.3	1793.1	1075.0	-200.3	874.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
9	4.08	-18.50	849.0	1413.1	2262.1	1356.2	-200.3	1155.8
		-19.00	387.7	1509.1	1896.8	1137.2	-200.3	936.8
		-19.50	247.8	1605.1	1852.9	1110.8	-200.3	910.5
10	4.01	-6.00	502.7	110.9	613.6	367.9	-189.5	178.4
		-6.50	552.6	185.2	737.8	442.3	-189.5	252.8
		-7.00	597.8	261.7	859.5	515.3	-189.5	325.8
		-7.50	685.3	332.9	1018.2	610.4	-189.5	420.9
		-8.00	1056.3	417.0	1473.3	883.2	-189.5	693.8
		-8.50	1058.3	513.0	1571.3	942.0	-189.5	752.5
		-9.00	366.7	609.0	975.6	584.9	-189.5	395.4
		-9.50	204.7	705.0	909.7	545.4	-189.5	355.9
		-10.00	109.8	798.1	908.0	544.3	-189.5	354.8
		-10.50	91.0	819.4	910.4	545.8	-189.5	356.3
		-11.00	185.9	829.7	1015.7	608.9	-189.5	419.4
		-11.50	153.9	874.0	1027.9	616.3	-189.5	426.8
		-12.00	281.8	895.7	1177.5	705.9	-189.5	516.4
		-12.50	1057.6	962.8	2020.4	1211.3	-189.5	1021.8
		-13.00	545.6	1058.8	1604.4	961.9	-189.5	772.4
		-13.50	271.6	1154.8	1426.4	855.1	-189.5	665.6
		-14.00	101.3	1250.6	1351.9	810.5	-189.5	621.0
		-14.50	86.4	1276.6	1363.0	817.1	-189.5	627.6
		-15.00	80.0	1287.0	1367.0	819.6	-189.5	630.1
		-15.50	90.6	1295.4	1386.0	830.9	-189.5	641.4
		-16.00	103.1	1305.1	1408.2	844.2	-189.5	654.7
		-16.50	132.7	1318.5	1451.2	870.0	-189.5	680.5
		-17.00	119.8	1342.8	1462.6	876.8	-189.5	687.3
		-17.50	639.8	1374.4	2014.2	1207.6	-189.5	1018.1
		-18.00	1141.2	1467.2	2608.4	1563.8	-189.5	1374.3
		-18.50	1195.6	1563.2	2758.8	1654.0	-189.5	1464.5
		-19.00	1251.2	1659.2	2910.4	1744.9	-189.5	1555.4
		-19.50	715.2	1755.2	2470.4	1481.1	-189.5	1291.6
		-20.00	462.2	1851.2	2313.5	1387.0	-189.5	1197.5
11	4.03	-6.00	692.1	117.4	809.6	485.4	-193.1	292.3
		-6.50	773.8	213.4	987.2	591.9	-193.1	398.8
		-7.00	861.0	309.4	1170.4	701.7	-193.1	508.6
		-7.50	1133.0	405.4	1538.4	922.3	-193.1	729.2
		-8.00	1477.7	501.4	1979.1	1186.5	-193.1	993.4
		-8.50	737.8	597.4	1335.2	800.5	-193.1	607.4
		-9.00	493.3	693.4	1186.7	711.4	-193.1	518.4
		-9.50	322.7	789.4	1112.1	666.7	-193.1	473.7
		-10.00	189.0	857.9	1047.0	627.7	-193.1	434.6
		-10.50	336.7	883.3	1220.0	731.4	-193.1	538.3
		-11.00	570.2	943.6	1513.7	907.5	-193.1	714.4
		-11.50	444.1	1020.4	1464.4	877.9	-193.1	684.9
		-12.00	670.3	1079.5	1749.8	1049.1	-193.1	856.0
		-12.50	1283.2	1168.8	2452.0	1470.0	-193.1	1277.0
		-13.00	531.2	1264.8	1796.0	1076.7	-193.1	883.7
		-13.50	315.2	1360.8	1676.0	1004.8	-193.1	811.7
		-14.00	136.5	1456.8	1593.4	955.2	-193.1	762.2
		-14.50	99.1	1500.7	1599.9	959.2	-193.1	766.1
		-15.00	96.6	1511.0	1607.6	963.8	-193.1	770.7
		-15.50	102.8	1520.6	1623.4	973.3	-193.1	780.2
		-16.00	108.2	1531.5	1639.7	983.0	-193.1	790.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
11	4.03	-16.50	203.3	1546.0	1749.4	1048.8	-193.1	855.7
		-17.00	172.6	1587.2	1759.8	1055.0	-193.1	862.0
		-17.50	456.1	1614.9	2071.1	1241.6	-193.1	1048.6
		-18.00	758.1	1693.4	2451.6	1469.8	-193.1	1276.7
		-18.50	712.3	1789.4	2501.7	1499.8	-193.1	1306.8
		-19.00	1184.8	1882.0	3066.8	1838.6	-193.1	1645.6
		-19.50	1213.4	1978.0	3191.3	1913.3	-193.1	1720.2
		-20.00	659.9	2074.0	2733.9	1639.0	-193.1	1445.9
12	4.04	-6.00	876.2	95.5	971.6	582.5	-193.1	389.4
		-6.50	989.1	191.5	1180.6	707.8	-193.1	514.7
		-7.00	1072.2	287.5	1359.6	815.1	-193.1	622.0
		-7.50	1245.9	383.5	1629.4	976.9	-193.1	783.8
		-8.00	1087.2	479.5	1566.6	939.2	-193.1	746.1
		-8.50	494.4	575.5	1069.9	641.4	-193.1	448.3
		-9.00	368.9	671.5	1040.4	623.7	-193.1	430.6
		-9.50	264.3	764.2	1028.5	616.6	-193.1	423.5
		-10.00	215.9	794.9	1010.8	606.0	-193.1	412.9
		-10.50	187.4	833.1	1020.5	611.8	-193.1	418.7
		-11.00	124.2	890.8	1015.0	608.5	-193.1	415.4
		-11.50	138.4	902.7	1041.2	624.2	-193.1	431.1
		-12.00	565.8	924.1	1489.9	893.2	-193.1	700.1
		-12.50	745.9	1013.3	1759.2	1054.7	-193.1	861.6
		-13.00	436.0	1109.3	1545.3	926.4	-193.1	733.4
		-13.50	197.8	1205.3	1403.2	841.2	-193.1	648.1
		-14.00	76.9	1284.4	1361.3	816.1	-193.1	623.0
		-14.50	71.1	1295.1	1366.1	819.0	-193.1	625.9
		-15.00	77.4	1301.8	1379.2	826.9	-193.1	633.8
		-15.50	87.6	1309.7	1397.3	837.7	-193.1	644.6
		-16.00	88.6	1319.5	1408.1	844.2	-193.1	651.1
		-16.50	525.1	1335.8	1861.0	1115.7	-193.1	922.6
		-17.00	770.0	1419.7	2189.6	1312.7	-193.1	1119.6
		-17.50	1180.8	1514.9	2695.7	1616.1	-193.1	1423.0
		-18.00	855.5	1610.9	2466.3	1478.6	-193.1	1285.5
		-18.50	463.7	1706.9	2170.5	1301.3	-193.1	1108.2
		-19.00	231.5	1802.9	2034.4	1219.7	-193.1	1026.6
		-19.50	142.0	1888.6	2030.6	1217.4	-193.1	1024.3
13	4.06	-6.00	595.9	54.4	650.3	389.8	-203.1	186.7
		-6.50	721.6	148.5	870.1	521.7	-203.1	318.5
		-7.00	813.7	244.5	1058.2	634.4	-203.1	431.3
		-7.50	759.3	340.5	1099.8	659.4	-203.1	456.3
		-8.00	714.4	436.5	1150.9	690.0	-203.1	486.9
		-8.50	714.4	532.5	1246.9	747.5	-203.1	544.4
		-9.00	369.0	615.3	984.3	590.1	-203.1	387.0
		-9.50	317.7	683.2	1000.8	600.0	-203.1	396.9
		-10.00	239.9	759.9	999.8	599.4	-203.1	396.3
		-10.50	168.5	810.5	979.0	587.0	-203.1	383.8
		-11.00	286.5	834.0	1120.5	671.7	-203.1	468.6
		-11.50	283.4	891.0	1174.4	704.1	-203.1	500.9
		-12.00	319.2	938.7	1257.9	754.1	-203.1	551.0
		-12.50	1014.2	977.1	1991.3	1193.8	-203.1	990.7
		-13.00	450.2	1073.1	1523.3	913.3	-203.1	710.2
		-13.50	256.7	1169.1	1425.8	854.8	-203.1	651.7
		-14.00	104.4	1265.0	1369.5	821.0	-203.1	617.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
13	4.06	-14.50	86.9	1291.3	1378.2	826.2	-203.1	623.1
		-15.00	86.8	1300.6	1387.3	831.7	-203.1	628.6
		-15.50	90.4	1308.7	1399.1	838.8	-203.1	635.7
		-16.00	107.8	1317.9	1425.7	854.7	-203.1	651.6
		-16.50	464.3	1339.1	1803.4	1081.2	-203.1	878.1
		-17.00	743.7	1422.6	2166.3	1298.7	-203.1	1095.6
		-17.50	1051.3	1518.6	2569.9	1540.7	-203.1	1337.6
		-18.00	798.7	1614.6	2413.3	1446.8	-203.1	1243.7
		-18.50	637.2	1710.6	2347.8	1407.5	-203.1	1204.4
		-19.00	588.7	1806.6	2395.3	1436.0	-203.1	1232.9
14	4.06	-19.50	365.8	1890.6	2256.3	1352.7	-203.1	1149.6
		-6.00	752.0	144.2	896.1	537.3	-182.8	354.5
		-6.50	806.4	240.2	1046.6	627.5	-182.8	444.7
		-7.00	979.6	336.2	1315.8	788.8	-182.8	606.1
		-7.50	1075.5	432.2	1507.7	903.9	-182.8	721.1
		-8.00	1167.1	528.2	1695.2	1016.3	-182.8	833.6
		-8.50	1208.6	624.2	1832.7	1098.8	-182.8	916.0
		-9.00	611.6	720.2	1331.8	798.4	-182.8	615.7
		-9.50	483.4	816.2	1299.6	779.1	-182.8	596.4
		-10.00	377.1	912.2	1289.3	773.0	-182.8	590.2
		-10.50	279.7	984.2	1263.9	757.7	-182.8	574.9
		-11.00	454.5	1034.3	1488.8	892.6	-182.8	709.8
		-11.50	395.5	1110.8	1506.3	903.1	-182.8	720.3
		-12.00	434.7	1165.8	1600.5	959.5	-182.8	776.7
		-12.50	1087.9	1235.7	2323.6	1393.1	-182.8	1210.3
		-13.00	435.5	1331.7	1767.2	1059.5	-182.8	876.7
		-13.50	254.4	1427.7	1682.1	1008.5	-182.8	825.7
		-14.00	115.2	1523.7	1638.9	982.5	-182.8	799.8
		-14.50	88.9	1556.9	1645.9	986.7	-182.8	804.0
		-15.00	91.3	1565.7	1657.1	993.4	-182.8	810.7
		-15.50	93.6	1575.3	1668.9	1000.6	-182.8	817.8
		-16.00	100.0	1584.5	1684.5	1009.9	-182.8	827.1
		-16.50	218.5	1595.2	1813.8	1087.4	-182.8	904.6
		-17.00	1000.6	1650.4	2651.0	1589.3	-182.8	1406.5
		-17.50	522.9	1746.4	2269.3	1360.5	-182.8	1177.7
		-18.00	346.8	1842.4	2189.2	1312.5	-182.8	1129.7
		-18.50	178.2	1938.4	2116.5	1268.9	-182.8	1086.1
		-19.00	151.4	1973.0	2124.4	1273.6	-182.8	1090.8
		-19.50	160.8	1994.0	2154.9	1291.9	-182.8	1109.1
15	4.19	-6.00	702.0	77.8	779.8	467.5	-203.5	264.0
		-6.50	751.8	173.8	925.6	554.9	-203.5	351.4
		-7.00	799.7	269.8	1069.5	641.2	-203.5	437.7
		-7.50	875.6	365.8	1241.4	744.3	-203.5	540.8
		-8.00	600.3	461.0	1061.3	636.3	-203.5	432.8
		-8.50	518.9	550.6	1069.5	641.2	-203.5	437.7
		-9.00	310.3	640.0	950.3	569.7	-203.5	366.2
		-9.50	275.6	710.0	985.5	590.8	-203.5	387.4
		-10.00	241.4	754.7	996.1	597.2	-203.5	393.7
		-10.50	305.0	783.5	1088.5	652.6	-203.5	449.1
		-11.00	285.5	839.3	1124.8	674.3	-203.5	470.8
		-11.50	271.1	881.1	1152.2	690.8	-203.5	487.3
		-12.00	506.7	906.5	1413.2	847.2	-203.5	643.8
		-12.50	974.8	944.9	1919.7	1150.9	-203.5	947.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
15	4.19	-13.00	540.8	1040.9	1581.7	948.3	-203.5	744.8
		-13.50	155.9	1136.9	1292.8	775.0	-203.5	571.6
		-14.00	92.6	1208.5	1301.1	780.0	-203.5	576.5
		-14.50	91.0	1218.4	1309.4	785.0	-203.5	581.5
		-15.00	97.3	1227.1	1324.3	794.0	-203.5	590.5
		-15.50	101.3	1236.7	1338.0	802.2	-203.5	598.7
		-16.00	102.1	1247.2	1349.4	809.0	-203.5	605.5
		-16.50	852.6	1295.8	2148.4	1288.0	-203.5	1084.5
		-17.00	948.4	1391.8	2340.2	1403.0	-203.5	1199.5
		-17.50	1046.8	1487.8	2534.6	1519.6	-203.5	1316.1
		-18.00	834.7	1583.8	2418.5	1450.0	-203.5	1246.5
		-18.50	539.1	1679.8	2218.9	1330.3	-203.5	1126.8
		-19.00	151.5	1775.8	1927.3	1155.5	-203.5	952.0
16	4.06	-6.00	725.8	76.1	801.9	480.8	-200.3	280.5
		-6.50	761.8	172.1	933.9	559.9	-200.3	359.6
		-7.00	554.4	268.1	822.5	493.1	-200.3	292.9
		-7.50	500.3	364.1	864.4	518.2	-200.3	318.0
		-8.00	390.4	457.9	848.4	508.6	-200.3	308.4
		-8.50	393.6	513.6	907.1	543.8	-200.3	343.6
		-9.00	284.1	559.4	843.6	505.7	-200.3	305.5
		-9.50	235.8	599.8	835.6	500.9	-200.3	300.7
		-10.00	202.3	650.8	853.0	511.4	-200.3	311.2
		-10.50	200.4	674.2	874.5	524.3	-200.3	324.0
		-11.00	300.8	703.7	1004.5	602.2	-200.3	401.9
		-11.50	286.2	758.5	1044.7	626.3	-200.3	426.1
		-12.00	333.3	792.2	1125.5	674.8	-200.3	474.5
		-12.50	959.2	856.1	1815.3	1088.3	-200.3	888.0
		-13.00	420.6	952.1	1372.7	823.0	-200.3	622.7
		-13.50	251.7	1048.1	1299.8	779.2	-200.3	579.0
		-14.00	101.3	1144.1	1245.3	746.6	-200.3	546.3
		-14.50	86.0	1168.1	1254.1	751.8	-200.3	551.6
		-15.00	84.9	1176.6	1261.4	756.3	-200.3	556.0
		-15.50	95.2	1184.5	1279.7	767.2	-200.3	566.9
		-16.00	112.2	1194.4	1306.6	783.3	-200.3	583.1
		-16.50	292.0	1220.3	1512.3	906.7	-200.3	706.4
		-17.00	847.3	1275.9	2123.2	1272.9	-200.3	1072.7
		-17.50	933.9	1371.9	2305.8	1382.4	-200.3	1182.1
		-18.00	727.0	1467.9	2194.9	1315.9	-200.3	1115.6
		-18.50	447.1	1563.9	2011.0	1205.6	-200.3	1005.4
		-19.00	327.9	1659.3	1987.3	1191.4	-200.3	991.2
		-19.50	169.3	1734.8	1904.1	1141.5	-200.3	941.3

**REKENGEGEVENS G4 Kelder 290**

Berekening : Ontwerpend
Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
Sondering(en) : 25 - Ontgraven tot 2.70, 26 - Ontgraven tot 2.70
: 27 - Ontgraven tot 2.70, 28 - Ontgraven tot 2.70
: 29 - Ontgraven tot 2.70, 30 - Ontgraven tot 2.70
: 31 - Ontgraven tot 2.70, 32 - Ontgraven tot 2.70
: 33 - Ontgraven tot 2.70, 34 - Ontgraven tot 2.70
: 35 - Ontgraven tot 2.70, 36 - Ontgraven tot 2.70
: 37 - Ontgraven tot 2.70, 38 - Ontgraven tot 2.70
: 39 - Ontgraven tot 2.70, 40 - Ontgraven tot 2.70
: 41 - Ontgraven tot 2.70, 42 - Ontgraven tot 2.70
: 43 - Ontgraven tot 2.70, 44 - Ontgraven tot 2.70
: 45 - Ontgraven tot 2.70, 46 - Ontgraven tot 2.70
: 47 - Ontgraven tot 2.70, 48 - Ontgraven tot 2.70
: 49 - Ontgraven tot 2.70

Stijf bouwwerk : NEE
Paalgroep : NEE
Aantal sonderingen : 25
Factor ξ_3 ($n=1$) : 1.39 (handmatig)
Factor ξ_3 (gem) : 1.39 (handmatig)
Factor ξ_4 (min) : 1.39 (handmatig)
Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{d,cal,max,i}$ begrenzen op $0.75 * R_{d,cal,max,i}$: NEE
UGT draagvermogen zonder negatieve kleef : NEE

Paal : #290
Niveau paalkop [m] : N.A.P. 4.60
Bovenbel. [kN/m²] : 0.00

PAALPUNTNIVEAUS #290

Alle niveaus/hogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-21.00	0.50



SAMENVATTINGSTABEL G4 Kelder 290 (n=1)

Uitgangspunten

- paal : #290
 - paaltype : Geheide paal (beton)
 - schachtafmeting : 290 x 290
 Paalklassefactor α_p : 0.70
 Factor α_s (tabel 7.c EC 7.1) : 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
 Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	maaiveld niveau	Bezuigdraagvermogen			Rekenwaarden		
			$R_{b,cal}$ [kN]	$R_{s,cal}$ [kN]	$R_{c,cal}$ [kN]	$R_{c,d}$ [kN]	$F_{nk,d}$ [kN]	$R_{c,netto,d}$ [kN]
25 - Ontgraven t	2.70	-6.00	556.5	61.3	617.7	370.3	-97.3	273.1
		-6.50	757.1	148.2	905.3	542.7	-97.3	445.5
		-7.00	743.0	235.2	978.2	586.4	-97.3	489.2
		-7.50	797.1	322.2	1119.3	671.1	-97.3	573.8
		-8.00	753.8	409.2	1163.1	697.3	-97.3	600.0
		-8.50	903.9	491.0	1394.9	836.3	-97.3	739.0
		-9.00	359.9	578.0	937.9	562.3	-97.3	465.0
		-9.50	179.1	665.0	844.1	506.1	-97.3	408.8
		-10.00	103.2	746.2	849.5	509.3	-97.3	412.0
		-10.50	81.0	763.9	844.9	506.5	-97.3	409.3
		-11.00	96.4	763.9	860.3	515.7	-97.3	418.5
		-11.50	93.3	763.9	857.2	513.9	-97.3	416.6
		-12.00	114.2	763.9	878.1	526.4	-97.3	429.2
		-12.50	481.9	783.0	1264.8	758.3	-97.3	661.0
		-13.00	299.9	867.3	1167.2	699.7	-97.3	602.5
		-13.50	170.7	954.3	1125.0	674.4	-97.3	577.2
		-14.00	66.0	1033.4	1099.4	659.1	-97.3	561.8
		-14.50	61.4	1045.0	1106.4	663.3	-97.3	566.0
		-15.00	60.4	1051.8	1112.2	666.8	-97.3	569.5
		-15.50	67.0	1058.4	1125.3	674.7	-97.3	577.4
		-16.00	69.6	1065.9	1135.5	680.8	-97.3	583.5
26 - Ontgraven t	2.70	-16.50	130.4	1079.5	1209.9	725.3	-97.3	628.1
		-17.00	482.7	1118.0	1600.8	959.7	-97.3	862.4
		-17.50	607.9	1194.5	1802.4	1080.6	-97.3	983.3
		-18.00	685.2	1273.0	1958.2	1174.0	-97.3	1076.7
		-18.50	576.1	1353.7	1929.8	1156.9	-97.3	1059.7
		-19.00	603.6	1433.6	2037.2	1221.3	-97.3	1124.1
		-6.00	589.3	118.6	707.9	424.4	-87.6	336.8
		-6.50	642.8	205.6	848.4	508.6	-87.6	421.0
		-7.00	698.5	292.6	991.1	594.2	-87.6	506.6
		-7.50	512.0	378.6	890.6	533.9	-87.6	446.3
		-8.00	505.0	465.6	970.5	581.8	-87.6	494.2
		-8.50	384.0	550.3	934.3	560.1	-87.6	472.5
		-9.00	542.0	607.8	1149.8	689.3	-87.6	601.7
		-9.50	454.4	679.5	1133.8	679.8	-87.6	592.1
		-10.00	213.9	747.5	961.4	576.4	-87.6	488.7
		-10.50	111.8	813.5	925.3	554.8	-87.6	467.1
		-11.00	86.0	852.4	938.4	562.6	-87.6	474.9
		-11.50	74.4	868.2	942.5	565.1	-87.6	477.4
		-12.00	116.8	877.0	993.9	595.8	-87.6	508.2
		-12.50	549.9	906.0	1455.8	872.8	-87.6	785.2
		-13.00	542.5	991.9	1534.3	919.9	-87.6	832.2
		-13.50	275.9	1078.9	1354.7	812.2	-87.6	724.6



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
26 - Ontgraven t	2.70	-14.00	133.1	1165.9	1299.0	778.8	-87.6	691.1
		-14.50	67.2	1219.8	1287.0	771.6	-87.6	684.0
		-15.00	65.9	1227.7	1293.7	775.6	-87.6	687.9
		-15.50	66.4	1234.6	1301.0	780.0	-87.6	692.4
		-16.00	69.8	1241.8	1311.6	786.3	-87.6	698.7
		-16.50	221.7	1253.4	1475.1	884.3	-87.6	796.7
		-17.00	665.0	1315.1	1980.1	1187.1	-87.6	1099.5
		-17.50	340.5	1402.1	1742.6	1044.7	-87.6	957.1
		-18.00	235.1	1489.1	1724.2	1033.7	-87.6	946.1
		-18.50	138.0	1568.6	1706.6	1023.2	-87.6	935.5
		-19.00	354.2	1592.2	1946.4	1166.9	-87.6	1079.3
		-19.50	419.6	1655.9	2075.5	1244.3	-87.6	1156.7
27 - Ontgraven t	2.70	-6.00	444.7	55.4	500.2	299.9	-96.7	203.2
		-6.50	549.7	130.5	680.2	407.8	-96.7	311.1
		-7.00	591.0	209.8	800.9	480.1	-96.7	383.5
		-7.50	650.5	288.7	939.2	563.0	-96.7	466.4
		-8.00	710.3	362.7	1073.0	643.3	-96.7	546.6
		-8.50	882.8	442.6	1325.4	794.6	-96.7	698.0
		-9.00	369.6	529.6	899.2	539.1	-96.7	442.4
		-9.50	291.8	616.6	908.4	544.6	-96.7	447.9
		-10.00	186.0	688.5	874.5	524.3	-96.7	427.6
		-10.50	239.3	722.1	961.4	576.4	-96.7	479.7
		-11.00	220.7	766.2	986.9	591.7	-96.7	495.0
		-11.50	168.2	826.3	994.5	596.2	-96.7	499.6
		-12.00	221.8	850.8	1072.6	643.1	-96.7	546.4
		-12.50	534.7	899.9	1434.7	860.1	-96.7	763.5
		-13.00	275.0	977.7	1252.7	751.0	-96.7	654.3
		-13.50	183.4	1055.4	1238.8	742.7	-96.7	646.0
		-14.00	86.5	1133.1	1219.6	731.2	-96.7	634.5
		-14.50	67.7	1158.1	1225.7	734.9	-96.7	638.2
		-15.00	69.5	1165.2	1234.7	740.2	-96.7	643.6
		-15.50	79.0	1173.1	1252.1	750.7	-96.7	654.0
		-16.00	79.5	1182.8	1262.3	756.8	-96.7	660.1
		-16.50	161.8	1193.2	1355.0	812.3	-96.7	715.7
		-17.00	410.2	1222.4	1632.6	978.8	-96.7	882.1
		-17.50	432.1	1286.2	1718.4	1030.2	-96.7	933.5
		-18.00	684.4	1349.8	2034.2	1219.5	-96.7	1122.9
		-18.50	454.6	1434.1	1888.7	1132.3	-96.7	1035.6
		-19.00	280.2	1521.1	1801.3	1079.9	-96.7	983.3
		-19.50	236.8	1596.6	1833.4	1099.2	-96.7	1002.5
28 - Ontgraven t	2.70	-6.00	411.9	45.7	457.5	274.3	-97.2	177.1
		-6.50	532.8	117.8	650.5	390.0	-97.2	292.8
		-7.00	558.3	195.0	753.3	451.6	-97.2	354.4
		-7.50	618.2	272.2	890.5	533.9	-97.2	436.6
		-8.00	678.1	349.1	1027.2	615.8	-97.2	518.6
		-8.50	784.3	429.7	1214.0	727.8	-97.2	630.6
		-9.00	556.7	516.7	1073.4	643.6	-97.2	546.3
		-9.50	371.3	603.7	975.0	584.5	-97.2	487.3
		-10.00	253.8	679.9	933.8	559.8	-97.2	462.6
		-10.50	124.3	726.9	851.2	510.3	-97.2	413.1
		-11.00	97.2	764.5	861.7	516.6	-97.2	419.4
		-11.50	77.2	778.7	855.9	513.1	-97.2	415.9
		-12.00	92.6	778.7	871.3	522.4	-97.2	425.1



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
28 - Ontgraven t	2.70	-12.50	162.4	785.5	947.9	568.3	-97.2	471.1
		-13.00	719.7	832.8	1552.6	930.8	-97.2	833.6
		-13.50	356.0	919.8	1275.8	764.9	-97.2	667.7
		-14.00	180.7	1006.8	1187.5	712.0	-97.2	614.7
		-14.50	75.5	1075.3	1150.8	689.9	-97.2	592.7
		-15.00	72.9	1084.8	1157.6	694.0	-97.2	596.8
		-15.50	78.9	1092.6	1171.5	702.3	-97.2	605.1
		-16.00	79.2	1101.6	1180.8	707.9	-97.2	610.7
		-16.50	129.0	1110.8	1239.9	743.3	-97.2	646.1
		-17.00	169.4	1146.6	1316.0	789.0	-97.2	691.8
		-17.50	433.0	1181.6	1614.7	968.0	-97.2	870.8
		-18.00	584.4	1253.0	1837.3	1101.5	-97.2	1004.3
		-18.50	591.4	1340.0	1931.4	1157.9	-97.2	1060.7
		-19.00	472.1	1427.0	1899.0	1138.5	-97.2	1041.3
		-19.50	381.3	1493.1	1874.4	1123.7	-97.2	1026.5
29 - Ontgraven t	2.70	-6.00	566.1	121.2	687.3	412.1	-85.5	326.6
		-6.50	581.1	208.2	789.3	473.2	-85.5	387.8
		-7.00	636.1	293.1	929.1	557.0	-85.5	471.6
		-7.50	688.4	371.7	1060.1	635.6	-85.5	550.1
		-8.00	799.8	446.2	1245.9	747.0	-85.5	661.5
		-8.50	569.5	532.0	1101.5	660.4	-85.5	574.9
		-9.00	240.5	619.0	859.5	515.3	-85.5	429.8
		-9.50	174.2	704.4	878.6	526.7	-85.5	441.3
		-10.00	127.0	755.6	882.6	529.1	-85.5	443.7
		-10.50	169.0	771.7	940.7	564.0	-85.5	478.5
		-11.00	112.1	812.3	924.3	554.1	-85.5	468.7
		-11.50	86.9	852.6	939.5	563.3	-85.5	477.8
		-12.00	71.1	869.9	940.9	564.1	-85.5	478.6
		-12.50	255.1	882.6	1137.7	682.1	-85.5	596.6
		-13.00	349.3	944.1	1293.4	775.4	-85.5	690.0
		-13.50	219.4	1031.1	1250.5	749.7	-85.5	664.3
		-14.00	93.1	1118.1	1211.2	726.1	-85.5	640.7
		-14.50	66.7	1150.1	1216.9	729.5	-85.5	644.1
		-15.00	65.8	1157.7	1223.5	733.5	-85.5	648.1
		-15.50	72.9	1165.0	1237.9	742.1	-85.5	656.7
		-16.00	78.5	1174.2	1252.7	751.0	-85.5	665.6
		-16.50	179.2	1185.8	1365.0	818.3	-85.5	732.9
		-17.00	375.9	1224.3	1600.3	959.4	-85.5	873.9
		-17.50	258.9	1291.4	1550.3	929.4	-85.5	844.0
		-18.00	250.6	1361.0	1611.6	966.2	-85.5	880.7
		-18.50	127.8	1426.5	1554.3	931.9	-85.5	846.4
		-19.00	584.0	1461.3	2045.2	1226.2	-85.5	1140.7
		-19.50	778.1	1548.3	2326.3	1394.7	-85.5	1309.2
30 - Ontgraven t	2.70	-6.00	428.7	32.1	460.8	276.3	-99.0	177.3
		-6.50	591.8	112.1	703.9	422.0	-99.0	323.0
		-7.00	663.8	198.8	862.6	517.2	-99.0	418.2
		-7.50	684.9	285.5	970.5	581.8	-99.0	482.8
		-8.00	741.9	372.2	1114.1	667.9	-99.0	568.9
		-8.50	789.5	456.1	1245.6	746.7	-99.0	647.7
		-9.00	906.7	539.3	1446.0	866.9	-99.0	767.9
		-9.50	922.6	626.3	1548.9	928.6	-99.0	829.6
		-10.00	477.6	713.3	1190.9	713.9	-99.0	615.0
		-10.50	325.2	800.3	1125.5	674.7	-99.0	575.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
30 - Ontgraven t	2.70	-11.00	234.1	887.3	1121.4	672.3	-99.0	573.3
		-11.50	241.9	927.4	1169.3	701.0	-99.0	602.0
		-12.00	306.0	962.5	1268.5	760.5	-99.0	661.5
		-12.50	563.3	1014.0	1577.3	945.6	-99.0	846.6
		-13.00	292.2	1097.2	1389.3	832.9	-99.0	733.9
		-13.50	150.6	1184.2	1334.7	800.2	-99.0	701.2
		-14.00	80.1	1252.3	1332.3	798.8	-99.0	699.8
		-14.50	77.0	1263.7	1340.7	803.8	-99.0	704.8
		-15.00	77.1	1271.7	1348.8	808.6	-99.0	709.6
		-15.50	85.0	1279.9	1364.9	818.3	-99.0	719.3
		-16.00	99.2	1289.5	1388.6	832.5	-99.0	733.5
		-16.50	237.1	1326.4	1563.4	937.3	-99.0	838.3
		-17.00	593.5	1384.7	1978.2	1186.0	-99.0	1087.0
		-17.50	787.0	1471.7	2258.7	1354.1	-99.0	1255.1
		-18.00	783.8	1558.7	2342.5	1404.4	-99.0	1305.4
		-18.50	800.4	1645.7	2446.0	1466.5	-99.0	1367.5
		-19.00	1143.6	1732.4	2876.1	1724.3	-99.0	1625.3
		-19.50	1146.8	1819.4	2966.2	1778.3	-99.0	1679.3
		-20.00	787.9	1906.4	2694.3	1615.3	-99.0	1516.3
31 - Ontgraven t	2.70	-6.00	447.9	44.8	492.8	295.4	-96.7	198.8
		-6.50	670.4	126.9	797.2	478.0	-96.7	381.3
		-7.00	759.4	213.9	973.3	583.5	-96.7	486.8
		-7.50	873.4	300.9	1174.3	704.0	-96.7	607.4
		-8.00	962.8	387.9	1350.6	809.7	-96.7	713.1
		-8.50	1009.7	474.9	1484.6	890.0	-96.7	793.4
		-9.00	1159.3	561.9	1721.1	1031.9	-96.7	935.2
		-9.50	1208.9	648.9	1857.8	1113.8	-96.7	1017.1
		-10.00	985.3	735.9	1721.2	1031.9	-96.7	935.2
		-10.50	505.8	822.9	1328.7	796.6	-96.7	699.9
		-11.00	287.6	909.9	1197.4	717.9	-96.7	621.2
		-11.50	221.9	995.1	1216.9	729.6	-96.7	632.9
		-12.00	192.2	1039.4	1231.6	738.3	-96.7	641.7
		-12.50	280.5	1064.1	1344.6	806.1	-96.7	709.4
		-13.00	235.0	1118.2	1353.2	811.3	-96.7	714.6
		-13.50	130.7	1187.8	1318.6	790.5	-96.7	693.8
		-14.00	68.2	1240.6	1308.8	784.6	-96.7	688.0
		-14.50	65.1	1250.7	1315.9	788.9	-96.7	692.2
		-15.00	67.8	1258.2	1326.0	795.0	-96.7	698.3
		-15.50	72.0	1265.8	1337.8	802.0	-96.7	705.4
		-16.00	76.7	1273.9	1350.6	809.7	-96.7	713.0
		-16.50	306.0	1302.0	1608.0	964.0	-96.7	867.4
		-17.00	602.7	1370.9	1973.5	1183.2	-96.7	1086.5
		-17.50	686.5	1454.0	2140.6	1283.3	-96.7	1186.7
		-18.00	438.0	1541.0	1979.0	1186.5	-96.7	1089.8
		-18.50	430.7	1628.0	2058.7	1234.3	-96.7	1137.6
		-19.00	316.1	1706.2	2022.3	1212.4	-96.7	1115.8
32 - Ontgraven t	2.70	-6.00	796.0	85.6	881.6	528.5	-88.2	440.4
		-6.50	825.6	172.6	998.2	598.4	-88.2	510.3
		-7.00	890.6	259.6	1150.2	689.6	-88.2	601.4
		-7.50	903.9	346.6	1250.5	749.7	-88.2	661.5
		-8.00	962.4	433.6	1396.0	836.9	-88.2	748.7
		-8.50	498.6	520.6	1019.2	611.0	-88.2	522.8
		-9.00	351.6	607.6	959.2	575.1	-88.2	486.9



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
32 - Ontgraven t	2.70	-9.50	300.5	694.5	995.0	596.5	-88.2	508.4
		-10.00	122.5	745.3	867.8	520.3	-88.2	432.1
		-10.50	89.1	777.9	867.0	519.8	-88.2	431.6
		-11.00	67.2	808.5	875.7	525.0	-88.2	436.8
		-11.50	63.9	812.0	875.9	525.1	-88.2	437.0
		-12.00	115.5	812.0	927.5	556.0	-88.2	467.9
		-12.50	296.7	823.2	1119.9	671.4	-88.2	583.2
		-13.00	353.0	878.0	1231.0	738.0	-88.2	649.8
		-13.50	245.5	947.1	1192.6	715.0	-88.2	626.8
		-14.00	90.0	1016.7	1106.8	663.5	-88.2	575.4
		-14.50	61.3	1045.5	1106.8	663.5	-88.2	575.4
		-15.00	61.7	1052.2	1113.9	667.8	-88.2	579.6
		-15.50	65.4	1058.7	1124.0	673.9	-88.2	585.7
		-16.00	65.1	1066.1	1131.2	678.2	-88.2	590.0
		-16.50	307.1	1080.2	1387.3	831.7	-88.2	743.6
		-17.00	425.3	1151.8	1577.1	945.5	-88.2	857.3
		-17.50	376.5	1238.8	1615.3	968.4	-88.2	880.2
		-18.00	313.3	1325.8	1639.1	982.7	-88.2	894.5
		-18.50	460.6	1379.2	1839.8	1103.0	-88.2	1014.8
		-19.00	312.1	1448.8	1760.9	1055.7	-88.2	967.5
		-19.50	254.5	1509.2	1763.7	1057.4	-88.2	969.2
33 - Ontgraven t	2.70	-6.00	455.5	49.7	505.2	302.9	-94.4	208.5
		-6.50	611.9	132.0	743.9	446.0	-94.4	351.6
		-7.00	542.2	219.0	761.2	456.3	-94.4	362.0
		-7.50	489.5	306.0	795.6	477.0	-94.4	382.6
		-8.00	469.1	393.0	862.1	516.9	-94.4	422.5
		-8.50	428.2	458.5	886.7	531.6	-94.4	437.2
		-9.00	372.9	526.6	899.6	539.3	-94.4	444.9
		-9.50	330.8	596.2	927.1	555.8	-94.4	461.4
		-10.00	423.0	638.2	1061.1	636.2	-94.4	541.8
		-10.50	230.6	697.3	927.9	556.3	-94.4	461.9
		-11.00	192.1	763.4	955.6	572.9	-94.4	478.5
		-11.50	128.6	815.2	943.8	565.8	-94.4	471.5
		-12.00	309.9	830.8	1140.7	683.9	-94.4	589.5
		-12.50	408.3	899.9	1308.2	784.3	-94.4	689.9
		-13.00	251.8	986.9	1238.6	742.6	-94.4	648.2
		-13.50	113.6	1073.9	1187.4	711.9	-94.4	617.5
		-14.00	76.7	1114.6	1191.3	714.2	-94.4	619.9
		-14.50	74.1	1124.2	1198.3	718.4	-94.4	624.1
		-15.00	80.3	1133.0	1213.3	727.4	-94.4	633.0
		-15.50	80.6	1142.6	1223.2	733.3	-94.4	639.0
		-16.00	81.8	1151.5	1233.3	739.4	-94.4	645.1
34 - Ontgraven t	2.70	-16.50	220.2	1163.1	1383.3	829.3	-94.4	734.9
		-17.00	459.4	1210.3	1669.8	1001.1	-94.4	906.7
		-17.50	451.2	1279.9	1731.2	1037.9	-94.4	943.5
		-18.00	421.0	1348.2	1769.2	1060.6	-94.4	966.3
		-18.50	236.7	1411.0	1647.7	987.8	-94.4	893.5
		-19.00	216.2	1476.3	1692.5	1014.7	-94.4	920.3
		-19.50	174.7	1525.8	1700.5	1019.5	-94.4	925.1
		-6.00	541.1	108.5	649.6	389.5	-85.5	304.0
		-6.50	562.1	193.0	755.1	452.7	-85.5	367.2
		-7.00	212.9	277.5	490.4	294.0	-85.5	208.5
		-7.50	171.0	355.6	526.6	315.7	-85.5	230.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
34 - Ontgraven t	2.70	-8.00	97.8	422.6	520.4	312.0	-85.5	226.5
		-8.50	220.2	438.0	658.3	394.6	-85.5	309.2
		-9.00	306.2	478.4	784.6	470.4	-85.5	384.9
		-9.50	282.5	533.4	816.0	489.2	-85.5	403.7
		-10.00	284.0	586.9	870.9	522.1	-85.5	436.6
		-10.50	274.5	636.1	910.7	546.0	-85.5	460.5
		-11.00	298.2	670.4	968.6	580.7	-85.5	495.2
		-11.50	298.7	712.0	1010.7	605.9	-85.5	520.5
		-12.00	255.7	767.1	1022.9	613.2	-85.5	527.8
		-12.50	446.0	797.4	1243.4	745.4	-85.5	660.0
		-13.00	234.5	862.4	1096.9	657.6	-85.5	572.2
		-13.50	156.2	929.2	1085.4	650.7	-85.5	565.3
		-14.00	86.1	990.2	1076.3	645.3	-85.5	559.8
		-14.50	74.4	1010.9	1085.4	650.7	-85.5	565.2
		-15.00	72.3	1019.8	1092.1	654.7	-85.5	569.3
		-15.50	77.9	1027.4	1105.3	662.7	-85.5	577.2
		-16.00	82.5	1036.5	1118.9	670.8	-85.5	585.4
		-16.50	530.6	1062.1	1592.7	954.8	-85.5	869.4
		-17.00	750.1	1148.5	1898.7	1138.3	-85.5	1052.8
		-17.50	447.5	1235.5	1683.0	1009.0	-85.5	923.5
		-18.00	356.3	1322.5	1678.8	1006.5	-85.5	921.0
		-18.50	280.5	1409.5	1690.0	1013.2	-85.5	927.7
		-19.00	278.4	1460.7	1739.1	1042.6	-85.5	957.2
		-19.50	376.2	1523.4	1899.6	1138.9	-85.5	1053.4
35 - Ontgraven t	2.70	-6.00	776.2	190.1	966.2	579.3	-81.6	497.7
		-6.50	858.7	277.1	1135.7	680.9	-81.6	599.3
		-7.00	1079.1	364.1	1443.1	865.2	-81.6	783.6
		-7.50	1247.3	451.1	1698.4	1018.2	-81.6	936.7
		-8.00	1043.7	538.1	1581.7	948.3	-81.6	866.7
		-8.50	885.0	625.1	1510.0	905.3	-81.6	823.7
		-9.00	411.8	712.1	1123.8	673.8	-81.6	592.2
		-9.50	220.2	799.1	1019.2	611.0	-81.6	529.5
		-10.00	154.7	879.0	1033.7	619.7	-81.6	538.1
		-10.50	139.8	915.3	1055.2	632.6	-81.6	551.0
		-11.00	140.2	948.0	1088.2	652.4	-81.6	570.8
		-11.50	116.7	969.5	1086.2	651.2	-81.6	569.6
		-12.00	270.6	969.5	1240.1	743.5	-81.6	661.9
		-12.50	563.8	1017.4	1581.2	948.0	-81.6	866.4
		-13.00	564.8	1097.6	1662.4	996.7	-81.6	915.1
		-13.50	620.6	1174.9	1795.5	1076.5	-81.6	994.9
		-14.00	77.0	1248.9	1325.9	794.9	-81.6	713.3
		-14.50	51.2	1272.2	1323.4	793.4	-81.6	711.8
		-15.00	49.8	1278.6	1328.4	796.4	-81.6	714.8
		-15.50	50.2	1283.6	1333.8	799.6	-81.6	718.1
		-16.00	62.7	1289.0	1351.7	810.4	-81.6	728.8
		-16.50	174.5	1304.9	1479.5	887.0	-81.6	805.4
		-17.00	474.4	1348.7	1823.1	1093.0	-81.6	1011.4
		-17.50	238.4	1433.6	1672.1	1002.4	-81.6	920.9
		-18.00	150.5	1517.0	1667.5	999.7	-81.6	918.1
		-18.50	114.8	1560.9	1675.7	1004.6	-81.6	923.1
		-19.00	166.4	1578.9	1745.3	1046.3	-81.6	964.8
		-19.50	217.7	1625.7	1843.5	1105.2	-81.6	1023.6



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
36 - Ontgraven t	2.70	-6.00	502.2	68.4	570.6	342.1	-92.1	250.0
		-6.50	624.4	153.1	777.4	466.1	-92.1	374.0
		-7.00	694.2	240.1	934.3	560.1	-92.1	468.1
		-7.50	793.5	327.1	1120.5	671.8	-92.1	579.7
		-8.00	639.7	414.1	1053.8	631.8	-92.1	539.7
		-8.50	510.0	501.1	1011.1	606.2	-92.1	514.1
		-9.00	329.4	582.6	912.1	546.8	-92.1	454.7
		-9.50	311.4	644.9	956.4	573.4	-92.1	481.3
		-10.00	281.5	700.3	981.8	588.6	-92.1	496.5
		-10.50	334.8	733.0	1067.8	640.2	-92.1	548.1
		-11.00	279.9	795.4	1075.3	644.7	-92.1	552.6
		-11.50	220.0	846.7	1066.7	639.5	-92.1	547.4
		-12.00	384.7	882.2	1267.0	759.6	-92.1	667.5
		-12.50	944.4	954.5	1898.9	1138.5	-92.1	1046.4
		-13.00	413.1	1041.5	1454.7	872.1	-92.1	780.0
		-13.50	249.8	1128.5	1378.3	826.3	-92.1	734.2
		-14.00	90.2	1215.5	1305.7	782.8	-92.1	690.7
		-14.50	63.5	1247.6	1311.2	786.1	-92.1	694.0
		-15.00	65.8	1255.0	1320.8	791.9	-92.1	699.8
		-15.50	67.1	1262.3	1329.4	797.0	-92.1	704.9
		-16.00	73.2	1270.5	1343.6	805.5	-92.1	713.5
37 - Ontgraven t	2.70	-6.00	591.6	79.1	670.7	402.1	-92.1	310.0
		-6.50	622.9	166.1	789.0	473.0	-92.1	380.9
		-7.00	670.3	253.1	923.5	553.6	-92.1	461.5
		-7.50	737.1	339.9	1077.0	645.7	-92.1	553.6
		-8.00	622.6	421.5	1044.1	626.0	-92.1	533.9
		-8.50	374.1	501.7	875.8	525.0	-92.1	433.0
		-9.00	259.4	578.2	837.6	502.2	-92.1	410.1
		-9.50	236.3	632.8	869.1	521.0	-92.1	429.0
		-10.00	236.4	667.8	904.3	542.1	-92.1	450.0
		-10.50	220.5	703.2	923.6	553.7	-92.1	461.7
		-11.00	340.5	744.1	1084.6	650.2	-92.1	558.2
		-11.50	290.5	813.7	1104.2	662.0	-92.1	569.9
		-12.00	260.9	878.9	1139.9	683.4	-92.1	591.3
		-12.50	252.7	916.2	1168.9	700.8	-92.1	608.7
		-13.00	419.8	964.3	1384.1	829.8	-92.1	737.7
		-13.50	210.3	1051.3	1261.6	756.3	-92.1	664.3
		-14.00	75.7	1137.6	1213.3	727.4	-92.1	635.3
		-14.50	56.8	1162.6	1219.4	731.1	-92.1	639.0
		-15.00	57.9	1168.7	1226.6	735.4	-92.1	643.3
		-15.50	59.5	1174.9	1234.4	740.1	-92.1	648.0
		-16.00	64.2	1181.2	1245.4	746.6	-92.1	654.6
38 - Ontgraven t	2.70	-16.50	125.0	1196.8	1321.8	792.5	-92.1	700.4
		-17.00	102.8	1228.3	1331.0	798.0	-92.1	705.9
		-17.50	217.4	1262.4	1479.8	887.2	-92.1	795.1
		-18.00	161.0	1328.7	1489.7	893.1	-92.1	801.0
		-18.50	178.4	1352.0	1530.5	917.6	-92.1	825.5
		-19.00	140.0	1403.5	1543.5	925.4	-92.1	833.3
		-19.50	121.7	1431.5	1553.3	931.2	-92.1	839.1
		-6.00	487.4	103.6	591.0	354.3	-87.6	266.7
		-6.50	565.7	177.0	742.7	445.2	-87.6	357.6
		-7.00	787.1	257.6	1044.6	626.3	-87.6	538.7
		-7.50	923.0	344.6	1267.6	759.9	-87.6	672.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
38 - Ontgraven t	2.70	-8.00	1140.3	431.6	1571.8	942.3	-87.6	854.7
		-8.50	1174.4	518.6	1693.0	1015.0	-87.6	927.4
		-9.00	898.6	605.6	1504.2	901.8	-87.6	814.2
		-9.50	659.1	692.6	1351.7	810.4	-87.6	722.7
		-10.00	414.4	778.4	1192.7	715.1	-87.6	627.4
		-10.50	384.0	851.8	1235.8	740.9	-87.6	653.3
		-11.00	270.9	907.1	1178.0	706.2	-87.6	618.6
		-11.50	257.0	958.1	1215.1	728.5	-87.6	640.8
		-12.00	192.2	1007.8	1200.0	719.4	-87.6	631.8
		-12.50	389.3	1035.6	1425.0	854.3	-87.6	766.7
		-13.00	225.5	1100.4	1325.9	794.9	-87.6	707.3
		-13.50	96.1	1170.0	1266.1	759.1	-87.6	671.4
		-14.00	71.6	1203.6	1275.2	764.5	-87.6	676.9
		-14.50	69.6	1212.9	1282.6	768.9	-87.6	681.3
		-15.00	74.3	1220.5	1294.9	776.3	-87.6	688.7
		-15.50	75.4	1229.0	1304.3	782.0	-87.6	694.3
		-16.00	93.5	1237.2	1330.8	797.8	-87.6	710.2
		-16.50	653.9	1258.5	1912.4	1146.5	-87.6	1058.9
		-17.00	488.6	1333.2	1821.8	1092.2	-87.6	1004.6
		-17.50	427.2	1408.8	1836.0	1100.7	-87.6	1013.1
		-18.00	677.9	1478.5	2156.4	1292.8	-87.6	1205.2
		-18.50	864.8	1562.4	2427.2	1455.2	-87.6	1367.5
		-19.00	722.6	1649.4	2371.9	1422.0	-87.6	1334.4
		-19.50	1105.7	1734.7	2840.5	1702.9	-87.6	1615.3
39 - Ontgraven t	2.70	-6.00	554.2	134.2	688.4	412.7	-83.3	329.4
		-6.50	728.6	218.6	947.3	567.9	-83.3	484.6
		-7.00	815.4	305.6	1121.0	672.1	-83.3	588.7
		-7.50	887.1	392.6	1279.7	767.2	-83.3	683.9
		-8.00	950.7	479.6	1430.3	857.5	-83.3	774.2
		-8.50	1163.3	566.6	1729.9	1037.1	-83.3	953.8
		-9.00	1194.9	653.6	1848.5	1108.2	-83.3	1024.9
		-9.50	869.5	740.6	1610.1	965.3	-83.3	882.0
		-10.00	456.0	827.6	1283.6	769.6	-83.3	686.3
		-10.50	267.6	914.6	1182.2	708.8	-83.3	625.5
		-11.00	217.2	992.2	1209.4	725.1	-83.3	641.8
		-11.50	192.6	1026.9	1219.5	731.1	-83.3	647.8
		-12.00	331.1	1051.8	1383.0	829.1	-83.3	745.8
		-12.50	559.5	1120.2	1679.7	1007.0	-83.3	923.7
		-13.00	312.5	1207.2	1519.7	911.1	-83.3	827.8
		-13.50	121.2	1294.2	1415.4	848.6	-83.3	765.3
		-14.00	69.4	1338.9	1408.3	844.3	-83.3	761.0
		-14.50	75.9	1346.0	1422.0	852.5	-83.3	769.2
		-15.00	77.6	1354.4	1432.1	858.6	-83.3	775.2
		-15.50	81.6	1363.0	1444.6	866.1	-83.3	782.8
		-16.00	145.1	1372.1	1517.2	909.6	-83.3	826.3
		-16.50	776.0	1424.3	2200.3	1319.1	-83.3	1235.8
		-17.00	660.7	1511.3	2172.0	1302.2	-83.3	1218.9
		-17.50	541.3	1598.3	2139.6	1282.7	-83.3	1199.4
		-18.00	554.8	1684.3	2239.1	1342.4	-83.3	1259.1
		-18.50	464.8	1756.7	2221.5	1331.8	-83.3	1248.5
		-19.00	294.1	1826.2	2120.3	1271.1	-83.3	1187.8
		-19.50	179.4	1892.7	2072.2	1242.3	-83.3	1159.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
40 - Ontgraven t	2.70	-6.00	630.4	166.2	796.6	477.6	-50.5	427.1
		-6.50	683.4	249.3	932.6	559.1	-50.5	508.7
		-7.00	718.1	332.3	1050.4	629.7	-50.5	579.3
		-7.50	797.3	411.7	1209.0	724.8	-50.5	674.3
		-8.00	684.5	491.8	1176.2	705.2	-50.5	654.7
		-8.50	557.8	571.3	1129.1	676.9	-50.5	626.4
		-9.00	527.2	649.9	1177.1	705.7	-50.5	655.2
		-9.50	366.4	716.9	1083.2	649.4	-50.5	598.9
		-10.00	202.3	785.6	987.9	592.2	-50.5	541.8
		-10.50	159.2	847.4	1006.6	603.4	-50.5	553.0
		-11.00	156.2	877.4	1033.7	619.7	-50.5	569.2
		-11.50	223.1	907.5	1130.6	677.8	-50.5	627.3
		-12.00	234.0	943.2	1177.2	705.8	-50.5	655.3
		-12.50	661.9	983.9	1645.8	986.7	-50.5	936.2
		-13.00	345.5	1070.9	1416.4	849.2	-50.5	798.7
		-13.50	201.3	1157.9	1359.2	814.9	-50.5	764.4
		-14.00	77.5	1244.0	1321.5	792.2	-50.5	741.8
		-14.50	67.4	1260.5	1327.9	796.1	-50.5	745.6
		-15.00	70.9	1267.5	1338.4	802.4	-50.5	751.9
		-15.50	72.1	1275.1	1347.2	807.7	-50.5	757.2
		-16.00	79.8	1283.1	1362.9	817.1	-50.5	766.6
41 - Ontgraven t	2.70	-16.50	109.0	1297.1	1406.1	843.0	-50.5	792.5
		-17.00	196.4	1319.1	1515.4	908.5	-50.5	858.1
		-17.50	174.6	1372.8	1547.3	927.7	-50.5	877.2
		-18.00	98.3	1431.8	1530.1	917.3	-50.5	866.9
		-18.50	176.6	1458.5	1635.1	980.3	-50.5	929.8
		-19.00	109.7	1507.4	1617.1	969.5	-50.5	919.0
		-19.50	143.8	1520.9	1664.8	998.1	-50.5	947.6
		-6.00	512.9	104.8	617.7	370.3	-85.5	284.9
		-6.50	589.2	182.8	771.9	462.8	-85.5	377.3
		-7.00	659.0	260.7	919.6	551.3	-85.5	465.9
		-7.50	594.7	340.9	935.6	560.9	-85.5	475.5
		-8.00	480.2	421.7	901.9	540.7	-85.5	455.3
		-8.50	456.1	496.3	952.4	571.0	-85.5	485.6
		-9.00	409.3	552.4	961.7	576.6	-85.5	491.1
		-9.50	302.0	598.2	900.2	539.7	-85.5	454.2
		-10.00	277.3	660.7	938.0	562.3	-85.5	476.9
		-10.50	220.5	706.0	926.4	555.4	-85.5	470.0
		-11.00	160.7	752.5	913.2	547.5	-85.5	462.1
		-11.50	99.4	819.4	918.8	550.8	-85.5	465.4
		-12.00	90.7	839.7	930.4	557.8	-85.5	472.3
		-12.50	103.1	850.3	953.3	571.5	-85.5	486.1
		-13.00	200.2	877.2	1077.3	645.9	-85.5	560.4
		-13.50	130.3	945.1	1075.4	644.7	-85.5	559.3
		-14.00	64.1	997.7	1061.8	636.6	-85.5	551.1
		-14.50	63.4	1006.0	1069.5	641.2	-85.5	555.7
		-15.00	64.1	1012.7	1076.9	645.6	-85.5	560.1
		-15.50	67.3	1019.4	1086.7	651.5	-85.5	566.1
		-16.00	69.1	1026.8	1095.8	657.0	-85.5	571.5
		-16.50	199.0	1037.0	1236.0	741.0	-85.5	655.5
		-17.00	396.2	1081.7	1477.9	886.0	-85.5	800.6
		-17.50	252.8	1168.6	1421.4	852.1	-85.5	766.7
		-18.00	174.6	1255.6	1430.2	857.4	-85.5	772.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
41 - Ontgraven t	2.70	-18.50	138.2	1306.2	1444.4	866.0	-85.5	780.5
		-19.00	168.9	1324.6	1493.5	895.4	-85.5	810.0
		-19.50	200.3	1346.0	1546.3	927.0	-85.5	841.6
42 - Ontgraven t	2.70	-6.00	450.8	88.9	539.7	323.6	-89.7	233.8
		-6.50	510.5	158.0	668.5	400.8	-89.7	311.0
		-7.00	685.4	230.9	916.3	549.4	-89.7	459.6
		-7.50	819.3	317.5	1136.8	681.5	-89.7	591.8
		-8.00	881.0	404.5	1285.6	770.7	-89.7	681.0
		-8.50	889.7	491.5	1381.2	828.1	-89.7	738.3
		-9.00	336.1	578.5	914.7	548.4	-89.7	458.6
		-9.50	176.0	665.5	841.5	504.5	-89.7	414.7
		-10.00	104.7	749.4	854.0	512.0	-89.7	422.3
		-10.50	80.0	769.8	849.8	509.5	-89.7	419.7
		-11.00	157.5	769.8	927.3	555.9	-89.7	466.2
		-11.50	122.2	812.4	934.6	560.3	-89.7	470.6
		-12.00	206.9	841.9	1048.9	628.8	-89.7	539.1
		-12.50	544.1	894.3	1438.4	862.3	-89.7	772.6
		-13.00	281.3	981.3	1262.6	757.0	-89.7	667.2
		-13.50	135.5	1068.3	1203.8	721.7	-89.7	632.0
		-14.00	64.5	1125.2	1189.7	713.2	-89.7	623.5
		-14.50	63.8	1132.3	1196.1	717.1	-89.7	627.4
		-15.00	64.4	1138.9	1203.3	721.4	-89.7	631.7
		-15.50	70.3	1145.6	1215.9	729.0	-89.7	639.2
		-16.00	77.4	1153.9	1231.2	738.2	-89.7	648.4
		-16.50	178.4	1176.1	1354.5	812.1	-89.7	722.3
		-17.00	159.9	1216.4	1376.3	825.1	-89.7	735.4
		-17.50	527.4	1245.5	1773.0	1062.9	-89.7	973.2
		-18.00	652.4	1329.0	1981.3	1187.8	-89.7	1098.1
		-18.50	832.6	1416.0	2248.6	1348.1	-89.7	1258.3
		-19.00	938.4	1503.0	2441.4	1463.6	-89.7	1373.9
		-19.50	739.0	1590.0	2329.0	1396.3	-89.7	1306.5
43 - Ontgraven t	2.70	-6.00	381.3	51.4	432.7	259.4	-87.6	171.8
		-6.50	504.7	118.7	623.4	373.7	-87.6	286.1
		-7.00	762.0	199.4	961.3	576.3	-87.6	488.7
		-7.50	875.1	286.4	1161.4	696.3	-87.6	608.7
		-8.00	883.6	373.4	1257.0	753.6	-87.6	666.0
		-8.50	858.6	460.4	1319.0	790.8	-87.6	703.1
		-9.00	795.6	547.4	1343.0	805.2	-87.6	717.5
		-9.50	402.5	633.8	1036.2	621.3	-87.6	533.6
		-10.00	349.0	716.4	1065.4	638.7	-87.6	551.1
		-10.50	280.5	783.4	1063.8	637.8	-87.6	550.1
		-11.00	221.8	841.2	1063.0	637.3	-87.6	549.7
		-11.50	175.1	901.3	1076.3	645.3	-87.6	557.7
		-12.00	235.7	922.2	1157.9	694.2	-87.6	606.6
		-12.50	1079.2	981.8	2061.0	1235.6	-87.6	1148.0
		-13.00	443.3	1068.8	1512.1	906.6	-87.6	818.9
		-13.50	258.0	1155.8	1413.9	847.6	-87.6	760.0
		-14.00	80.1	1241.8	1321.9	792.5	-87.6	704.9
		-14.50	72.1	1257.1	1329.2	796.9	-87.6	709.3
		-15.00	73.4	1264.7	1338.1	802.2	-87.6	714.6
		-15.50	84.9	1272.3	1357.3	813.7	-87.6	726.1
		-16.00	82.5	1284.4	1366.9	819.5	-87.6	731.9
		-16.50	222.7	1305.6	1528.3	916.2	-87.6	828.6



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
43 - Ontgraven t	2.70	-17.00	685.0	1367.7	2052.7	1230.6	-87.6	1143.0
		-17.50	722.8	1454.7	2177.5	1305.5	-87.6	1217.8
		-18.00	771.9	1541.7	2313.6	1387.0	-87.6	1299.4
		-18.50	800.8	1628.7	2429.5	1456.5	-87.6	1368.9
		-19.00	1053.1	1715.7	2768.8	1659.9	-87.6	1572.3
		-19.50	1093.9	1802.7	2896.6	1736.6	-87.6	1648.9
44 - Ontgraven t	2.70	-6.00	791.7	174.0	965.7	579.0	-83.3	495.6
		-6.50	881.7	261.0	1142.7	685.1	-83.3	601.8
		-7.00	794.4	348.0	1142.4	684.9	-83.3	601.6
		-7.50	433.0	435.0	868.0	520.4	-83.3	437.1
		-8.00	380.2	522.0	902.2	540.9	-83.3	457.6
		-8.50	307.3	598.6	905.9	543.1	-83.3	459.8
		-9.00	489.8	638.4	1128.2	676.4	-83.3	593.0
		-9.50	286.0	707.9	993.9	595.9	-83.3	512.6
		-10.00	152.5	779.9	932.3	558.9	-83.3	475.6
		-10.50	81.0	843.9	925.0	554.5	-83.3	471.2
		-11.00	84.5	860.7	945.2	566.6	-83.3	483.3
		-11.50	79.8	883.5	963.3	577.5	-83.3	494.2
		-12.00	117.6	894.1	1011.6	606.5	-83.3	523.2
		-12.50	274.0	912.2	1186.2	711.1	-83.3	627.8
		-13.00	399.5	979.4	1378.8	826.6	-83.3	743.3
		-13.50	264.9	1066.4	1331.3	798.1	-83.3	714.8
		-14.00	88.0	1153.4	1241.4	744.3	-83.3	660.9
		-14.50	65.2	1182.4	1247.6	748.0	-83.3	664.6
		-15.00	62.8	1190.3	1253.1	751.3	-83.3	668.0
		-15.50	74.5	1196.8	1271.3	762.2	-83.3	678.9
		-16.00	87.0	1205.8	1292.8	775.0	-83.3	691.7
		-16.50	487.0	1232.0	1719.1	1030.6	-83.3	947.3
		-17.00	411.8	1315.9	1727.7	1035.8	-83.3	952.5
		-17.50	290.6	1402.9	1693.5	1015.3	-83.3	932.0
		-18.00	204.1	1489.9	1694.0	1015.6	-83.3	932.3
		-18.50	202.8	1523.6	1726.4	1035.0	-83.3	951.7
		-19.00	475.6	1548.3	2023.9	1213.4	-83.3	1130.0
		-19.50	806.4	1626.6	2433.0	1458.6	-83.3	1375.3
45 - Ontgraven t	2.70	-6.00	562.9	156.1	719.0	431.1	-86.0	345.1
		-6.50	595.4	242.2	837.6	502.2	-86.0	416.2
		-7.00	758.6	319.7	1078.4	646.5	-86.0	560.5
		-7.50	1035.8	406.4	1442.2	864.6	-86.0	778.6
		-8.00	1079.9	493.4	1573.3	943.2	-86.0	857.2
		-8.50	519.7	580.4	1100.1	659.6	-86.0	573.6
		-9.00	321.5	667.4	988.9	592.9	-86.0	506.9
		-9.50	194.5	754.4	948.9	568.9	-86.0	482.9
		-10.00	171.0	799.1	970.1	581.6	-86.0	495.6
		-10.50	126.5	820.0	946.5	567.4	-86.0	481.5
		-11.00	123.4	840.9	964.3	578.1	-86.0	492.1
		-11.50	106.5	850.3	956.9	573.7	-86.0	487.7
		-12.00	246.5	850.3	1096.9	657.6	-86.0	571.6
		-12.50	440.6	890.1	1330.6	797.7	-86.0	711.8
		-13.00	348.7	964.8	1313.5	787.4	-86.0	701.5
		-13.50	177.3	1051.8	1229.1	736.9	-86.0	650.9
		-14.00	64.2	1133.3	1197.5	717.9	-86.0	632.0
		-14.50	55.8	1146.9	1202.7	721.1	-86.0	635.1
		-15.00	57.1	1153.0	1210.1	725.5	-86.0	639.5



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
45 - Ontgraven t	2.70	-15.50	75.2	1159.3	1234.5	740.1	-86.0	654.1
		-16.00	80.2	1169.5	1249.7	749.2	-86.0	663.3
		-16.50	97.8	1181.7	1279.5	767.1	-86.0	681.1
		-17.00	73.8	1205.6	1279.4	767.0	-86.0	681.1
		-17.50	311.2	1220.6	1531.7	918.3	-86.0	832.3
		-18.00	490.5	1278.2	1768.7	1060.4	-86.0	974.4
		-18.50	558.8	1348.2	1907.0	1143.3	-86.0	1057.3
		-19.00	897.4	1431.5	2328.9	1396.2	-86.0	1310.3
		-19.50	999.8	1518.5	2518.3	1509.8	-86.0	1423.8
46 - Ontgraven t	2.70	-6.00	678.4	139.4	817.7	490.3	-86.0	404.3
		-6.50	757.5	226.4	983.8	589.8	-86.0	503.9
		-7.00	916.3	313.4	1229.6	737.2	-86.0	651.2
		-7.50	1100.6	400.4	1501.0	899.9	-86.0	813.9
		-8.00	1165.4	487.4	1652.8	990.9	-86.0	904.9
		-8.50	571.1	574.4	1145.5	686.7	-86.0	600.7
		-9.00	379.2	661.4	1040.5	623.8	-86.0	537.8
		-9.50	266.9	748.4	1015.3	608.7	-86.0	522.7
		-10.00	237.1	804.0	1041.1	624.1	-86.0	538.2
		-10.50	183.6	837.9	1021.6	612.5	-86.0	526.5
		-11.00	143.9	884.3	1028.2	616.4	-86.0	530.5
		-11.50	105.5	902.3	1007.8	604.2	-86.0	518.2
		-12.00	165.0	902.3	1067.2	639.8	-86.0	553.8
		-12.50	1005.1	949.9	1955.0	1172.1	-86.0	1086.1
		-13.00	405.5	1036.9	1442.4	864.8	-86.0	778.8
		-13.50	230.7	1123.9	1354.6	812.1	-86.0	726.2
		-14.00	69.3	1210.5	1279.8	767.2	-86.0	681.3
		-14.50	63.3	1223.5	1286.8	771.5	-86.0	685.5
		-15.00	64.1	1230.2	1294.3	776.0	-86.0	690.0
		-15.50	71.0	1237.0	1308.0	784.2	-86.0	698.2
		-16.00	79.5	1245.2	1324.7	794.2	-86.0	708.2
		-16.50	193.1	1263.7	1456.7	873.4	-86.0	787.4
		-17.00	605.0	1315.2	1920.2	1151.2	-86.0	1065.2
		-17.50	675.9	1402.2	2078.1	1245.8	-86.0	1159.9
		-18.00	722.0	1489.2	2211.1	1325.6	-86.0	1239.6
		-18.50	889.3	1576.2	2465.5	1478.1	-86.0	1392.1
		-19.00	1216.6	1663.2	2879.8	1726.5	-86.0	1640.5
		-19.50	1261.5	1750.2	3011.7	1805.6	-86.0	1719.6
		-20.00	1261.5	1837.2	3098.7	1857.7	-86.0	1771.7
		-20.50	1261.5	1924.2	3185.7	1909.9	-86.0	1823.9
47 - Ontgraven t	2.70	-6.00	540.4	103.9	644.4	386.3	-85.5	300.8
		-6.50	607.9	186.0	793.8	475.9	-85.5	390.5
		-7.00	769.9	270.3	1040.2	623.6	-85.5	538.2
		-7.50	931.7	357.3	1289.0	772.8	-85.5	687.3
		-8.00	970.1	444.3	1414.4	847.9	-85.5	762.5
		-8.50	718.7	531.3	1250.0	749.4	-85.5	664.0
		-9.00	403.0	618.3	1021.3	612.3	-85.5	526.8
		-9.50	214.4	705.3	919.7	551.4	-85.5	465.9
		-10.00	175.9	769.9	945.8	567.0	-85.5	481.6
		-10.50	162.6	802.7	965.2	578.7	-85.5	493.2
		-11.00	423.5	832.7	1256.2	753.1	-85.5	667.7
		-11.50	302.6	913.9	1216.5	729.3	-85.5	643.9
		-12.00	236.3	995.0	1231.2	738.2	-85.5	652.7
		-12.50	226.2	1035.8	1262.0	756.6	-85.5	671.2



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
47 - Ontgraven t	2.70	-13.00	208.7	1061.0	1269.7	761.2	-85.5	675.8
		-13.50	118.3	1112.7	1230.9	738.0	-85.5	652.5
		-14.00	55.2	1161.7	1217.0	729.6	-85.5	644.1
		-14.50	53.8	1168.2	1222.0	732.6	-85.5	647.2
		-15.00	55.3	1173.9	1229.2	736.9	-85.5	651.5
		-15.50	61.9	1180.0	1241.8	744.5	-85.5	659.1
		-16.00	63.1	1187.9	1251.0	750.0	-85.5	664.5
		-16.50	84.7	1199.7	1284.4	770.0	-85.5	684.6
		-17.00	64.9	1223.0	1287.9	772.1	-85.5	686.7
		-17.50	367.0	1231.3	1598.3	958.2	-85.5	872.7
		-18.00	619.4	1303.1	1922.5	1152.6	-85.5	1067.1
		-18.50	662.1	1390.1	2052.2	1230.3	-85.5	1144.9
		-19.00	288.0	1477.1	1765.1	1058.2	-85.5	972.8
		-19.50	227.4	1563.7	1791.1	1073.8	-85.5	988.3
		-20.00	141.4	1630.1	1771.5	1062.1	-85.5	976.6
48 - Ontgraven t	2.70	-6.00	470.5	103.9	574.4	344.4	-85.5	258.9
		-6.50	540.6	173.5	714.1	428.1	-85.5	342.7
		-7.00	713.9	248.8	962.8	577.2	-85.5	491.8
		-7.50	975.8	335.5	1311.3	786.2	-85.5	700.7
		-8.00	1053.4	422.5	1475.8	884.8	-85.5	799.3
		-8.50	1082.5	509.5	1592.0	954.4	-85.5	869.0
		-9.00	451.3	596.5	1047.8	628.2	-85.5	542.7
		-9.50	364.6	683.5	1048.1	628.4	-85.5	542.9
		-10.00	284.4	769.6	1054.0	631.9	-85.5	546.5
		-10.50	234.1	806.3	1040.4	623.7	-85.5	538.3
		-11.00	224.4	848.9	1073.3	643.5	-85.5	558.0
		-11.50	170.2	916.8	1086.9	651.6	-85.5	566.2
		-12.00	206.8	943.5	1150.3	689.6	-85.5	604.2
		-12.50	483.3	979.7	1463.0	877.1	-85.5	791.7
		-13.00	271.4	1066.5	1337.9	802.1	-85.5	716.7
		-13.50	126.9	1153.5	1280.5	767.7	-85.5	682.2
		-14.00	63.5	1205.3	1268.7	760.6	-85.5	675.2
		-14.50	63.3	1212.5	1275.8	764.9	-85.5	679.4
		-15.00	62.6	1219.4	1282.0	768.6	-85.5	683.1
		-15.50	70.5	1225.8	1296.3	777.2	-85.5	691.7
		-16.00	81.8	1233.8	1315.6	788.8	-85.5	703.3
		-16.50	139.2	1248.5	1387.7	832.0	-85.5	746.5
		-17.00	385.7	1302.8	1688.5	1012.3	-85.5	926.9
		-17.50	224.8	1389.8	1614.6	968.0	-85.5	882.5
		-18.00	153.1	1476.8	1629.9	977.2	-85.5	891.7
		-18.50	109.5	1518.3	1627.7	975.9	-85.5	890.4
		-19.00	138.4	1533.6	1672.0	1002.4	-85.5	916.9
		-19.50	114.7	1561.9	1676.5	1005.1	-85.5	919.7
49 - Ontgraven t	2.70	-6.00	769.5	79.3	848.8	508.9	-96.7	412.2
		-6.50	871.4	166.3	1037.8	622.2	-96.7	525.5
		-7.00	1023.7	253.3	1277.0	765.6	-96.7	668.9
		-7.50	1261.5	340.3	1601.8	960.3	-96.7	863.7
		-8.00	1261.5	427.3	1688.8	1012.5	-96.7	915.8
		-8.50	574.1	514.3	1088.4	652.5	-96.7	555.9
		-9.00	359.6	601.3	960.9	576.1	-96.7	479.4
		-9.50	230.7	688.3	919.0	550.9	-96.7	454.3
		-10.00	205.4	731.7	937.2	561.8	-96.7	465.2
		-10.50	359.1	759.2	1118.3	670.4	-96.7	573.8



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
49 - Ontgraven t	2.70	-11.00	431.6	826.6	1258.2	754.3	-96.7	657.7
		-11.50	295.5	911.6	1207.1	723.7	-96.7	627.0
		-12.00	220.7	990.5	1211.2	726.1	-96.7	629.5
		-12.50	202.3	1024.3	1226.5	735.3	-96.7	638.7
		-13.00	164.4	1064.8	1229.2	736.9	-96.7	640.3
		-13.50	62.2	1134.2	1196.4	717.3	-96.7	620.6
		-14.00	51.8	1149.4	1201.3	720.2	-96.7	623.5
		-14.50	55.3	1154.8	1210.1	725.5	-96.7	628.8
		-15.00	62.6	1160.9	1223.5	733.5	-96.7	636.9
		-15.50	73.8	1168.5	1242.4	744.8	-96.7	648.2
		-16.00	93.3	1177.9	1271.2	762.1	-96.7	665.5
		-16.50	257.6	1212.0	1469.5	881.0	-96.7	784.4
		-17.00	395.4	1264.6	1660.0	995.2	-96.7	898.5
		-17.50	300.2	1343.6	1643.8	985.5	-96.7	888.8
		-18.00	250.8	1422.3	1673.1	1003.0	-96.7	906.4
		-18.50	259.5	1459.6	1719.1	1030.7	-96.7	934.0
		-19.00	403.0	1495.0	1898.0	1137.9	-96.7	1041.2
		-19.50	228.1	1557.1	1785.2	1070.2	-96.7	973.6

REKENGEGEVENS G4 Kelder320

Berekening : Ontwerpend
 Rekenmethode : Drukpalen volgens NEN-EN 1997-1, art. 7.6.2
 Sondering(en) : 25 - Ontgraven tot 2.70, 26 - Ontgraven tot 2.70
 : 27 - Ontgraven tot 2.70, 28 - Ontgraven tot 2.70
 : 29 - Ontgraven tot 2.70, 30 - Ontgraven tot 2.70
 : 31 - Ontgraven tot 2.70, 32 - Ontgraven tot 2.70
 : 33 - Ontgraven tot 2.70, 34 - Ontgraven tot 2.70
 : 35 - Ontgraven tot 2.70, 36 - Ontgraven tot 2.70
 : 37 - Ontgraven tot 2.70, 38 - Ontgraven tot 2.70
 : 39 - Ontgraven tot 2.70, 40 - Ontgraven tot 2.70
 : 41 - Ontgraven tot 2.70, 42 - Ontgraven tot 2.70
 : 43 - Ontgraven tot 2.70, 44 - Ontgraven tot 2.70
 : 45 - Ontgraven tot 2.70, 46 - Ontgraven tot 2.70
 : 47 - Ontgraven tot 2.70, 48 - Ontgraven tot 2.70
 : 49 - Ontgraven tot 2.70

Stijf bouwwerk : NEE
 Paalgroep : NEE
 Aantal sonderingen : 25
 Factor ξ_3 ($n=1$) : 1.39 (handmatig)
 Factor ξ_3 (gem) : 1.39 (handmatig)
 Factor ξ_4 (min) : 1.39 (handmatig)
 Weerstandsfactor γ_R : 1.20
 $\gamma_{f,nk}$: 1.0
 $R_{s;cal;max;i}$ begrenzen op $0.75 \cdot R_{b;cal;max;i}$: NEE
 UGT draagvermogen zonder negatieve kleef : NEE

Paal : #320
 Niveau paalkop [m] : N.A.P. 4.60
 Bovenbel. [kN/m²] : 0.00



PAALPUNTNIVEAUS #320

Alle niveaus/hoogtes/peilmaten zijn t.o.v. : N.A.P.

Nr	Beginniveau [m]	Eindniveau [m]	Stapgrootte [m]
1	-6.00	-21.00	0.50

SAMENVATTINGSTABEL G4 Kelder320 (n=1)

Uitgangspunten

- paal	: #320
- paaltype	: Geheide paal (beton)
- schachtafmeting	: 320 x 320
Paalklassefactor α_p	: 0.70
Factor α_s (tabel 7.c EC 7.1)	: 0.010 (zandlagen; voor kleilagen zie tabel 7.d)
Correlatiefactor $\xi_{3(n=1)}$: 1.39

Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
25 - Ontgraven t	2.70	-6.00	674.8	67.6	742.4	445.1	-107.3	337.7
		-6.50	904.9	163.5	1068.5	640.6	-107.3	533.2
		-7.00	885.2	259.5	1144.8	686.3	-107.3	579.0
		-7.50	960.4	355.5	1315.9	788.9	-107.3	681.6
		-8.00	885.1	451.5	1336.6	801.3	-107.3	694.0
		-8.50	956.1	541.8	1497.9	898.0	-107.3	790.7
		-9.00	382.1	637.8	1019.9	611.4	-107.3	504.1
		-9.50	215.5	733.8	949.2	569.1	-107.3	461.7
		-10.00	125.7	823.4	949.1	569.0	-107.3	461.7
		-10.50	98.9	842.9	941.8	564.6	-107.3	457.3
		-11.00	117.3	842.9	960.2	575.6	-107.3	468.3
		-11.50	113.4	842.9	956.3	573.3	-107.3	466.0
		-12.00	140.2	842.9	983.1	589.4	-107.3	482.1
		-12.50	568.3	864.0	1432.3	858.7	-107.3	751.3
		-13.00	325.8	957.0	1282.9	769.1	-107.3	661.8
		-13.50	195.5	1053.0	1248.5	748.5	-107.3	641.2
		-14.00	80.0	1140.3	1220.3	731.6	-107.3	624.2
		-14.50	74.8	1153.1	1227.9	736.1	-107.3	628.8
		-15.00	73.9	1160.6	1234.5	740.1	-107.3	632.8
		-15.50	81.5	1167.9	1249.4	749.0	-107.3	641.7
		-16.00	85.3	1176.2	1261.5	756.3	-107.3	648.9
26 - Ontgraven t	2.70	-16.50	158.0	1191.1	1349.1	808.8	-107.3	701.5
		-17.00	602.0	1233.7	1835.7	1100.5	-107.3	993.2
		-17.50	728.1	1318.1	2046.2	1226.7	-107.3	1119.4
		-18.00	816.2	1404.6	2220.9	1331.4	-107.3	1224.1
		-18.50	687.1	1493.8	2180.8	1307.4	-107.3	1200.1
		-19.00	642.9	1581.9	2224.8	1333.8	-107.3	1226.5
		-6.00	707.3	130.9	838.1	502.5	-96.7	405.8
		-6.50	762.3	226.9	989.1	593.0	-96.7	496.3
		-7.00	822.5	322.9	1145.4	686.7	-96.7	590.0
		-7.50	611.9	417.7	1029.7	617.3	-96.7	520.6
		-8.00	609.5	513.7	1123.3	673.4	-96.7	576.7
		-8.50	473.2	607.3	1080.4	647.7	-96.7	551.0
		-9.00	654.6	670.7	1325.3	794.5	-96.7	697.8
		-9.50	512.9	749.8	1262.7	757.0	-96.7	660.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
26 - Ontgraven t	2.70	-10.00	230.6	824.8	1055.4	632.7	-96.7	536.0
		-10.50	132.6	897.7	1030.3	617.7	-96.7	521.0
		-11.00	104.7	940.6	1045.3	626.7	-96.7	530.0
		-11.50	90.6	958.0	1048.5	628.6	-96.7	531.9
		-12.00	142.1	967.8	1109.9	665.4	-96.7	568.7
		-12.50	682.0	999.7	1681.7	1008.2	-96.7	911.5
		-13.00	525.5	1094.5	1619.9	971.2	-96.7	874.5
		-13.50	311.0	1190.5	1501.5	900.2	-96.7	803.5
		-14.00	154.5	1286.5	1441.0	863.9	-96.7	767.2
		-14.50	81.8	1346.0	1427.8	856.0	-96.7	759.3
		-15.00	80.3	1354.7	1435.0	860.3	-96.7	763.6
		-15.50	81.2	1362.4	1443.6	865.5	-96.7	768.8
		-16.00	85.5	1370.2	1455.7	872.7	-96.7	776.0
		-16.50	287.2	1383.1	1670.2	1001.3	-96.7	904.6
		-17.00	693.1	1451.2	2144.2	1285.5	-96.7	1188.8
		-17.50	363.0	1547.2	1910.1	1145.2	-96.7	1048.5
		-18.00	284.6	1643.2	1927.8	1155.8	-96.7	1059.1
		-18.50	166.4	1730.9	1897.3	1137.5	-96.7	1040.8
		-19.00	447.6	1756.9	2204.5	1321.6	-96.7	1224.9
27 - Ontgraven t	2.70	-6.00	535.4	61.2	596.6	357.6	-106.7	251.0
		-6.50	650.9	143.9	794.9	476.5	-106.7	369.9
		-7.00	698.4	231.5	930.0	557.5	-106.7	450.9
		-7.50	763.1	318.6	1081.7	648.5	-106.7	541.9
		-8.00	831.2	400.2	1231.4	738.3	-106.7	631.6
		-8.50	742.8	488.4	1231.2	738.1	-106.7	631.5
		-9.00	442.7	584.4	1027.1	615.7	-106.7	509.1
		-9.50	349.9	680.4	1030.2	617.6	-106.7	511.0
		-10.00	230.3	759.7	990.0	593.5	-106.7	486.9
		-10.50	270.2	796.8	1066.9	639.7	-106.7	533.0
		-11.00	268.8	845.4	1114.2	668.0	-106.7	561.3
		-11.50	204.8	911.8	1116.6	669.4	-106.7	562.8
		-12.00	274.6	938.8	1213.4	727.5	-106.7	620.8
		-12.50	647.0	993.0	1640.1	983.3	-106.7	876.6
		-13.00	309.3	1078.8	1388.1	832.2	-106.7	725.5
		-13.50	210.4	1164.6	1375.0	824.3	-106.7	717.7
		-14.00	103.6	1250.4	1354.0	811.7	-106.7	705.1
		-14.50	82.4	1277.9	1360.3	815.5	-106.7	708.8
		-15.00	85.6	1285.7	1371.3	822.1	-106.7	715.5
28 - Ontgraven t	2.70	-15.50	95.8	1294.5	1390.3	833.5	-106.7	726.9
		-16.00	96.5	1305.1	1401.6	840.3	-106.7	733.7
		-16.50	200.0	1316.6	1516.7	909.3	-106.7	802.6
		-17.00	508.1	1348.8	1856.9	1113.3	-106.7	1006.6
		-17.50	519.0	1419.3	1938.3	1162.1	-106.7	1055.4
		-18.00	758.3	1489.4	2247.7	1347.5	-106.7	1240.9
		-18.50	543.0	1582.4	2125.5	1274.3	-106.7	1167.6
		-19.00	330.7	1678.4	2009.1	1204.5	-106.7	1097.8
		-19.50	278.6	1761.7	2040.4	1223.2	-106.7	1116.6
		-6.00	497.8	50.4	548.2	328.6	-107.3	221.4
		-6.50	629.3	129.9	759.2	455.2	-107.3	347.9
		-7.00	661.2	215.2	876.4	525.4	-107.3	418.1
		-7.50	727.2	300.4	1027.6	616.1	-107.3	508.8
		-8.00	801.3	385.2	1186.4	711.3	-107.3	604.0
		-8.50	852.9	474.2	1327.1	795.6	-107.3	688.3



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
28 - Ontgraven t	2.70	-9.00	654.2	570.2	1224.4	734.0	-107.3	626.8
		-9.50	445.9	666.2	1112.1	666.7	-107.3	559.5
		-10.00	198.8	750.3	949.1	569.0	-107.3	461.8
		-10.50	142.1	802.1	944.2	566.1	-107.3	458.8
		-11.00	119.0	843.6	962.5	577.1	-107.3	469.8
		-11.50	94.0	859.3	953.3	571.5	-107.3	464.2
		-12.00	114.2	859.3	973.4	583.6	-107.3	476.3
		-12.50	203.3	866.8	1070.1	641.5	-107.3	534.3
		-13.00	631.2	919.0	1550.2	929.4	-107.3	822.1
		-13.50	397.3	1015.0	1412.2	846.7	-107.3	739.4
		-14.00	208.2	1111.0	1319.1	790.8	-107.3	683.6
		-14.50	91.9	1186.5	1278.5	766.5	-107.3	659.2
		-15.00	88.8	1197.0	1285.7	770.8	-107.3	663.5
		-15.50	96.0	1205.6	1301.6	780.3	-107.3	673.1
		-16.00	96.4	1215.5	1311.9	786.5	-107.3	679.2
		-16.50	169.7	1225.7	1395.4	836.6	-107.3	729.3
		-17.00	204.7	1265.3	1470.0	881.3	-107.3	774.0
		-17.50	523.1	1303.9	1827.0	1095.3	-107.3	988.1
		-18.00	704.0	1382.6	2086.6	1251.0	-107.3	1143.7
		-18.50	702.3	1478.6	2180.9	1307.5	-107.3	1200.2
		-19.00	570.8	1574.6	2145.4	1286.2	-107.3	1178.9
		-19.50	445.0	1647.6	2092.5	1254.5	-107.3	1147.2
29 - Ontgraven t	2.70	-6.00	677.2	133.8	811.0	486.2	-94.3	391.9
		-6.50	685.1	229.8	914.9	548.5	-94.3	454.2
		-7.00	748.3	323.4	1071.7	642.5	-94.3	548.2
		-7.50	804.6	410.2	1214.8	728.3	-94.3	634.0
		-8.00	960.6	492.3	1452.9	871.1	-94.3	776.8
		-8.50	573.6	587.0	1160.7	695.8	-94.3	601.6
		-9.00	278.4	683.0	961.5	576.4	-94.3	482.1
		-9.50	212.1	777.3	989.4	593.2	-94.3	498.9
		-10.00	154.6	833.8	988.4	592.6	-94.3	498.3
		-10.50	182.5	851.6	1034.1	619.9	-94.3	525.6
		-11.00	137.4	896.3	1033.7	619.7	-94.3	525.4
		-11.50	105.9	940.8	1046.6	627.5	-94.3	533.2
		-12.00	86.5	959.8	1046.4	627.3	-94.3	533.0
		-12.50	318.3	973.9	1292.2	774.7	-94.3	680.4
		-13.00	387.4	1041.8	1429.2	856.8	-94.3	762.5
		-13.50	250.8	1137.8	1388.6	832.5	-94.3	738.2
		-14.00	110.7	1233.8	1344.5	806.0	-94.3	711.7
		-14.50	81.3	1269.1	1350.4	809.6	-94.3	715.3
		-15.00	80.2	1277.5	1357.6	813.9	-94.3	719.6
		-15.50	88.7	1285.5	1374.2	823.9	-94.3	729.6
		-16.00	95.3	1295.7	1391.0	833.9	-94.3	739.6
		-16.50	217.6	1308.4	1526.0	914.9	-94.3	820.6
		-17.00	466.5	1351.0	1817.5	1089.6	-94.3	995.3
		-17.50	314.9	1425.0	1740.0	1043.2	-94.3	948.9
		-18.00	303.4	1501.8	1805.1	1082.2	-94.3	987.9
		-18.50	153.7	1574.1	1727.9	1035.9	-94.3	941.6
		-19.00	717.2	1612.4	2329.6	1396.6	-94.3	1302.3
30 - Ontgraven t	2.70	-6.00	522.1	35.4	557.6	334.3	-109.2	225.0
		-6.50	709.0	123.7	832.7	499.2	-109.2	390.0
		-7.00	746.6	219.4	966.0	579.1	-109.2	469.9
		-7.50	809.8	315.0	1124.9	674.4	-109.2	565.1



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
30 - Ontgraven t	2.70	-8.00	869.0	410.7	1279.7	767.2	-109.2	658.0
		-8.50	937.0	503.2	1440.3	863.5	-109.2	754.2
		-9.00	1102.5	595.1	1697.6	1017.7	-109.2	908.5
		-9.50	1121.1	691.1	1812.2	1086.5	-109.2	977.2
		-10.00	479.6	787.1	1266.7	759.4	-109.2	650.2
		-10.50	389.0	883.1	1272.1	762.6	-109.2	653.4
		-11.00	285.0	979.1	1264.1	757.9	-109.2	648.6
		-11.50	294.6	1023.3	1317.9	790.1	-109.2	680.8
		-12.00	371.3	1062.1	1433.4	859.4	-109.2	750.1
		-12.50	539.7	1118.9	1658.6	994.3	-109.2	885.1
		-13.00	312.9	1210.7	1523.6	913.4	-109.2	804.2
		-13.50	174.8	1306.7	1481.5	888.2	-109.2	779.0
		-14.00	97.4	1381.8	1479.2	886.8	-109.2	777.6
		-14.50	93.8	1394.4	1488.2	892.2	-109.2	783.0
		-15.00	93.8	1403.3	1497.1	897.5	-109.2	788.3
		-15.50	103.5	1412.3	1515.7	908.7	-109.2	799.5
		-16.00	130.7	1422.8	1553.6	931.4	-109.2	822.2
		-16.50	287.0	1463.6	1750.5	1049.5	-109.2	940.2
		-17.00	715.8	1527.9	2243.7	1345.2	-109.2	1235.9
		-17.50	919.5	1623.9	2543.4	1524.8	-109.2	1415.6
31 - Ontgraven t	2.70	-18.00	931.0	1719.9	2650.9	1589.2	-109.2	1480.0
		-18.50	943.4	1815.9	2759.3	1654.3	-109.2	1545.0
		-19.00	1410.7	1911.7	3322.3	1991.8	-109.2	1882.6
		-19.50	1374.0	2007.7	3381.7	2027.4	-109.2	1918.1
		-6.00	546.1	49.5	595.5	357.0	-106.7	250.4
		-6.50	802.5	140.0	942.5	565.1	-106.7	458.4
		-7.00	901.1	236.0	1137.0	681.7	-106.7	575.0
		-7.50	1028.4	332.0	1360.4	815.6	-106.7	708.9
		-8.00	1126.5	428.0	1554.5	932.0	-106.7	825.3
		-8.50	1200.0	524.0	1724.0	1033.6	-106.7	926.9
		-9.00	1415.1	620.0	2035.1	1220.1	-106.7	1113.4
		-9.50	1468.8	716.0	2184.8	1309.8	-106.7	1203.2
		-10.00	1193.1	812.0	2005.1	1202.1	-106.7	1095.4
		-10.50	490.7	908.0	1398.7	838.6	-106.7	731.9
		-11.00	340.8	1004.0	1344.8	806.2	-106.7	699.6
		-11.50	270.2	1098.0	1368.2	820.2	-106.7	713.6
		-12.00	237.0	1146.9	1384.0	829.7	-106.7	723.1
		-12.50	351.1	1174.1	1525.3	914.4	-106.7	807.8
		-13.00	252.0	1233.9	1485.9	890.8	-106.7	784.2
		-13.50	147.9	1310.7	1458.6	874.4	-106.7	767.8
		-14.00	83.1	1368.9	1452.0	870.5	-106.7	763.8
		-14.50	79.3	1380.1	1459.4	875.0	-106.7	768.3
		-15.00	82.5	1388.4	1470.9	881.9	-106.7	775.2
		-15.50	87.6	1396.8	1484.4	889.9	-106.7	783.3
		-16.00	94.3	1405.7	1500.0	899.3	-106.7	792.6
		-16.50	378.4	1436.6	1815.0	1088.1	-106.7	981.5
		-17.00	725.3	1512.7	2238.0	1341.7	-106.7	1235.1
		-17.50	819.7	1604.5	2424.2	1453.3	-106.7	1346.7
		-18.00	526.9	1700.5	2227.4	1335.4	-106.7	1228.7
		-18.50	501.3	1796.5	2297.7	1377.5	-106.7	1270.9
		-19.00	396.0	1882.7	2278.7	1366.2	-106.7	1259.5



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
32 - Ontgraven t	2.70	-6.00	942.1	94.4	1036.6	621.4	-97.3	524.2
		-6.50	966.8	190.4	1157.3	693.8	-97.3	596.5
		-7.00	1025.2	286.4	1311.7	786.4	-97.3	689.1
		-7.50	1056.3	382.4	1438.7	862.6	-97.3	765.3
		-8.00	1084.8	478.4	1563.2	937.2	-97.3	839.9
		-8.50	541.7	574.4	1116.2	669.2	-97.3	571.9
		-9.00	424.3	670.4	1094.8	656.3	-97.3	559.1
		-9.50	294.7	766.4	1061.1	636.2	-97.3	538.9
		-10.00	144.1	822.4	966.5	579.5	-97.3	482.2
		-10.50	107.7	858.3	966.0	579.1	-97.3	481.8
		-11.00	81.9	892.1	974.0	583.9	-97.3	486.6
		-11.50	78.3	896.0	974.3	584.1	-97.3	486.8
		-12.00	141.4	896.0	1037.4	621.9	-97.3	524.6
		-12.50	364.2	908.4	1272.6	762.9	-97.3	665.7
		-13.00	386.7	968.9	1355.5	812.7	-97.3	715.4
		-13.50	278.1	1045.1	1323.2	793.3	-97.3	696.0
		-14.00	106.4	1121.9	1228.3	736.4	-97.3	639.1
		-14.50	74.7	1153.7	1228.4	736.4	-97.3	639.1
		-15.00	75.5	1161.0	1236.5	741.3	-97.3	644.0
		-15.50	79.5	1168.2	1247.7	748.0	-97.3	650.7
		-16.00	79.3	1176.4	1255.6	752.8	-97.3	655.5
		-16.50	398.6	1192.0	1590.6	953.6	-97.3	856.3
		-17.00	501.0	1270.9	1771.9	1062.3	-97.3	965.0
		-17.50	452.2	1366.9	1819.1	1090.6	-97.3	993.3
		-18.00	372.9	1462.9	1835.9	1100.7	-97.3	1003.4
		-18.50	461.4	1521.8	1983.3	1189.0	-97.3	1091.7
		-19.00	374.6	1598.6	1973.2	1183.0	-97.3	1085.7
		-19.50	309.9	1665.4	1975.2	1184.2	-97.3	1086.9
33 - Ontgraven t	2.70	-6.00	555.8	54.8	610.6	366.1	-104.1	262.0
		-6.50	731.3	145.7	877.0	525.8	-104.1	421.6
		-7.00	553.0	241.7	794.7	476.4	-104.1	372.3
		-7.50	586.9	337.7	924.5	554.3	-104.1	450.2
		-8.00	552.2	433.7	985.9	591.0	-104.1	486.9
		-8.50	468.4	505.9	974.3	584.1	-104.1	480.0
		-9.00	454.1	581.1	1035.2	620.6	-104.1	516.5
		-9.50	402.8	657.9	1060.7	635.9	-104.1	531.8
		-10.00	402.8	704.2	1107.0	663.7	-104.1	559.5
		-10.50	271.5	769.5	1041.0	624.1	-104.1	520.0
		-11.00	234.0	842.4	1076.3	645.3	-104.1	541.2
		-11.50	156.5	899.6	1056.1	633.2	-104.1	529.1
		-12.00	397.5	916.8	1314.2	787.9	-104.1	683.8
		-12.50	424.5	992.9	1417.4	849.8	-104.1	745.7
		-13.00	283.6	1088.9	1372.5	822.8	-104.1	718.7
		-13.50	134.8	1184.9	1319.8	791.2	-104.1	687.1
		-14.00	93.3	1230.0	1323.3	793.3	-104.1	689.2
		-14.50	91.5	1240.5	1332.0	798.5	-104.1	694.4
		-15.00	97.7	1250.2	1347.9	808.1	-104.1	704.0
		-15.50	98.0	1260.8	1358.8	814.6	-104.1	710.5
		-16.00	99.3	1270.6	1370.0	821.3	-104.1	717.2
		-16.50	267.4	1283.4	1550.8	929.7	-104.1	825.6
		-17.00	538.2	1335.5	1873.7	1123.3	-104.1	1019.2
		-17.50	517.8	1412.3	1930.2	1157.2	-104.1	1053.1
		-18.00	374.0	1487.7	1861.6	1116.1	-104.1	1012.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
33 - Ontgraven t	2.70	-18.50	286.3	1557.0	1843.3	1105.1	-104.1	1001.0
		-19.00	261.4	1629.0	1890.4	1133.4	-104.1	1029.2
		-19.50	233.2	1683.6	1916.8	1149.2	-104.1	1045.1
34 - Ontgraven t	2.70	-6.00	648.2	119.8	767.9	460.4	-94.3	366.1
		-6.50	570.2	213.0	783.1	469.5	-94.3	375.2
		-7.00	239.3	306.2	545.4	327.0	-94.3	232.7
		-7.50	207.2	392.4	599.7	359.5	-94.3	265.2
		-8.00	119.1	466.3	585.4	351.0	-94.3	256.7
		-8.50	272.7	483.4	756.1	453.3	-94.3	359.0
		-9.00	336.2	527.9	864.0	518.0	-94.3	423.7
		-9.50	343.4	588.6	932.0	558.8	-94.3	464.5
		-10.00	341.2	647.6	988.8	592.8	-94.3	498.5
		-10.50	325.9	702.0	1027.9	616.2	-94.3	521.9
		-11.00	354.1	739.7	1093.8	655.7	-94.3	561.4
		-11.50	363.7	785.6	1149.4	689.1	-94.3	594.8
		-12.00	313.0	846.5	1159.5	695.1	-94.3	600.8
		-12.50	549.3	879.9	1429.1	856.8	-94.3	762.5
		-13.00	253.6	951.6	1205.2	722.5	-94.3	628.2
		-13.50	168.5	1025.4	1193.9	715.7	-94.3	621.4
		-14.00	103.4	1092.7	1196.0	717.0	-94.3	622.8
		-14.50	90.7	1115.5	1206.1	723.1	-94.3	628.8
		-15.00	88.5	1125.2	1213.8	727.7	-94.3	633.4
		-15.50	95.8	1133.7	1229.5	737.1	-94.3	642.8
		-16.00	101.2	1143.7	1244.9	746.4	-94.3	652.1
		-16.50	662.0	1172.0	1833.9	1099.5	-94.3	1005.2
		-17.00	899.4	1267.4	2166.8	1299.0	-94.3	1204.7
		-17.50	508.4	1363.4	1871.8	1122.2	-94.3	1027.9
		-18.00	428.5	1459.4	1887.9	1131.8	-94.3	1037.5
		-18.50	335.1	1555.4	1890.5	1133.4	-94.3	1039.1
		-19.00	374.7	1611.8	1986.4	1190.9	-94.3	1096.6
		-19.50	424.0	1681.0	2105.0	1262.0	-94.3	1167.7
35 - Ontgraven t	2.70	-6.00	922.4	209.7	1132.1	678.7	-90.0	588.7
		-6.50	1012.3	305.7	1318.0	790.2	-90.0	700.2
		-7.00	1279.1	401.7	1680.8	1007.7	-90.0	917.7
		-7.50	1464.0	497.7	1961.8	1176.1	-90.0	1086.1
		-8.00	1270.6	593.7	1864.3	1117.7	-90.0	1027.7
		-8.50	969.3	689.7	1659.1	994.6	-90.0	904.6
		-9.00	393.2	785.7	1179.0	706.8	-90.0	616.8
		-9.50	274.4	881.7	1156.2	693.1	-90.0	603.1
		-10.00	188.3	969.9	1158.2	694.4	-90.0	604.4
		-10.50	179.3	1010.0	1189.3	713.0	-90.0	623.0
		-11.00	170.4	1046.1	1216.5	729.3	-90.0	639.3
		-11.50	142.1	1069.8	1211.9	726.6	-90.0	636.6
		-12.00	357.9	1069.8	1427.8	856.0	-90.0	766.0
		-12.50	679.9	1122.6	1802.6	1080.7	-90.0	990.7
		-13.00	674.0	1211.1	1885.2	1130.2	-90.0	1040.2
		-13.50	683.5	1296.5	1980.0	1187.0	-90.0	1097.0
		-14.00	90.0	1378.1	1468.2	880.2	-90.0	790.2
		-14.50	62.3	1403.8	1466.1	879.0	-90.0	789.0
		-15.00	60.7	1410.8	1471.5	882.2	-90.0	792.2
		-15.50	61.2	1416.4	1477.6	885.9	-90.0	795.9
		-16.00	77.8	1422.4	1500.2	899.4	-90.0	809.4
		-16.50	211.5	1439.9	1651.4	990.0	-90.0	900.0



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
35 - Ontgraven t	2.70	-17.00	425.9	1488.2	1914.1	1147.6	-90.0	1057.6
		-17.50	279.6	1581.9	1861.5	1116.0	-90.0	1026.0
		-18.00	180.7	1674.0	1854.7	1111.9	-90.0	1021.9
		-18.50	138.5	1722.3	1860.8	1115.6	-90.0	1025.6
		-19.00	220.4	1742.2	1962.6	1176.6	-90.0	1086.6
		-19.50	232.7	1793.9	2026.6	1215.0	-90.0	1125.0
36 - Ontgraven t	2.70	-6.00	608.7	75.4	684.1	410.2	-101.6	308.5
		-6.50	744.6	168.9	913.6	547.7	-101.6	446.1
		-7.00	820.6	264.9	1085.6	650.8	-101.6	549.2
		-7.50	934.3	360.9	1295.2	776.5	-101.6	674.9
		-8.00	741.8	456.9	1198.8	718.7	-101.6	617.1
		-8.50	625.1	552.9	1178.0	706.3	-101.6	604.7
		-9.00	395.1	642.9	1038.0	622.3	-101.6	520.7
		-9.50	379.2	711.6	1090.8	654.0	-101.6	552.4
		-10.00	342.7	772.8	1115.5	668.7	-101.6	567.1
		-10.50	407.6	808.9	1216.5	729.3	-101.6	627.7
		-11.00	340.9	877.6	1218.5	730.5	-101.6	628.9
		-11.50	278.9	934.3	1213.1	727.3	-101.6	625.7
		-12.00	497.7	973.5	1471.2	882.0	-101.6	780.4
		-12.50	1140.0	1053.3	2193.3	1314.9	-101.6	1213.3
		-13.00	458.1	1149.3	1607.3	963.6	-101.6	862.0
		-13.50	276.8	1245.3	1522.0	912.5	-101.6	810.9
		-14.00	106.7	1341.3	1448.0	868.1	-101.6	766.5
		-14.50	77.4	1376.7	1454.1	871.7	-101.6	770.1
		-15.00	80.1	1384.8	1465.0	878.3	-101.6	776.7
		-15.50	81.7	1392.9	1474.6	884.1	-101.6	782.5
		-16.00	90.3	1401.9	1492.2	894.6	-101.6	793.0
37 - Ontgraven t	2.70	-6.00	690.0	87.3	777.3	466.0	-101.6	364.4
		-6.50	737.4	183.3	920.7	552.0	-101.6	450.4
		-7.00	791.0	279.3	1070.3	641.7	-101.6	540.1
		-7.50	783.9	375.1	1159.0	694.9	-101.6	593.2
		-8.00	648.6	465.1	1113.8	667.7	-101.6	566.1
		-8.50	449.6	553.6	1003.2	601.4	-101.6	499.8
		-9.00	311.2	638.0	949.2	569.1	-101.6	467.5
		-9.50	287.8	698.3	986.1	591.2	-101.6	489.6
		-10.00	287.9	736.9	1024.8	614.4	-101.6	512.8
		-10.50	270.5	775.9	1046.4	627.4	-101.6	525.8
		-11.00	409.4	821.1	1230.5	737.7	-101.6	636.1
		-11.50	353.8	897.9	1251.7	750.4	-101.6	648.8
		-12.00	316.3	969.9	1286.1	771.0	-101.6	669.4
		-12.50	309.4	1011.0	1320.4	791.6	-101.6	690.0
		-13.00	412.2	1064.0	1476.2	885.0	-101.6	783.4
		-13.50	238.4	1160.0	1398.4	838.4	-101.6	736.8
		-14.00	89.9	1255.3	1345.1	806.4	-101.6	704.8
		-14.50	69.1	1282.9	1352.0	810.6	-101.6	709.0
		-15.00	70.5	1289.6	1360.1	815.4	-101.6	713.8
		-15.50	72.5	1296.4	1368.9	820.7	-101.6	719.1
		-16.00	79.0	1303.4	1382.4	828.8	-101.6	727.1
		-16.50	151.7	1320.6	1472.3	882.7	-101.6	781.1
		-17.00	124.6	1355.3	1479.9	887.2	-101.6	785.6
		-17.50	262.7	1393.0	1655.7	992.6	-101.6	891.0
		-18.00	192.6	1466.2	1658.8	994.5	-101.6	892.9
		-18.50	206.3	1491.9	1698.2	1018.1	-101.6	916.5



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
37 - Ontgraven t	2.70	-19.00	163.1	1548.7	1711.8	1026.3	-101.6	924.7
		-19.50	147.6	1579.6	1727.2	1035.5	-101.6	933.9
38 - Ontgraven t	2.70	-6.00	584.3	114.3	698.6	418.8	-96.7	322.1
		-6.50	672.7	195.3	867.9	520.3	-96.7	423.6
		-7.00	935.6	284.2	1219.8	731.3	-96.7	634.6
		-7.50	1085.8	380.2	1466.0	878.9	-96.7	782.2
		-8.00	1388.1	476.2	1864.3	1117.7	-96.7	1021.0
		-8.50	1186.5	572.2	1758.8	1054.4	-96.7	957.7
		-9.00	1073.9	668.2	1742.2	1044.5	-96.7	947.8
		-9.50	583.6	764.2	1347.8	808.1	-96.7	711.4
		-10.00	505.1	858.9	1364.0	817.7	-96.7	721.0
		-10.50	351.9	939.9	1291.8	774.5	-96.7	677.8
		-11.00	329.9	1000.9	1330.8	797.8	-96.7	701.1
		-11.50	312.9	1057.2	1370.1	821.4	-96.7	724.7
		-12.00	239.4	1112.0	1351.4	810.2	-96.7	713.5
		-12.50	371.3	1142.8	1514.1	907.7	-96.7	811.0
		-13.00	240.2	1214.2	1454.4	871.9	-96.7	775.2
		-13.50	113.7	1291.0	1404.7	842.2	-96.7	745.5
		-14.00	87.2	1328.1	1415.3	848.5	-96.7	751.8
		-14.50	84.8	1338.4	1423.2	853.2	-96.7	756.5
		-15.00	90.5	1346.8	1437.2	861.7	-96.7	765.0
		-15.50	91.6	1356.1	1447.7	867.9	-96.7	771.2
		-16.00	116.8	1365.2	1482.0	888.5	-96.7	791.8
		-16.50	623.7	1388.7	2012.4	1206.5	-96.7	1109.8
		-17.00	588.9	1471.1	2060.0	1235.0	-96.7	1138.3
		-17.50	510.3	1554.6	2064.8	1237.9	-96.7	1141.2
		-18.00	844.0	1631.4	2475.4	1484.1	-96.7	1387.4
		-18.50	1033.0	1724.0	2757.0	1652.9	-96.7	1556.2
		-19.00	851.2	1820.0	2671.3	1601.5	-96.7	1504.8
		-19.50	1360.3	1914.2	3274.5	1963.1	-96.7	1866.4
39 - Ontgraven t	2.70	-6.00	665.3	148.1	813.5	487.7	-91.9	395.8
		-6.50	862.5	241.2	1103.8	661.7	-91.9	569.8
		-7.00	960.0	337.2	1297.3	777.7	-91.9	685.8
		-7.50	1037.9	433.2	1471.1	882.0	-91.9	790.0
		-8.00	1153.0	529.2	1682.2	1008.5	-91.9	916.6
		-8.50	1401.1	625.2	2026.4	1214.8	-91.9	1122.9
		-9.00	1392.4	721.2	2113.7	1267.2	-91.9	1175.2
		-9.50	1050.8	817.2	1868.1	1119.9	-91.9	1028.0
		-10.00	476.9	913.2	1390.2	833.4	-91.9	741.5
		-10.50	320.7	1009.2	1330.0	797.3	-91.9	705.4
		-11.00	264.4	1094.9	1359.3	814.9	-91.9	723.0
		-11.50	240.1	1133.1	1373.2	823.3	-91.9	731.4
		-12.00	433.2	1160.6	1593.8	955.5	-91.9	863.6
		-12.50	538.6	1236.1	1774.7	1064.0	-91.9	972.0
		-13.00	352.5	1332.1	1684.6	1010.0	-91.9	918.0
		-13.50	142.4	1428.1	1570.5	941.6	-91.9	849.6
		-14.00	84.5	1477.4	1561.9	936.4	-91.9	844.5
		-14.50	92.4	1485.3	1577.7	945.9	-91.9	853.9
		-15.00	94.4	1494.5	1588.9	952.6	-91.9	860.7
		-15.50	99.0	1504.0	1603.1	961.1	-91.9	869.1
		-16.00	195.7	1514.0	1709.7	1025.0	-91.9	933.1
		-16.50	877.1	1571.6	2448.8	1468.1	-91.9	1376.2
		-17.00	680.5	1667.6	2348.1	1407.7	-91.9	1315.8



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
39 - Ontgraven t	2.70	-17.50	644.6	1763.6	2408.3	1443.8	-91.9	1351.9
		-18.00	655.9	1858.6	2514.5	1507.5	-91.9	1415.6
		-18.50	429.3	1938.5	2367.8	1419.5	-91.9	1327.6
		-19.00	345.2	2015.1	2360.2	1415.0	-91.9	1323.1
		-19.50	202.4	2088.5	2290.9	1373.4	-91.9	1281.5
40 - Ontgraven t	2.70	-6.00	751.7	183.4	935.1	560.6	-55.7	504.9
		-6.50	810.3	275.1	1085.4	650.7	-55.7	595.0
		-7.00	845.6	366.7	1212.3	726.8	-55.7	671.1
		-7.50	938.3	454.3	1392.6	834.9	-55.7	779.2
		-8.00	681.7	542.6	1224.3	734.0	-55.7	678.3
		-8.50	679.2	630.4	1309.6	785.1	-55.7	729.4
		-9.00	641.9	717.2	1359.1	814.8	-55.7	759.1
		-9.50	314.9	791.0	1105.9	663.0	-55.7	607.3
		-10.00	251.8	866.8	1118.6	670.6	-55.7	614.9
		-10.50	193.8	935.0	1128.8	676.8	-55.7	621.1
		-11.00	193.9	968.2	1162.1	696.7	-55.7	641.0
		-11.50	270.4	1001.3	1271.7	762.4	-55.7	706.7
		-12.00	283.0	1040.8	1323.8	793.7	-55.7	738.0
		-12.50	802.0	1085.7	1887.7	1131.7	-55.7	1076.0
		-13.00	383.6	1181.7	1565.3	938.4	-55.7	882.8
		-13.50	229.9	1277.7	1507.6	903.8	-55.7	848.1
		-14.00	93.6	1372.6	1466.2	879.0	-55.7	823.3
		-14.50	82.0	1390.9	1472.9	883.0	-55.7	827.3
		-15.00	86.4	1398.6	1485.0	890.3	-55.7	834.6
		-15.50	87.8	1407.0	1494.9	896.2	-55.7	840.5
		-16.00	97.5	1415.8	1513.3	907.3	-55.7	851.6
		-16.50	132.4	1431.3	1563.7	937.4	-55.7	881.7
		-17.00	238.7	1455.5	1694.2	1015.7	-55.7	960.0
		-17.50	211.9	1514.8	1726.7	1035.2	-55.7	979.5
		-18.00	119.3	1579.9	1699.2	1018.7	-55.7	963.0
		-18.50	203.8	1609.3	1813.1	1087.0	-55.7	1031.3
		-19.00	133.8	1663.3	1797.1	1077.4	-55.7	1021.7
		-19.50	173.5	1678.3	1851.8	1110.2	-55.7	1054.5
41 - Ontgraven t	2.70	-6.00	617.0	115.7	732.7	439.3	-94.3	345.0
		-6.50	698.2	201.7	899.9	539.5	-94.3	445.2
		-7.00	732.1	287.6	1019.7	611.3	-94.3	517.1
		-7.50	666.5	376.1	1042.7	625.1	-94.3	530.8
		-8.00	573.3	465.4	1038.6	622.7	-94.3	528.4
		-8.50	555.4	547.6	1103.0	661.3	-94.3	567.0
		-9.00	361.0	609.6	970.6	581.9	-94.3	487.6
		-9.50	368.5	660.1	1028.6	616.7	-94.3	522.4
		-10.00	337.7	729.0	1066.7	639.5	-94.3	545.2
		-10.50	232.0	779.0	1011.1	606.1	-94.3	511.9
		-11.00	187.6	830.4	1018.0	610.3	-94.3	516.0
		-11.50	121.0	904.1	1025.2	614.6	-94.3	520.3
		-12.00	110.7	926.6	1037.3	621.9	-94.3	527.6
		-12.50	127.9	938.3	1066.1	639.2	-94.3	544.9
		-13.00	230.2	967.9	1198.1	718.3	-94.3	624.0
		-13.50	150.5	1042.9	1193.4	715.5	-94.3	621.2
		-14.00	78.4	1100.9	1179.4	707.0	-94.3	612.8
		-14.50	77.2	1110.1	1187.3	711.8	-94.3	617.5
		-15.00	78.1	1117.5	1195.6	716.8	-94.3	622.5
		-15.50	82.0	1124.8	1206.8	723.5	-94.3	629.2



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
41 - Ontgraven t	2.70	-16.00	84.4	1133.0	1217.3	729.8	-94.3	635.5
		-16.50	241.7	1144.2	1385.9	830.9	-94.3	736.6
		-17.00	378.7	1193.6	1572.3	942.7	-94.3	848.4
		-17.50	294.2	1289.5	1583.7	949.5	-94.3	855.2
		-18.00	209.5	1385.5	1595.0	956.2	-94.3	861.9
		-18.50	167.8	1441.3	1609.1	964.7	-94.3	870.4
		-19.00	202.8	1461.6	1664.5	997.9	-94.3	903.6
		-19.50	254.0	1485.3	1739.2	1042.7	-94.3	948.4
42 - Ontgraven t	2.70	-6.00	540.0	98.1	638.2	382.6	-99.0	283.6
		-6.50	607.7	174.4	782.1	468.9	-99.0	369.9
		-7.00	817.4	254.8	1072.1	642.8	-99.0	543.7
		-7.50	965.7	350.4	1316.1	789.0	-99.0	690.0
		-8.00	1049.9	446.4	1496.2	897.0	-99.0	798.0
		-8.50	1004.3	542.4	1546.6	927.2	-99.0	828.2
		-9.00	356.6	638.4	995.0	596.5	-99.0	497.5
		-9.50	212.4	734.4	946.8	567.6	-99.0	468.6
		-10.00	127.4	826.9	954.3	572.1	-99.0	473.1
		-10.50	97.3	849.4	946.7	567.6	-99.0	468.5
		-11.00	191.6	849.4	1041.0	624.1	-99.0	525.1
		-11.50	160.3	896.4	1056.7	633.5	-99.0	534.5
		-12.00	255.5	929.0	1184.5	710.2	-99.0	611.1
		-12.50	485.1	986.8	1471.9	882.4	-99.0	783.4
		-13.00	318.4	1082.8	1401.2	840.0	-99.0	741.0
		-13.50	156.0	1178.8	1334.8	800.3	-99.0	701.2
		-14.00	78.6	1241.6	1320.2	791.5	-99.0	692.5
		-14.50	77.7	1249.5	1327.2	795.7	-99.0	696.6
		-15.00	78.4	1256.7	1335.1	800.4	-99.0	701.4
		-15.50	85.7	1264.2	1349.9	809.3	-99.0	710.3
		-16.00	95.3	1273.3	1368.5	820.5	-99.0	721.4
		-16.50	216.1	1297.8	1514.0	907.7	-99.0	808.6
		-17.00	193.0	1342.3	1535.3	920.4	-99.0	821.4
		-17.50	650.5	1374.4	2024.9	1214.0	-99.0	1114.9
		-18.00	791.3	1466.4	2257.8	1353.6	-99.0	1254.5
		-18.50	990.2	1562.4	2552.7	1530.4	-99.0	1431.4
		-19.00	876.9	1658.4	2535.3	1520.0	-99.0	1420.9
		-19.50	865.1	1754.4	2619.5	1570.5	-99.0	1471.4
43 - Ontgraven t	2.70	-6.00	463.9	56.7	520.6	312.1	-96.7	215.4
		-6.50	606.7	131.0	737.6	442.2	-96.7	345.5
		-7.00	917.9	220.0	1137.9	682.2	-96.7	585.5
		-7.50	980.7	316.0	1296.7	777.4	-96.7	680.7
		-8.00	989.1	412.0	1401.1	840.0	-96.7	743.3
		-8.50	1024.0	508.0	1532.0	918.5	-96.7	821.8
		-9.00	631.6	604.0	1235.6	740.7	-96.7	644.0
		-9.50	495.2	699.3	1194.5	716.1	-96.7	619.4
		-10.00	424.9	790.6	1215.5	728.7	-96.7	632.0
		-10.50	303.8	864.4	1168.2	700.4	-96.7	603.7
		-11.00	270.0	928.2	1198.3	718.4	-96.7	621.7
		-11.50	213.2	994.5	1207.7	724.0	-96.7	627.3
		-12.00	308.1	1017.6	1325.7	794.8	-96.7	698.1
		-12.50	1064.0	1083.4	2147.4	1287.4	-96.7	1190.7
		-13.00	499.4	1179.4	1678.8	1006.5	-96.7	909.8
		-13.50	290.5	1275.4	1565.9	938.8	-96.7	842.1
		-14.00	96.6	1370.3	1466.9	879.4	-96.7	782.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
43 - Ontgraven t	2.70	-14.50	87.8	1387.2	1475.0	884.3	-96.7	787.6
		-15.00	89.3	1395.5	1484.8	890.2	-96.7	793.5
		-15.50	103.4	1403.9	1507.3	903.7	-96.7	807.0
		-16.00	102.4	1417.3	1519.7	911.1	-96.7	814.4
		-16.50	277.7	1440.6	1718.3	1030.1	-96.7	933.4
		-17.00	835.5	1509.2	2344.7	1405.7	-96.7	1309.0
		-17.50	869.0	1605.2	2474.2	1483.3	-96.7	1386.6
		-18.00	915.0	1701.2	2616.2	1568.5	-96.7	1471.8
		-18.50	949.5	1797.2	2746.7	1646.7	-96.7	1550.0
		-19.00	1244.2	1893.2	3137.4	1881.0	-96.7	1784.3
		-19.50	1310.8	1989.2	3300.0	1978.4	-96.7	1881.7
44 - Ontgraven t	2.70	-6.00	941.5	192.0	1133.6	679.6	-91.9	587.7
		-6.50	1039.4	288.0	1327.4	795.8	-91.9	703.9
		-7.00	792.7	384.0	1176.7	705.5	-91.9	613.6
		-7.50	506.1	480.0	986.1	591.2	-91.9	499.3
		-8.00	462.9	576.0	1038.9	622.9	-91.9	530.9
		-8.50	374.1	660.5	1034.6	620.3	-91.9	528.4
		-9.00	598.0	704.4	1302.5	780.9	-91.9	688.9
		-9.50	294.9	781.1	1076.1	645.1	-91.9	553.2
		-10.00	186.2	860.5	1046.7	627.5	-91.9	535.6
		-10.50	98.6	931.3	1029.9	617.4	-91.9	525.5
		-11.00	114.3	949.7	1064.1	637.9	-91.9	546.0
		-11.50	97.0	974.9	1071.8	642.6	-91.9	550.7
		-12.00	142.5	986.6	1129.1	676.9	-91.9	585.0
		-12.50	350.4	1006.5	1356.9	813.5	-91.9	721.6
		-13.00	448.6	1080.7	1529.3	916.8	-91.9	824.9
		-13.50	292.4	1176.7	1469.1	880.7	-91.9	788.8
		-14.00	104.4	1272.7	1377.1	825.6	-91.9	733.7
		-14.50	79.3	1304.7	1384.1	829.8	-91.9	737.9
		-15.00	76.5	1313.5	1390.0	833.3	-91.9	741.4
		-15.50	90.7	1320.7	1411.3	846.1	-91.9	754.2
		-16.00	108.5	1330.5	1439.0	862.7	-91.9	770.8
		-16.50	603.3	1359.5	1962.8	1176.8	-91.9	1084.8
		-17.00	471.1	1452.0	1923.1	1152.9	-91.9	1061.0
		-17.50	334.5	1548.0	1882.5	1128.6	-91.9	1036.7
		-18.00	243.1	1644.0	1887.1	1131.4	-91.9	1039.4
		-18.50	241.3	1681.2	1922.6	1152.6	-91.9	1060.7
		-19.00	605.2	1708.5	2313.6	1387.1	-91.9	1295.1
		-19.50	973.0	1794.8	2767.8	1659.4	-91.9	1567.4
45 - Ontgraven t	2.70	-6.00	670.6	172.3	842.9	505.3	-94.9	410.4
		-6.50	703.5	267.3	970.8	582.0	-94.9	487.2
		-7.00	902.6	352.8	1255.4	752.7	-94.9	657.8
		-7.50	1221.5	448.5	1670.0	1001.2	-94.9	906.3
		-8.00	1180.6	544.5	1725.1	1034.2	-94.9	939.4
		-8.50	490.6	640.5	1131.1	678.1	-94.9	583.2
		-9.00	342.8	736.5	1079.3	647.0	-94.9	552.2
		-9.50	236.4	832.5	1068.9	640.8	-94.9	546.0
		-10.00	205.6	881.8	1087.4	651.9	-94.9	557.0
		-10.50	153.1	904.8	1057.9	634.3	-94.9	539.4
		-11.00	150.2	927.9	1078.1	646.3	-94.9	551.5
		-11.50	129.7	938.3	1068.0	640.3	-94.9	545.4
		-12.00	311.2	938.3	1249.6	749.1	-94.9	654.3
		-12.50	531.6	982.1	1513.7	907.5	-94.9	812.6



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
45 - Ontgraven t	2.70	-13.00	393.1	1064.6	1457.7	873.9	-94.9	779.1
		-13.50	202.4	1160.6	1363.0	817.1	-94.9	722.2
		-14.00	77.9	1250.5	1328.4	796.4	-94.9	701.5
		-14.50	68.3	1265.5	1333.9	799.7	-94.9	704.8
		-15.00	69.9	1272.2	1342.1	804.6	-94.9	709.8
		-15.50	91.5	1279.2	1370.7	821.8	-94.9	726.9
		-16.00	98.7	1290.5	1389.2	832.8	-94.9	738.0
		-16.50	118.7	1303.9	1422.6	852.9	-94.9	758.0
		-17.00	89.2	1330.4	1419.5	851.0	-94.9	756.2
		-17.50	377.5	1346.9	1724.4	1033.8	-94.9	938.9
		-18.00	591.0	1410.4	2001.4	1199.9	-94.9	1105.0
		-18.50	680.1	1487.6	2167.7	1299.6	-94.9	1204.7
		-19.00	1069.3	1579.6	2648.9	1588.1	-94.9	1493.2
		-19.50	1181.5	1675.6	2857.1	1712.9	-94.9	1618.0
46 - Ontgraven t	2.70	-6.00	811.1	153.8	964.8	578.4	-94.9	483.6
		-6.50	898.4	249.8	1148.1	688.3	-94.9	593.5
		-7.00	1091.0	345.8	1436.8	861.4	-94.9	766.5
		-7.50	1289.8	441.8	1731.5	1038.1	-94.9	943.2
		-8.00	1394.1	537.8	1931.9	1158.2	-94.9	1063.3
		-8.50	677.4	633.8	1311.1	786.1	-94.9	691.2
		-9.00	411.2	729.8	1141.0	684.0	-94.9	589.2
		-9.50	325.0	825.8	1150.8	689.9	-94.9	595.0
		-10.00	288.6	887.2	1175.8	704.9	-94.9	610.1
		-10.50	204.5	924.6	1129.1	676.9	-94.9	582.1
		-11.00	175.2	975.8	1151.0	690.1	-94.9	595.2
		-11.50	128.5	995.6	1124.1	673.9	-94.9	579.0
		-12.00	223.1	995.6	1218.7	730.6	-94.9	635.7
		-12.50	1030.4	1048.2	2078.6	1246.1	-94.9	1151.3
		-13.00	454.5	1144.2	1598.7	958.4	-94.9	863.6
		-13.50	261.5	1240.2	1501.7	900.3	-94.9	805.4
		-14.00	83.9	1335.7	1419.6	851.1	-94.9	756.2
		-14.50	76.8	1350.1	1427.0	855.5	-94.9	760.6
		-15.00	78.1	1357.5	1435.6	860.7	-94.9	765.8
		-15.50	86.4	1365.0	1451.4	870.1	-94.9	775.2
		-16.00	101.5	1374.1	1475.6	884.7	-94.9	789.8
		-16.50	239.0	1394.4	1633.4	979.3	-94.9	884.4
		-17.00	726.1	1451.2	2177.3	1305.3	-94.9	1210.5
		-17.50	807.7	1547.2	2355.0	1411.9	-94.9	1317.0
		-18.00	864.9	1643.2	2508.1	1503.7	-94.9	1408.8
		-18.50	1049.9	1739.2	2789.2	1672.2	-94.9	1577.3
		-19.00	1445.2	1835.2	3280.4	1966.7	-94.9	1871.8
		-19.50	1529.8	1931.2	3461.0	2074.9	-94.9	1980.1
		-20.00	1536.0	2027.2	3563.2	2136.2	-94.9	2041.4
		-20.50	1536.0	2123.2	3659.2	2193.8	-94.9	2098.9
47 - Ontgraven t	2.70	-6.00	647.5	114.7	762.1	456.9	-94.3	362.6
		-6.50	721.5	205.2	926.8	555.6	-94.3	461.3
		-7.00	915.0	298.3	1213.3	727.4	-94.3	633.1
		-7.50	1074.1	394.3	1468.4	880.3	-94.3	786.0
		-8.00	1146.8	490.3	1637.0	981.4	-94.3	887.1
		-8.50	623.6	586.3	1209.9	725.4	-94.3	631.1
		-9.00	481.5	682.3	1163.8	697.7	-94.3	603.4
		-9.50	259.3	778.3	1037.6	622.1	-94.3	527.8
		-10.00	214.1	849.6	1063.7	637.7	-94.3	543.4



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld paalpunt		Bezwijkdraagvermogen			Rekenwaarden		
	niveau	niveau	$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
47 - Ontgraven t	2.70	-10.50	197.9	885.7	1083.6	649.7	-94.3	555.4
		-11.00	492.7	918.8	1411.6	846.3	-94.3	752.0
		-11.50	351.7	1008.4	1360.1	815.4	-94.3	721.1
		-12.00	285.1	1097.9	1383.0	829.1	-94.3	734.8
		-12.50	271.7	1143.0	1414.7	848.1	-94.3	753.8
		-13.00	254.1	1170.8	1424.9	854.3	-94.3	760.0
		-13.50	136.8	1227.8	1364.6	818.1	-94.3	723.8
		-14.00	67.3	1281.9	1349.2	808.9	-94.3	714.6
		-14.50	65.7	1289.1	1354.8	812.2	-94.3	717.9
		-15.00	67.7	1295.4	1363.1	817.2	-94.3	722.9
		-15.50	76.3	1302.1	1378.4	826.4	-94.3	732.1
		-16.00	77.0	1310.8	1387.8	832.0	-94.3	737.7
		-16.50	102.9	1323.8	1426.7	855.3	-94.3	761.0
		-17.00	78.7	1349.5	1428.2	856.2	-94.3	761.9
		-17.50	461.5	1358.6	1820.1	1091.2	-94.3	996.9
		-18.00	763.5	1437.9	2201.5	1319.8	-94.3	1225.5
		-18.50	651.6	1533.9	2185.5	1310.2	-94.3	1216.0
		-19.00	330.7	1629.9	1960.6	1175.4	-94.3	1081.1
		-19.50	273.8	1725.5	1999.3	1198.6	-94.3	1104.3
48 - Ontgraven t	2.70	-6.00	562.0	114.6	676.6	405.6	-94.3	311.3
		-6.50	642.4	191.4	833.8	499.9	-94.3	405.6
		-7.00	849.3	274.6	1123.9	673.8	-94.3	579.5
		-7.50	1151.2	370.2	1521.4	912.1	-94.3	817.8
		-8.00	1232.9	466.2	1699.1	1018.7	-94.3	924.4
		-8.50	1187.8	562.2	1750.0	1049.1	-94.3	954.8
		-9.00	528.1	658.2	1186.3	711.2	-94.3	616.9
		-9.50	441.2	754.2	1195.4	716.6	-94.3	622.4
		-10.00	346.3	849.3	1195.5	716.7	-94.3	622.4
		-10.50	277.8	889.7	1167.6	700.0	-94.3	605.7
		-11.00	275.6	936.7	1212.3	726.8	-94.3	632.5
		-11.50	207.2	1011.6	1218.8	730.7	-94.3	636.4
		-12.00	251.5	1041.1	1292.6	775.0	-94.3	680.7
		-12.50	425.8	1081.0	1506.9	903.4	-94.3	809.1
		-13.00	307.7	1176.8	1484.5	890.0	-94.3	795.7
		-13.50	146.9	1272.8	1419.8	851.2	-94.3	756.9
		-14.00	77.7	1330.0	1407.7	843.9	-94.3	749.6
		-14.50	77.1	1337.9	1415.0	848.3	-94.3	754.0
		-15.00	76.2	1345.5	1421.8	852.4	-94.3	758.1
		-15.50	85.8	1352.6	1438.4	862.4	-94.3	768.1
		-16.00	101.0	1361.4	1462.4	876.7	-94.3	782.5
		-16.50	186.3	1377.7	1564.0	937.7	-94.3	843.4
		-17.00	403.4	1437.6	1841.0	1103.7	-94.3	1009.4
		-17.50	263.0	1533.6	1796.6	1077.1	-94.3	982.8
		-18.00	184.4	1629.6	1814.0	1087.6	-94.3	993.3
		-18.50	133.1	1675.3	1808.4	1084.2	-94.3	989.9
		-19.00	167.5	1692.2	1859.7	1114.9	-94.3	1020.6
		-19.50	139.7	1723.5	1863.1	1117.0	-94.3	1022.7
49 - Ontgraven t	2.70	-6.00	926.8	87.5	1014.3	608.1	-106.7	501.4
		-6.50	1037.9	183.5	1221.4	732.2	-106.7	625.6
		-7.00	1218.4	279.5	1497.9	898.0	-106.7	791.4
		-7.50	1484.8	375.5	1860.3	1115.3	-106.7	1008.6
		-8.00	1517.9	471.5	1989.4	1192.7	-106.7	1086.0
		-8.50	609.1	567.5	1176.6	705.4	-106.7	598.7



Alle niveaus/hoogtes/peilmaten zijn t.o.v.: N.A.P.

sondering	maaiveld niveau	paalpunt niveau	Bezwijkdraagvermogen			Rekenwaarden		
			$R_{b;cal}$ [kN]	$R_{s;cal}$ [kN]	$R_{c;cal}$ [kN]	$R_{c;d}$ [kN]	$F_{nk;d}$ [kN]	$R_{c;netto;d}$ [kN]
49 - Ontgraven t	2.70	-9.00	406.7	663.5	1070.2	641.6	-106.7	535.0
		-9.50	280.8	759.5	1040.4	623.7	-106.7	517.1
		-10.00	250.1	807.4	1057.6	634.0	-106.7	527.4
		-10.50	445.1	837.7	1282.9	769.1	-106.7	662.4
		-11.00	462.3	912.1	1374.4	824.0	-106.7	717.3
		-11.50	360.5	1005.9	1366.4	819.2	-106.7	712.5
		-12.00	268.2	1092.9	1361.2	816.0	-106.7	709.4
		-12.50	250.4	1130.2	1380.7	827.7	-106.7	721.1
		-13.00	187.3	1175.0	1362.2	816.7	-106.7	710.0
		-13.50	75.1	1251.5	1326.6	795.3	-106.7	688.6
		-14.00	63.1	1268.3	1331.4	798.2	-106.7	691.6
		-14.50	67.3	1274.2	1341.6	804.3	-106.7	697.6
		-15.00	76.7	1280.9	1357.6	813.9	-106.7	707.3
		-15.50	89.5	1289.4	1378.9	826.7	-106.7	720.0
		-16.00	115.5	1299.7	1415.2	848.4	-106.7	741.8
		-16.50	307.5	1337.4	1644.9	986.1	-106.7	879.5
		-17.00	410.5	1395.4	1805.8	1082.6	-106.7	976.0
		-17.50	358.8	1482.6	1841.4	1104.0	-106.7	997.3
		-18.00	298.6	1569.4	1868.0	1119.9	-106.7	1013.3
		-18.50	311.0	1610.6	1921.7	1152.1	-106.7	1045.4
		-19.00	401.0	1649.6	2050.6	1229.4	-106.7	1122.7
		-19.50	263.0	1718.2	1981.2	1187.8	-106.7	1081.1



Bijlage C Grondonderzoek

Rapportage Geotechnisch Bodemonderzoek

Project : Harlingen, Lange Lijnbaan nabij nr 51
Realiseren Biogasinstallatie

Opdrachtnummer : 61211729

Opdrachtgever : SFP Group B.V.
Hofsleane 67
9041 AM Berlikum

datum	deel rapport	omschrijving
8-7-2021	GB-1	-

Deze rapportage betreft het door IJB Geotechniek uitgevoerde geotechnische bodemonderzoek conform NEN-EN-ISO 22476-1 en ons kwaliteitssysteem ISO 9001.

Achtereenvolgens treft u aan:

- Toelichting op het sonderen en de specificatie van de gebruikte apparatuur
- Inmeetgegevens van de onderzoekspunten
- Eventueel foto's van de onderzoekslocatie
- Meetresultaten
- Situatietekening

IJB totaalconcept:

Het uitvoeren van geotechnisch onderzoek is slechts één onderdeel van het IJB totaalconcept.

Na opstellen van een funderingsadvies kan binnen het totaalconcept ook de productie, levering en installatie van palen voor u worden verzorgd. Het berekenen, produceren en leggen van prefab funderingsbalken maken uw fundering compleet.

Op onze website www.ijbgroep.nl kunt u meer informatie vinden over producten en/of diensten van ons bedrijf.

Bijzonderheden tijdens de uitvoering:

-

Sonderingen zijn uitgevoerd conform NEN-EN-ISO-22476-1 en ons ISO 9001 kwaliteitsstelsel.

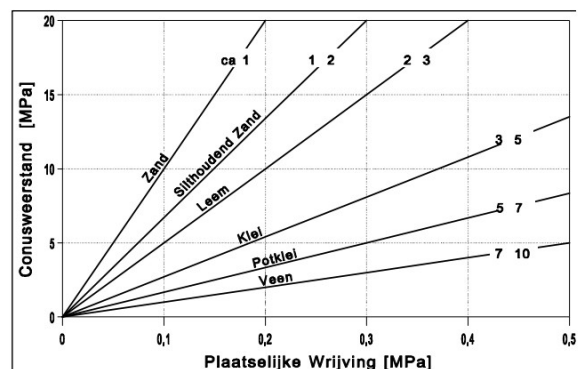
Het uitvoeren van de sonderingen geschiedt met behulp van hoogwaardige apparatuur. Op basis van de gehanteerde meetmethode en ijking van onze apparatuur kunnen al onze sonderingen ingedeeld worden in toepassingsklasse 2. Dit is met de gebruikelijke meetapparatuur in Nederland de hoogst haalbare kwaliteitsklasse. De metingen worden op onze sonderwagens uitgevoerd met het nieuwe en voor Nederland unieke optocone systeem. Dit wil zeggen dat de data uit de elektrische conus optisch worden doorgezonden naar de meetunit. Eventueel optredende ruis en daardoor meeton nauwkeurigheden welke bij een lange kabel tussen conus en meetunit kunnen optreden worden hierdoor vermeden.

Tijdens het sonderen worden naast conusweerstand, de sondeersnelheid en helling gemeten. Daar waar aangevraagd wordt ook de mantelwrijving gemeten en gepresenteerd.

De sondeergrafieken worden gepresenteerd ten opzichte van N.A.P., tenzij dit niet gewenst of niet mogelijk is. De sondeergrafiek laat de conusweerstand als functie van de diepte zien. Naarmate de grond stijver is, neemt de sondeerwaarde toe. De eenheid is megapascal, 1 MPa is gelijk aan 1 N/mm². Indien de kleefweerstand is gemeten, is deze met een gestippelde lijn in de grafiek van de conusweerstand gepresenteerd. Het wrijvingsgetal is aan de rechterkant van de grafiek gepresenteerd.

Het wrijvingsgetal geeft samen met de conusweerstand, bij metingen onder de grondwaterspiegel, een beeld van de bodemopbouw. In onderstaande tabel en grafiek zijn enkele kenmerkende waarden van het wrijvingsgetal weergegeven. We wijzen erop dat deze waarden indicatief zijn en getoetst dienen te worden aan lokale ervaringen en/of boringen.

Grondsoort	Wrijvingsgetal
Zand	ca. 1
Slithoudend zand	1 á 2
Leem	2 á 3
Klei	3 á 5
Potklei	5 á 7
Veen	7 á 10



2.1 : Specificatie meet apparatuur

werknummer: 61211729

unit(s):

15

tracktruck, 20000 kg, 200 kN drukcapaciteit

sondeermeester(s)

MPdN

DvdB

conus nr 201219 200417

calibratiedatum 11-05-21 06-07-21

punt (cm²) 15

fabrikant AP vd Berg

meetbereik: Punt: 100 MPa

Kleef: 0.75 MPa

Watersp: 10 MPa

$\alpha = 20^\circ$

De onderzoekspunten zijn ingemeten met 06 gps apparatuur. De nauwkeurigheid van de meting is in x en y richting maximaal +/- 25 mm en in z richting +/-50 mm. De hoogtemeting van de onderzoekslocaties in het terrein zijn uitgevoerd met als doel de bodemopbouw te refereren aan een vast punt. Gerapporteerde hoogtes zijn niet geschikt voor andere doeleinden dan dit onderzoek.

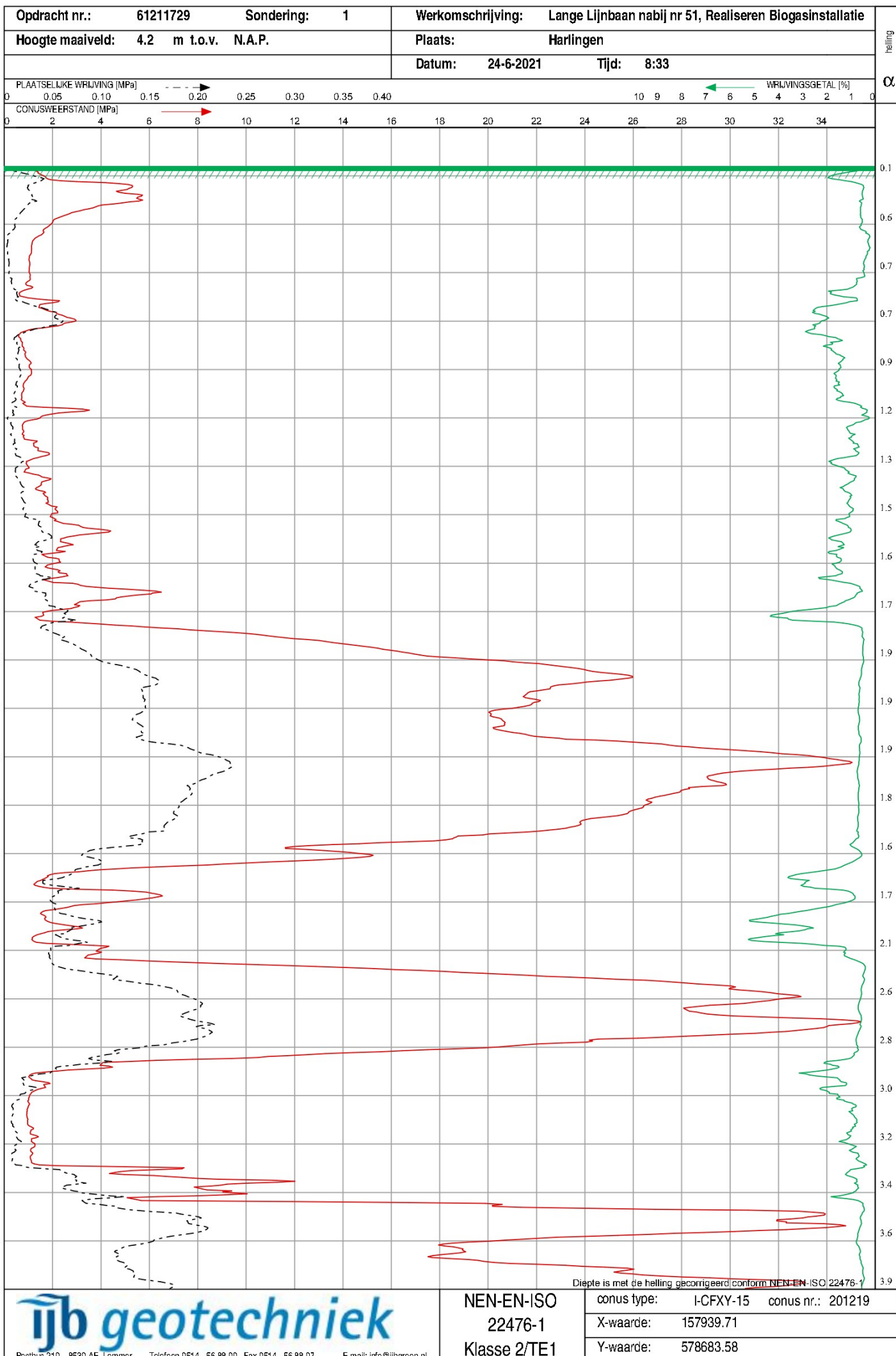
De reden waarom de sondering is beëindigd is in de kolom stopcriteria weergegeven.

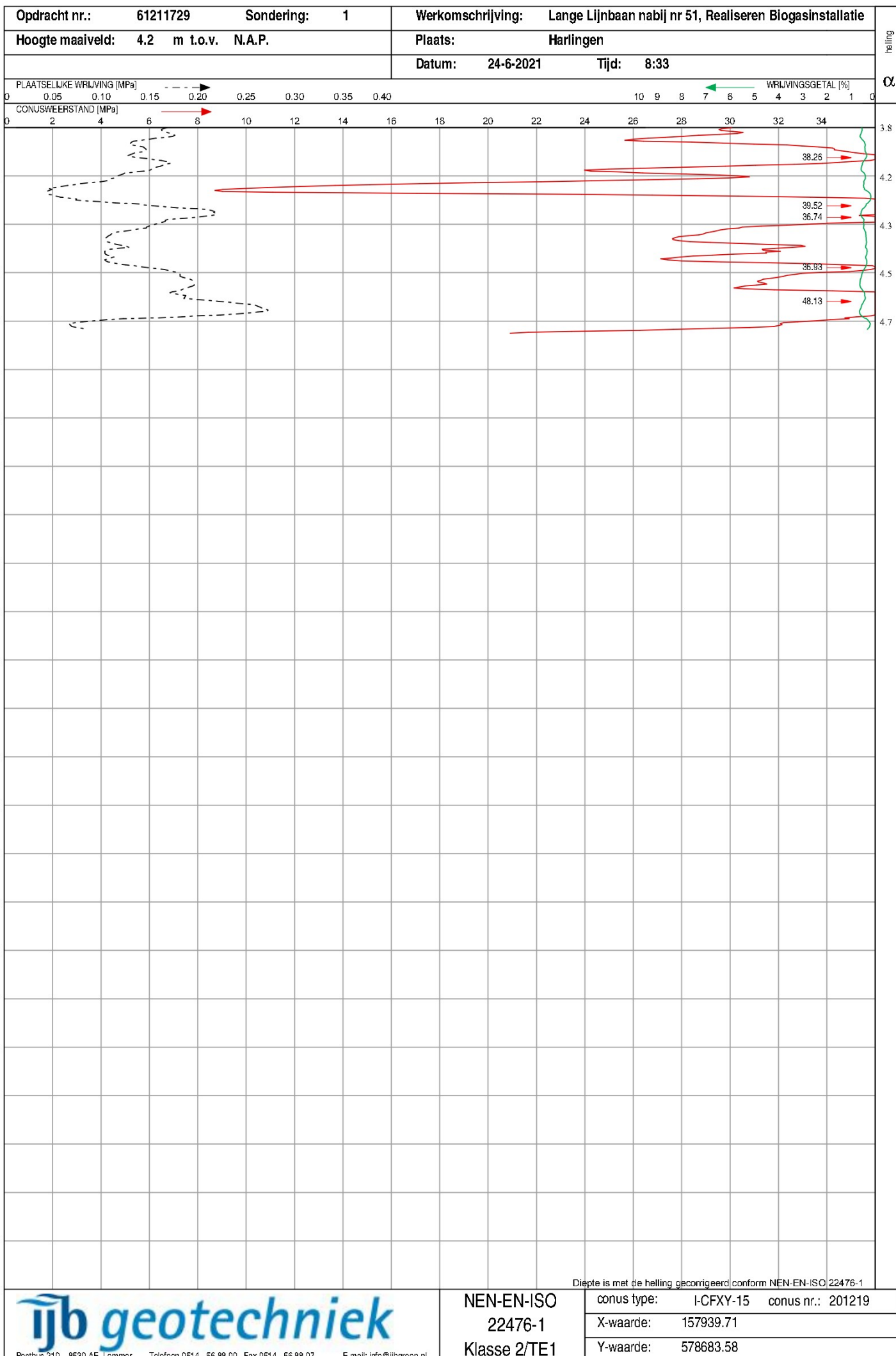
Indien tijdens het veldwerk de grondwaterstand in het sondeergat is bepaald staat deze ook vermeld. De weergegeven diepte is in meters en ten opzichte van N.A.P. Het betreft een indicatie.

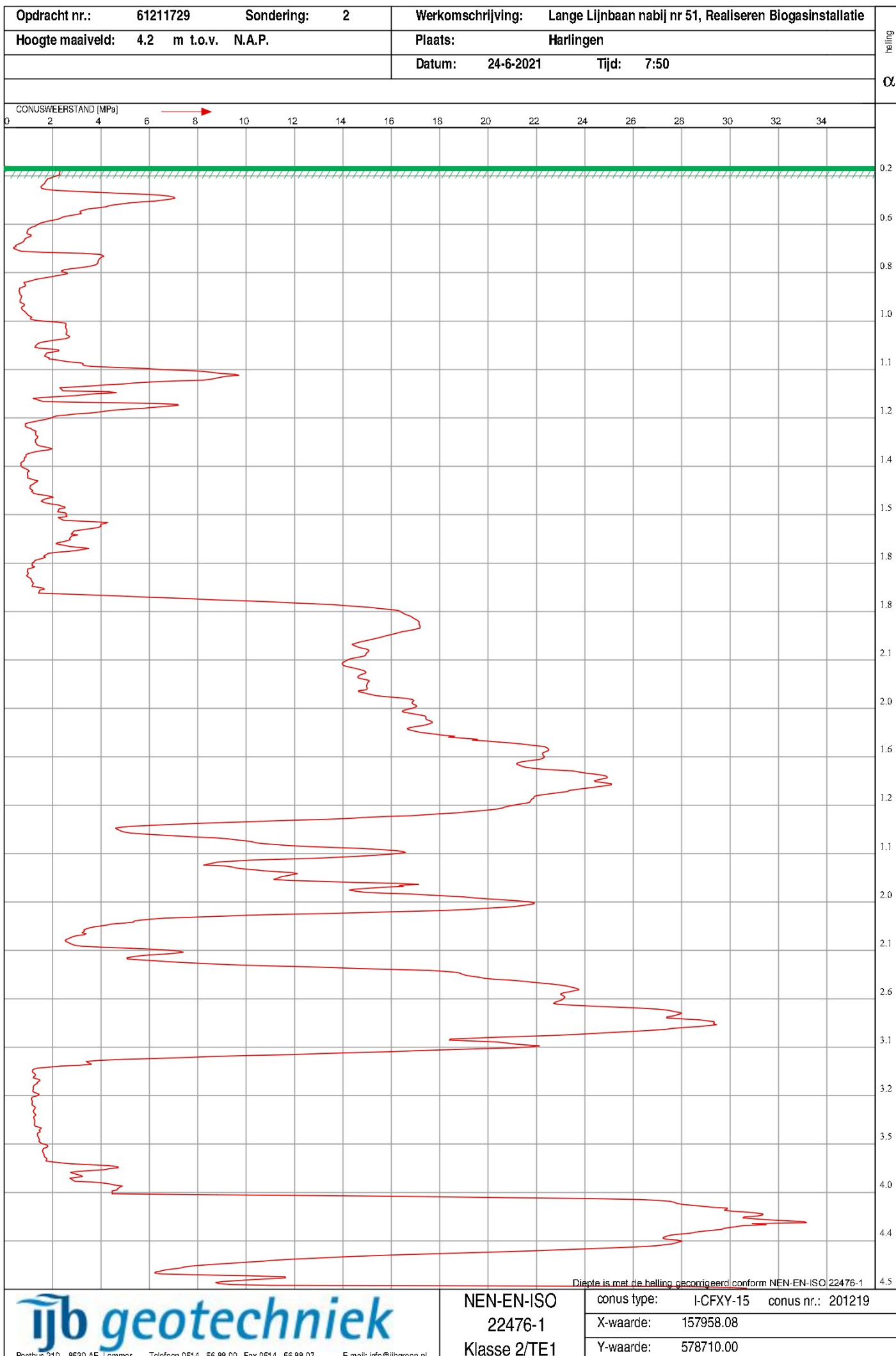
Meetpnt.	X-waarde (m) in RD	Y-waarde (m) in RD	Z-waarde (m) tov N AP	Stopcriteria	Gws (m) tov N AP
1	157939.71	578683.58	4.20	einddiepte bereikt	
2	157958.08	578710.00	4.20	einddiepte bereikt	
3	157976.30	578736.67	4.22	einddiepte bereikt	
4	157954.24	578730.68	4.06	einddiepte bereikt	
5	157937.22	578704.92	4.10	einddiepte bereikt	
6	157914.94	578700.69	4.01	einddiepte bereikt	
7	157933.09	578726.74	4.05	einddiepte bereikt	
8	157952.04	578753.21	4.05	einddiepte bereikt	3.15
9	157928.79	578747.47	4.08	einddiepte bereikt	
10	157910.56	578721.75	4.01	einddiepte bereikt	3.11
11	157888.44	578718.79	4.03	einddiepte bereikt	
12	157906.49	578745.51	4.04	einddiepte bereikt	
13	157925.06	578771.95	4.06	einddiepte bereikt	3.26
14	157898.32	578790.09	4.06	einddiepte bereikt	
15	157888.27	578764.86	4.19	einddiepte bereikt	
16	157873.30	578742.98	4.06	einddiepte bereikt	
17	157921.98	578814.03	4.21	einddiepte bereikt	
18	157936.86	578835.53	4.22	einddiepte bereikt	
19	157959.02	578821.06	4.17	einddiepte bereikt	
20	157943.25	578800.38	4.13	einddiepte bereikt	
21	157964.71	578785.48	4.12	einddiepte bereikt	
22	157979.53	578806.98	4.23	einddiepte bereikt	
23	158000.57	578792.68	4.21	einddiepte bereikt	
24	157985.78	578771.09	4.22	einddiepte bereikt	
25	158029.67	578813.61	4.30	einddiepte bereikt	3.40
26	158043.75	578833.98	4.39	einddiepte bereikt	
27	158056.37	578852.73	4.33	einddiepte bereikt	
28	158070.81	578873.90	4.37	einddiepte bereikt	
29	158085.55	578895.33	4.28	einddiepte bereikt	
30	158066.51	578908.22	4.17	einddiepte bereikt	
31	158053.63	578890.25	4.21	knikgevaar	
32	158036.22	578866.14	4.22	einddiepte bereikt	
33	158023.34	578845.81	4.19	einddiepte bereikt	

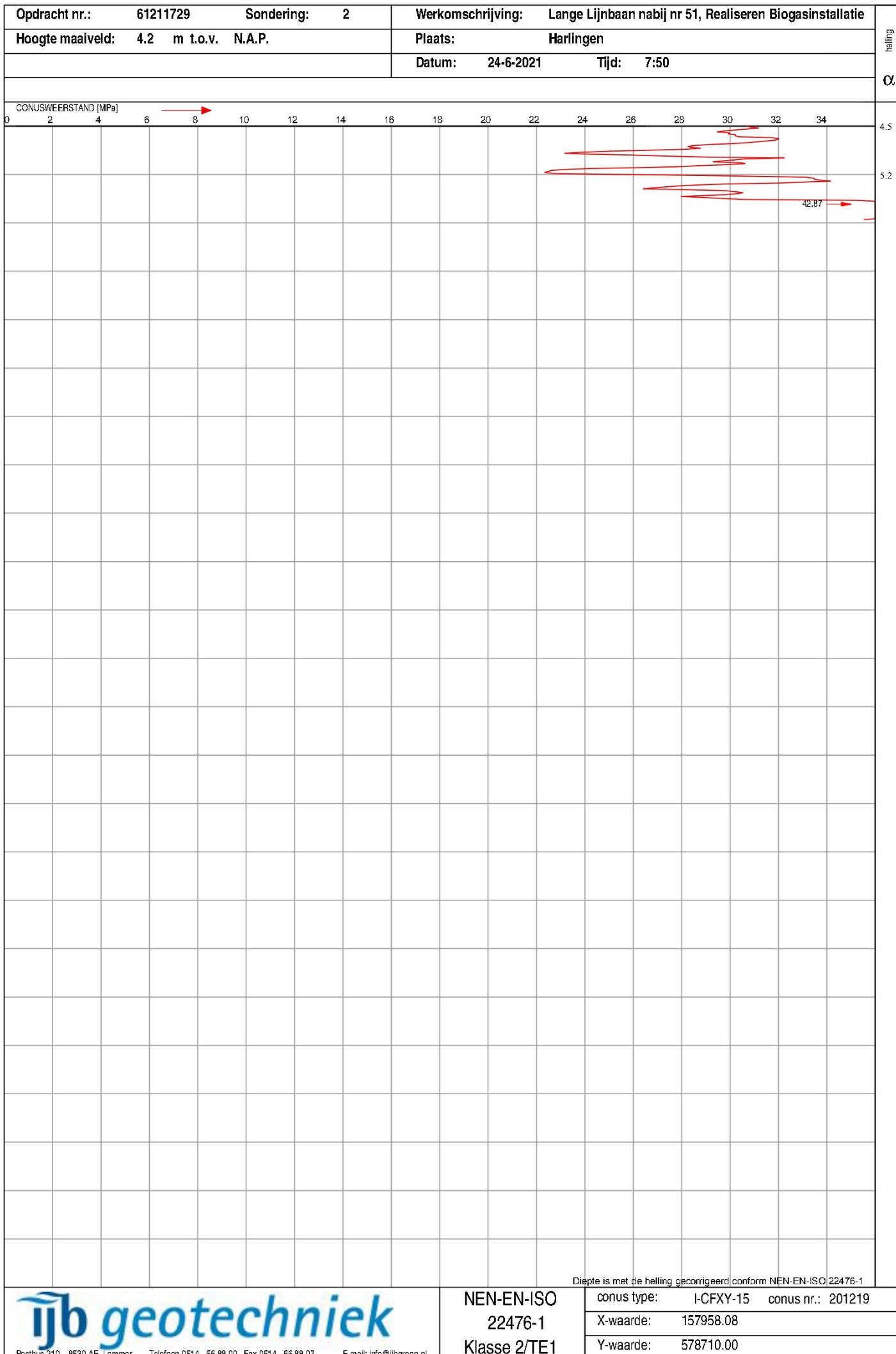
34	158009.42	578827.04	4.18	einddiepte bereikt	
35	157988.23	578841.85	4.13	einddiepte bereikt	
36	158002.73	578862.97	4.19	knikgevaar	
37	158016.10	578882.51	4.23	einddiepte bereikt	
38	158031.10	578904.22	4.20	einddiepte bereikt	
39	158044.52	578924.07	4.20	knikgevaar	
40	158021.85	578939.68	4.15	einddiepte bereikt	
41	158005.85	578922.14	4.19	einddiepte bereikt	
42	157991.50	578896.83	4.20	einddiepte bereikt	
43	157980.01	578876.91	4.20	einddiepte bereikt	
44	157967.01	578856.44	4.14	einddiepte bereikt	3.34
45	157943.41	578872.68	4.18	einddiepte bereikt	
46	157958.25	578894.61	4.10	einddiepte bereikt	
47	157970.83	578912.88	4.16	einddiepte bereikt	
48	157985.95	578935.43	4.15	einddiepte bereikt	
49	157999.58	578954.85	4.12	einddiepte bereikt	
50	158018.14	578969.38	4.10	einddiepte bereikt	
51	158029.30	578985.59	4.09	einddiepte bereikt	
52	158031.41	578971.63	4.16	einddiepte bereikt	
53	158034.43	578955.61	4.12	einddiepte bereikt	
54	158053.23	578981.83	4.53	einddiepte bereikt	
55	158056.04	578958.67	4.12	einddiepte bereikt	
56	158072.32	578968.60	4.47	einddiepte bereikt	
57	158062.02	578936.72	4.13	einddiepte bereikt	
58	158085.06	578937.73	4.14	einddiepte bereikt	
59	158094.88	578953.76	4.61	einddiepte bereikt	
60	158117.59	578941.84	4.73	einddiepte bereikt	
61	158104.98	578924.00	4.40	einddiepte bereikt	

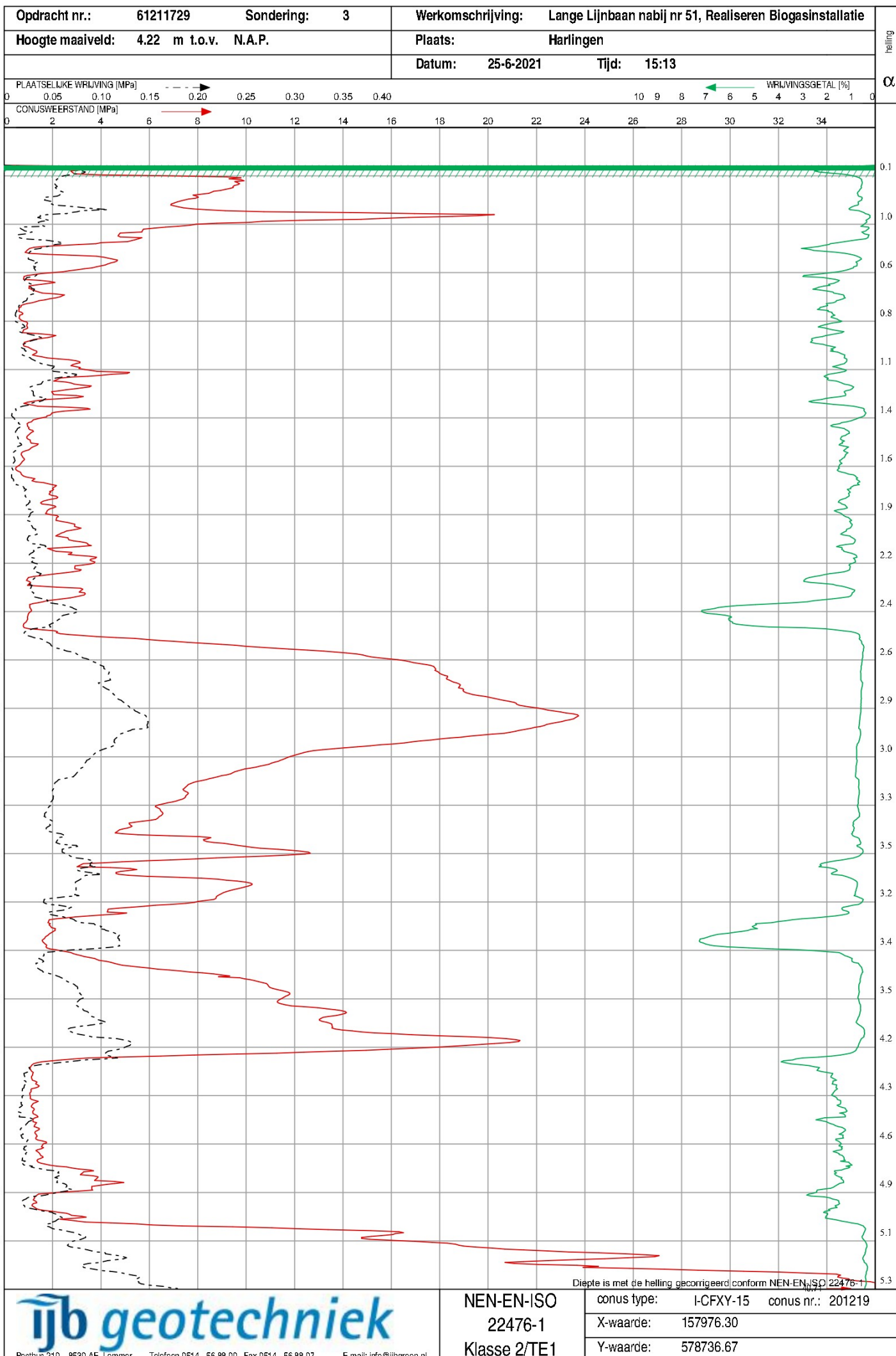


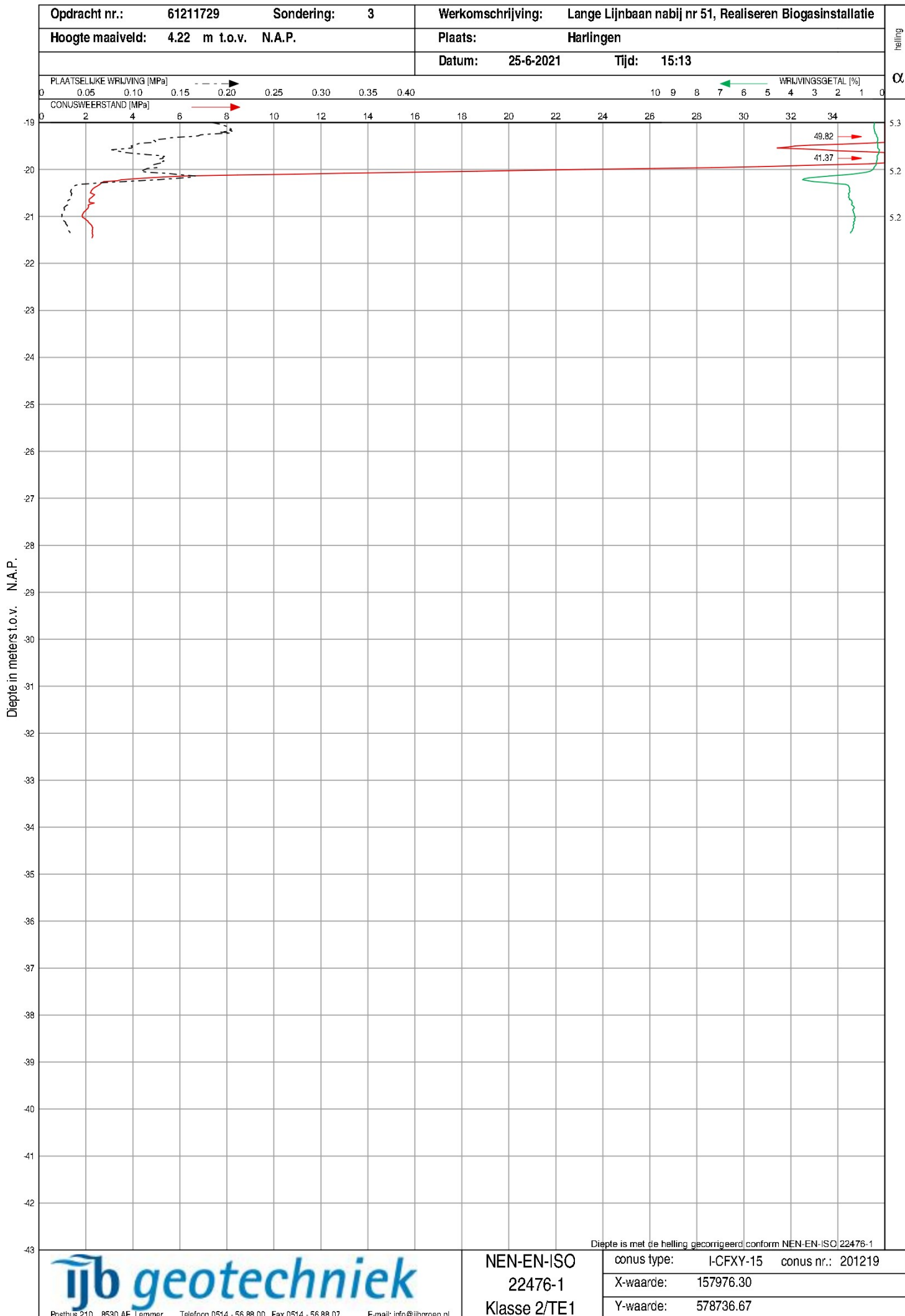




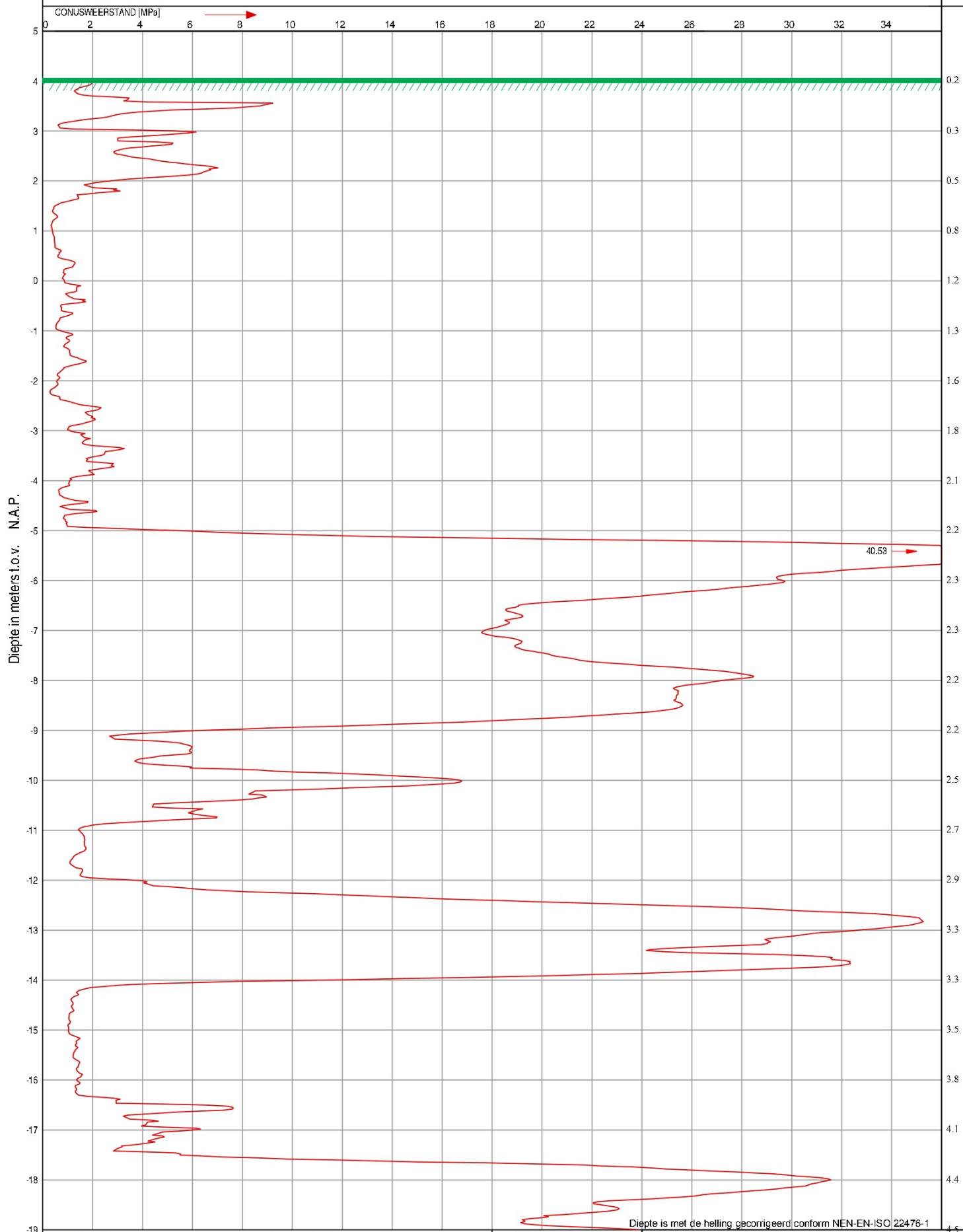


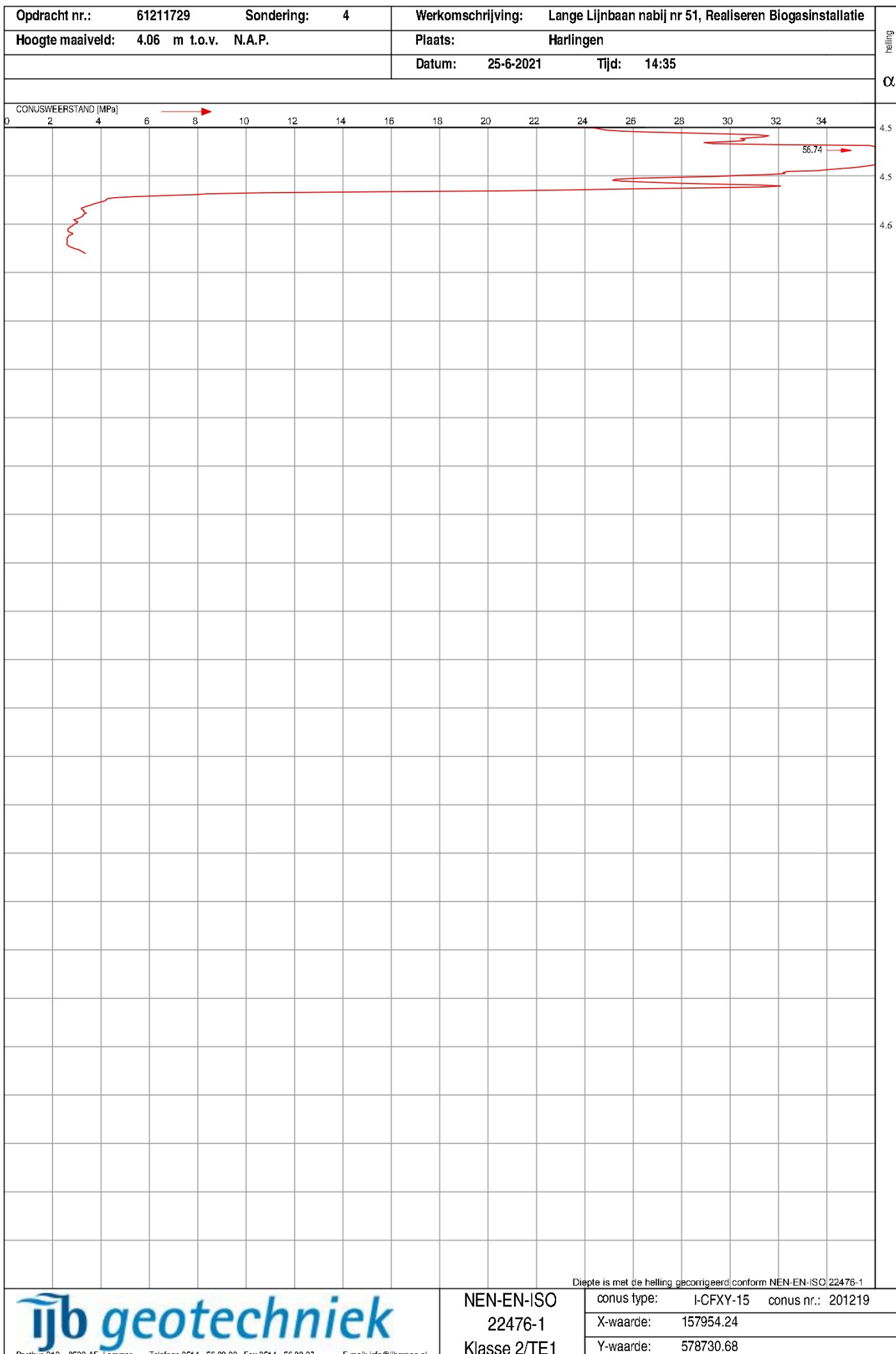






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Hoogte maaiveld: 4.06 m t.o.v. N.A.P.		Plaats: Harlingen	
		Datum: 25-6-2021 Tijd: 14:35	





Postbus 210, 8530 AF Lemmer, Telefoon 0514 - 56 88 00, Fax 0514 - 56 88 07, E-mail: info@liboroo.nl

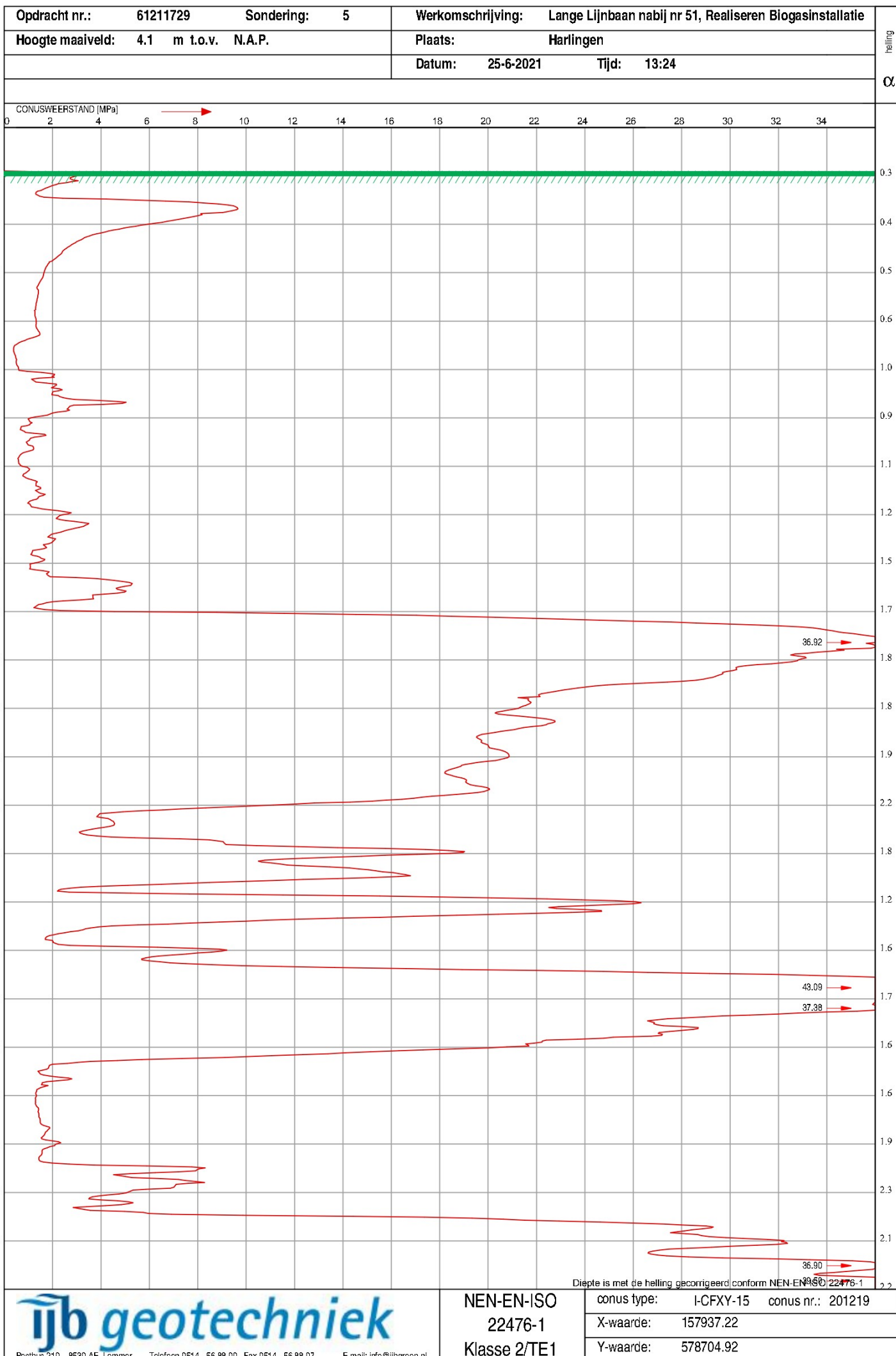
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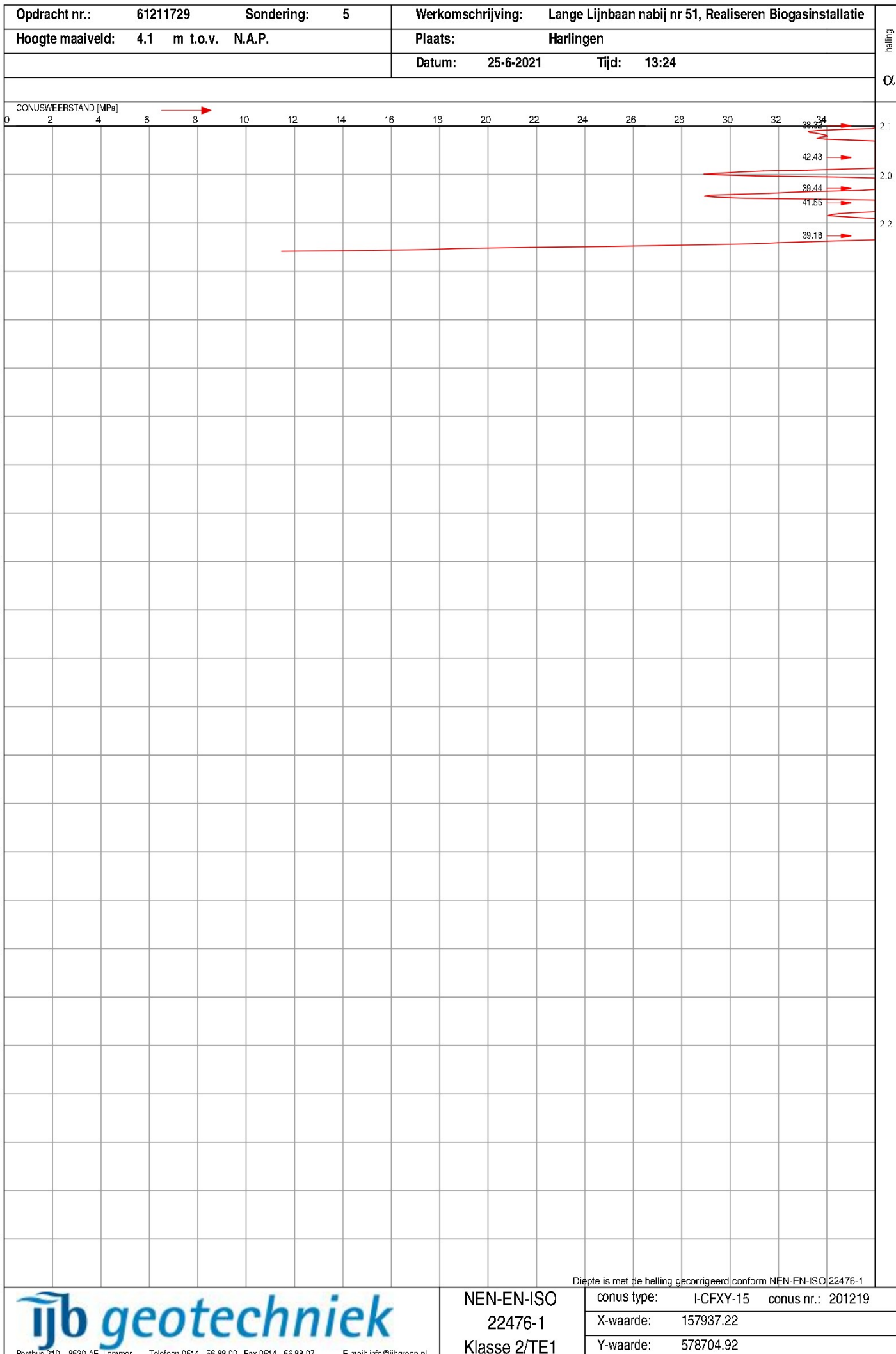
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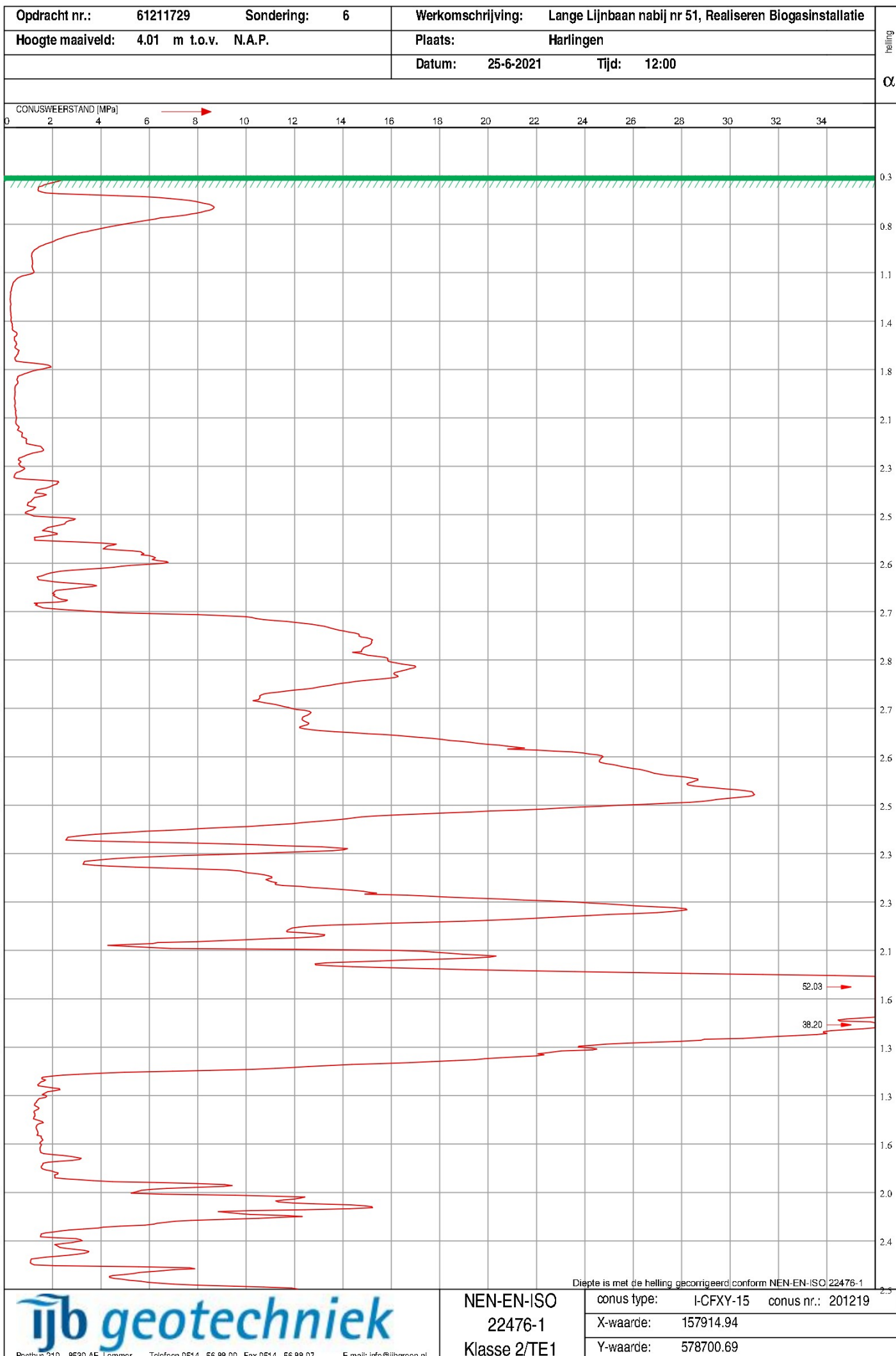
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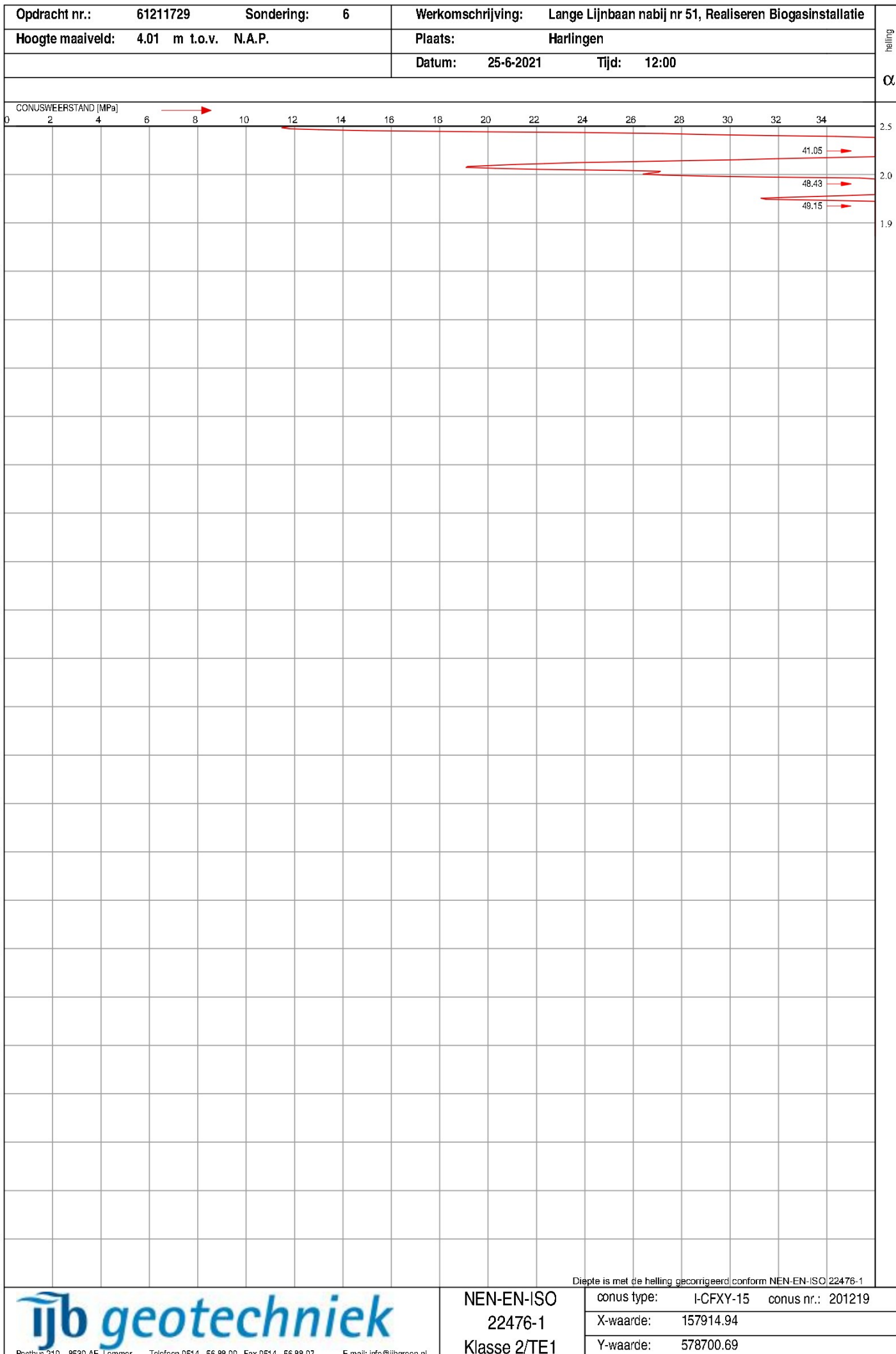
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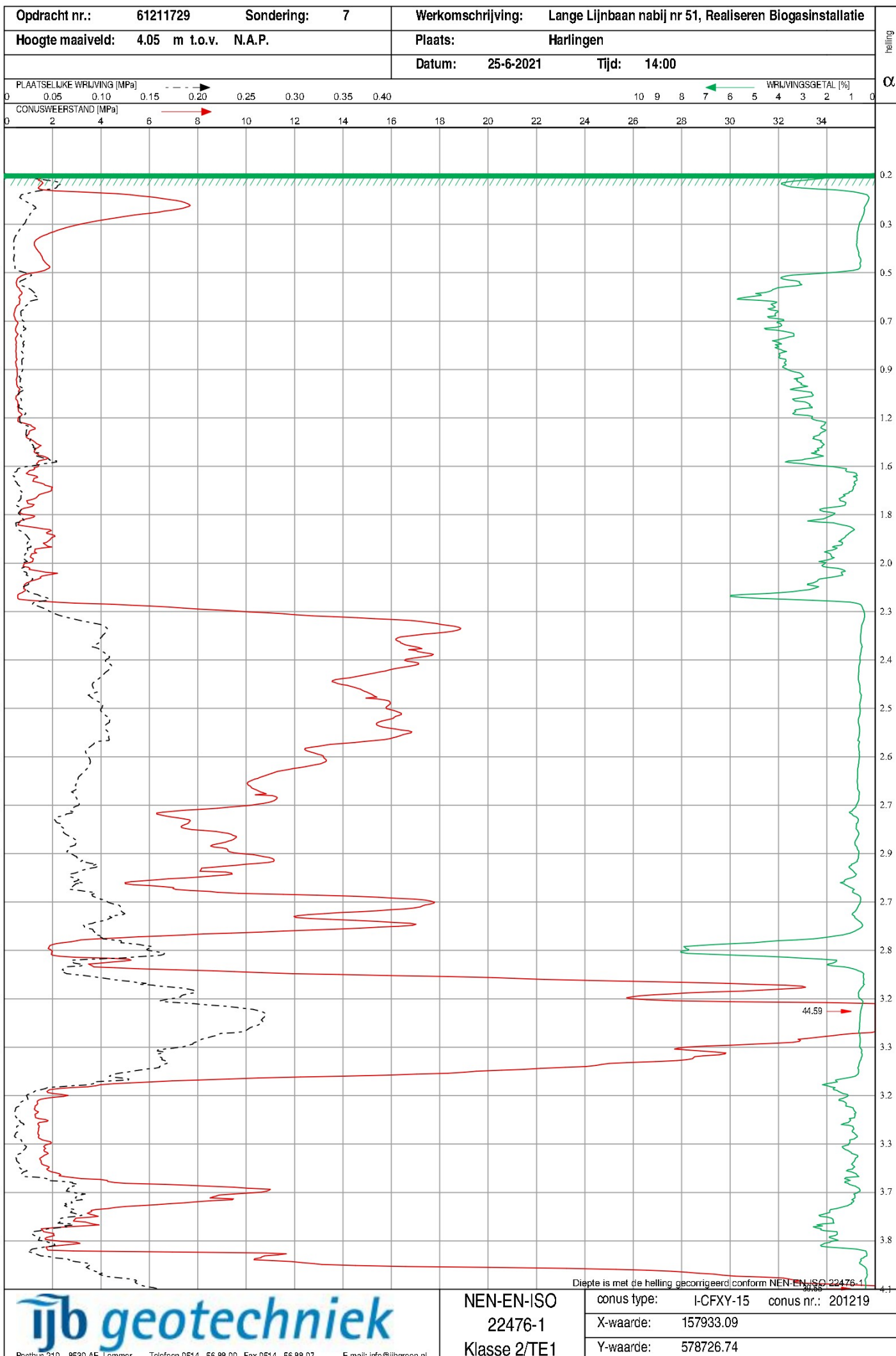
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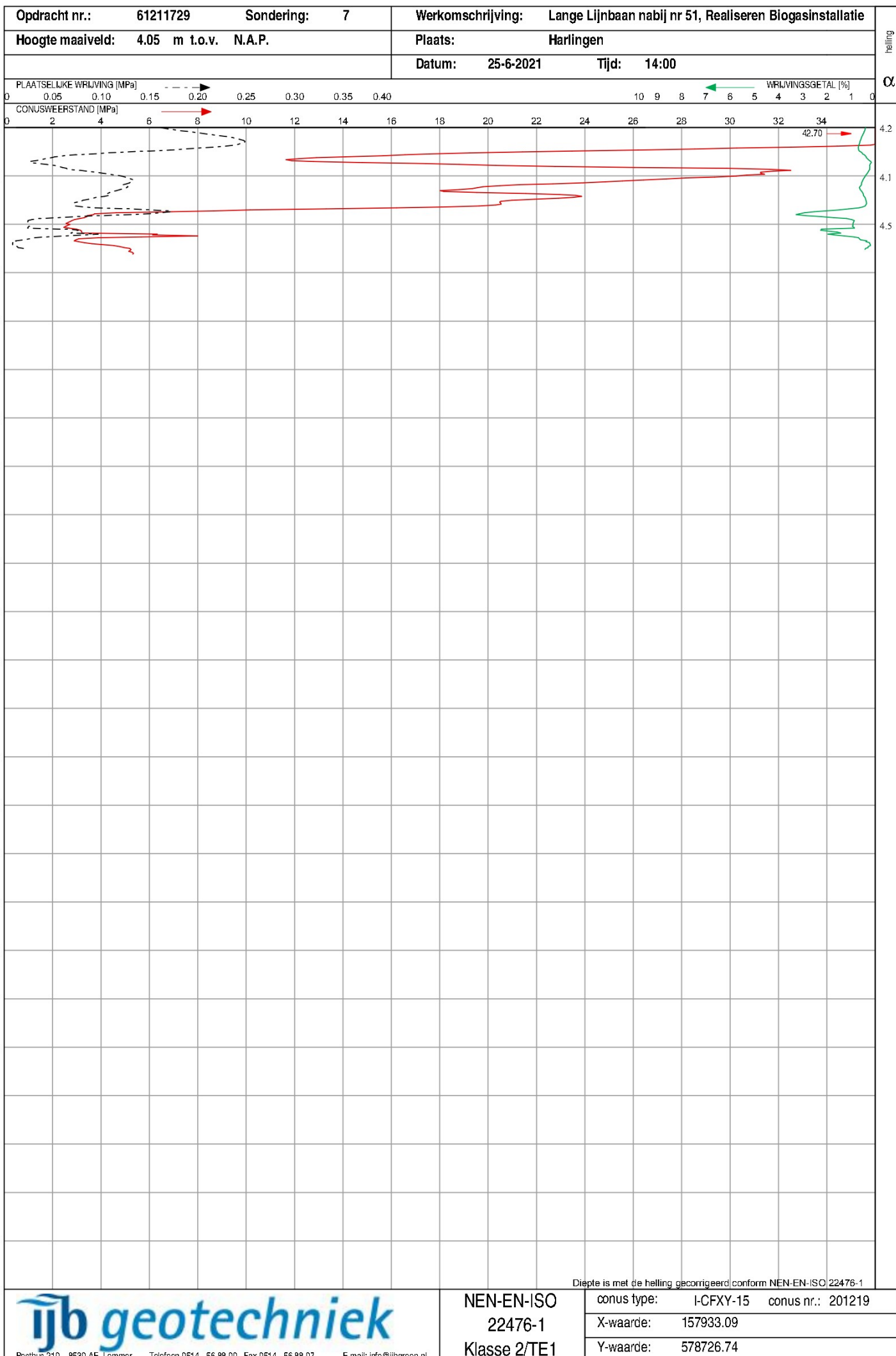


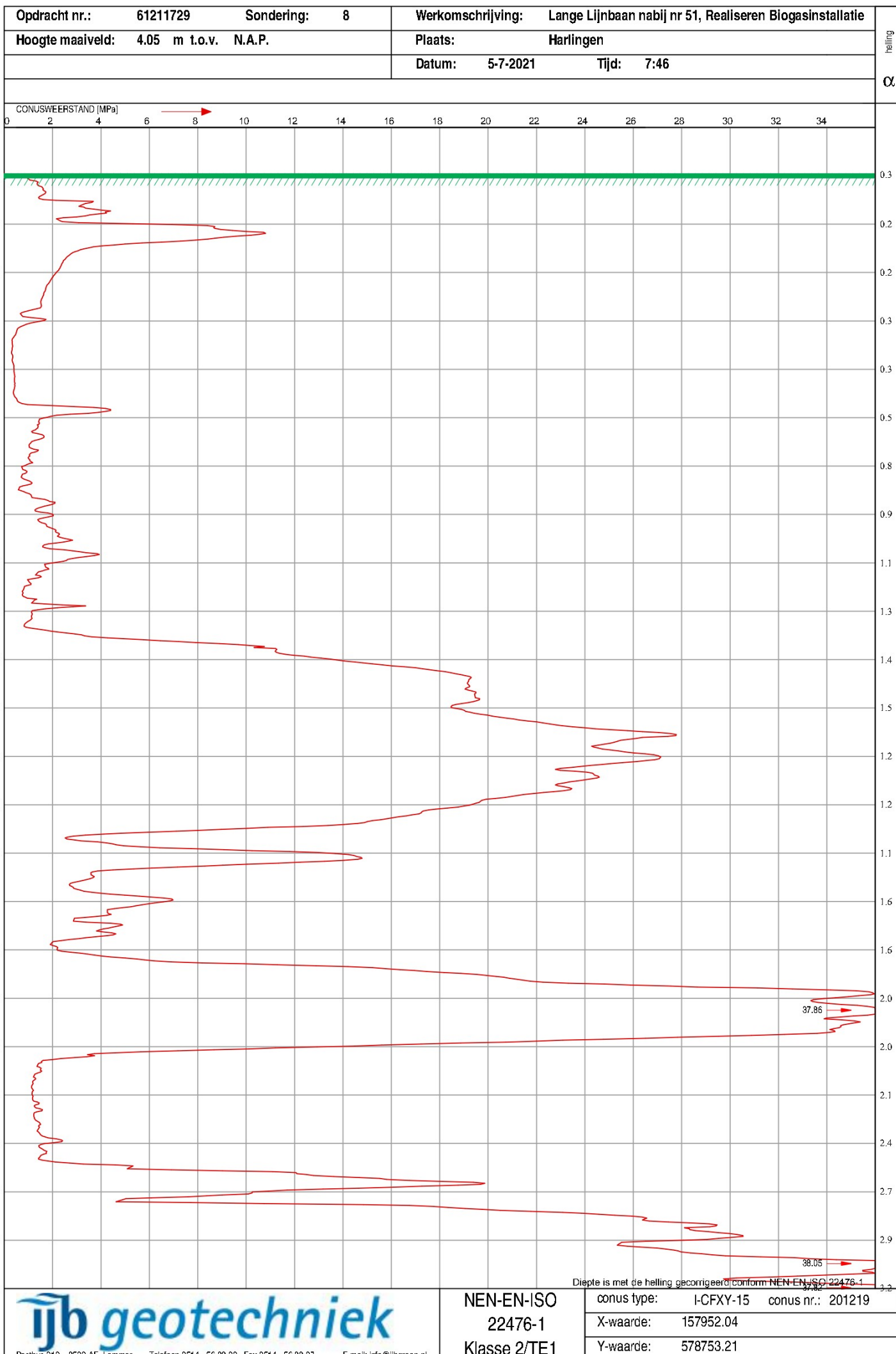


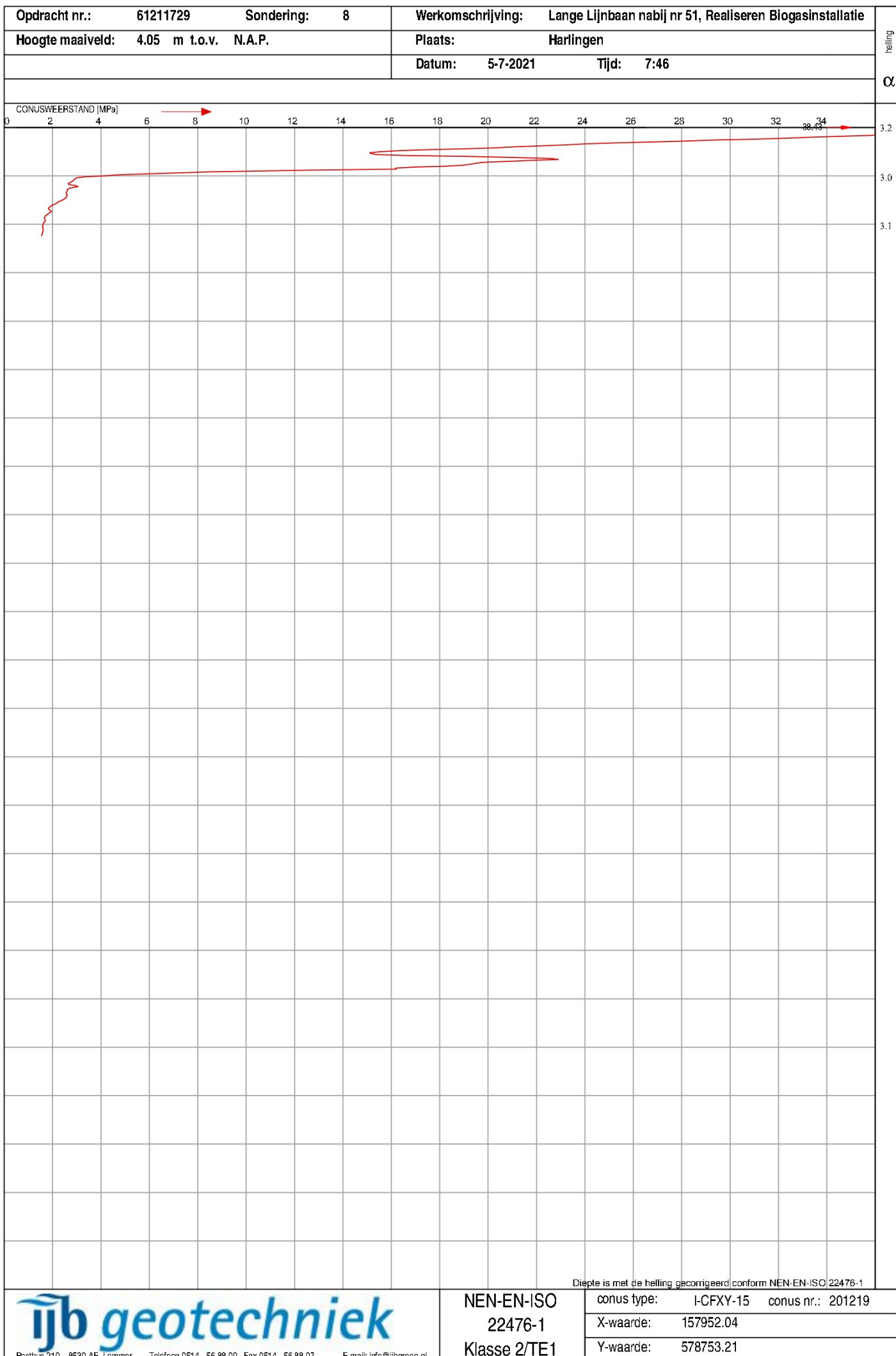




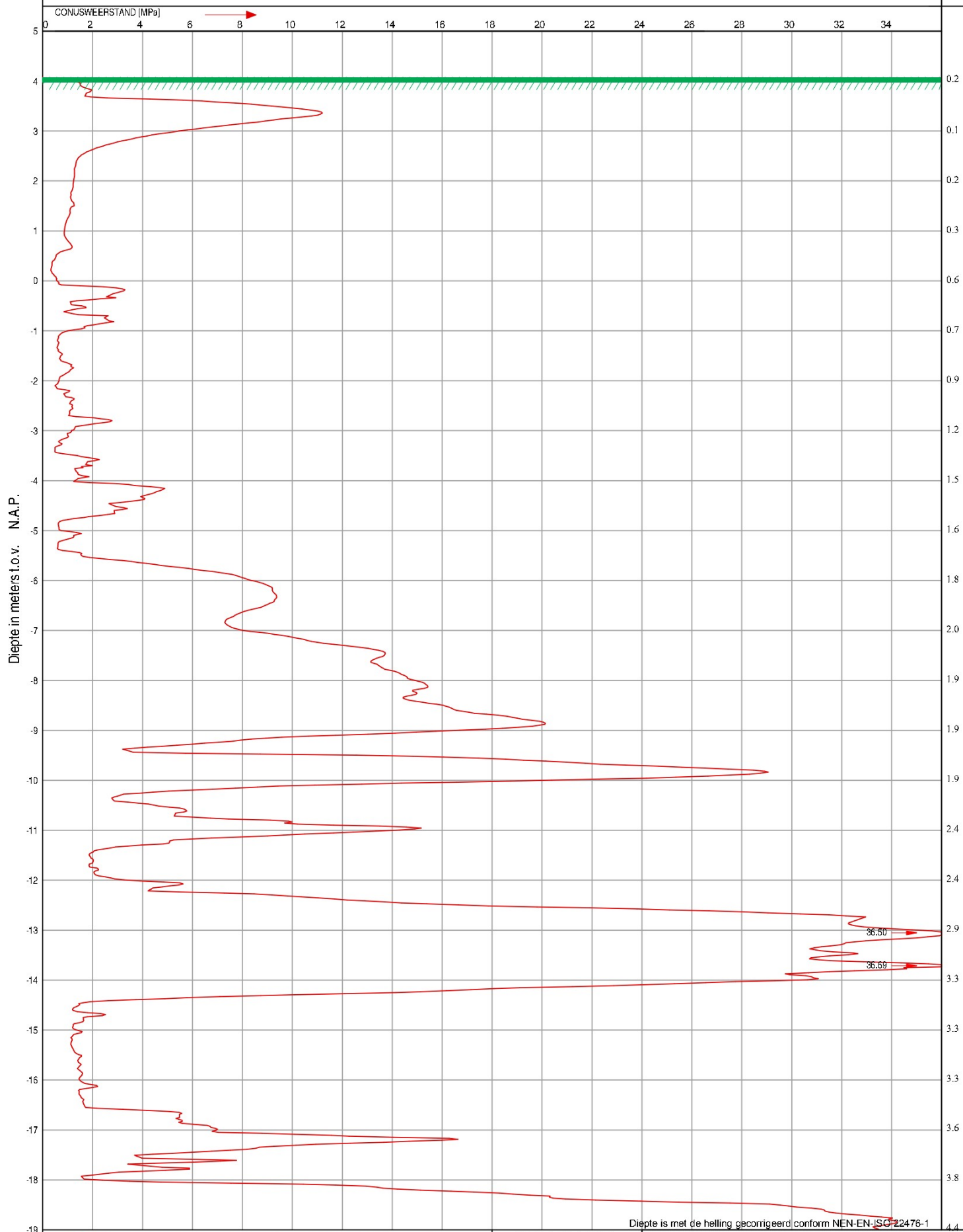


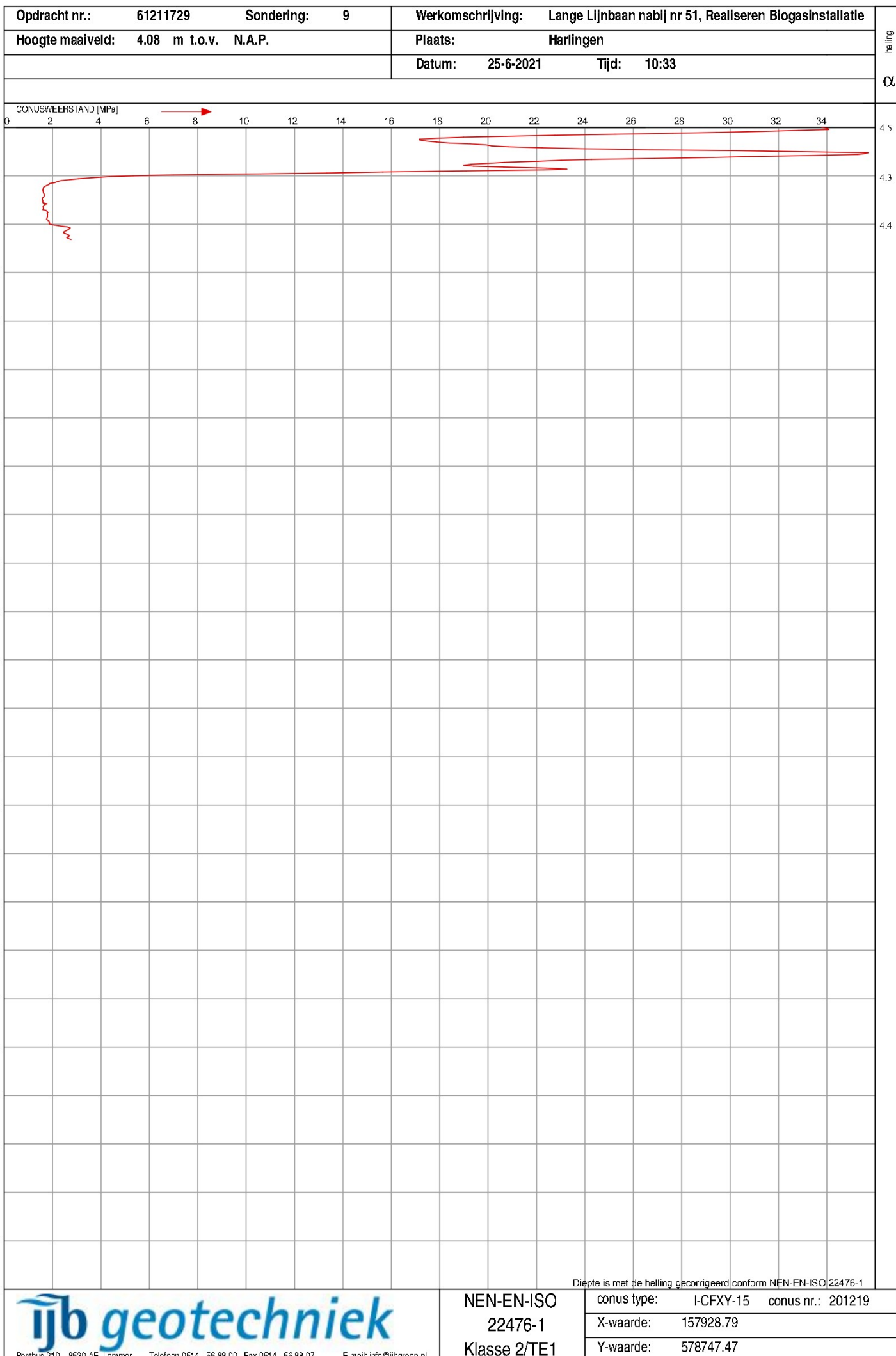


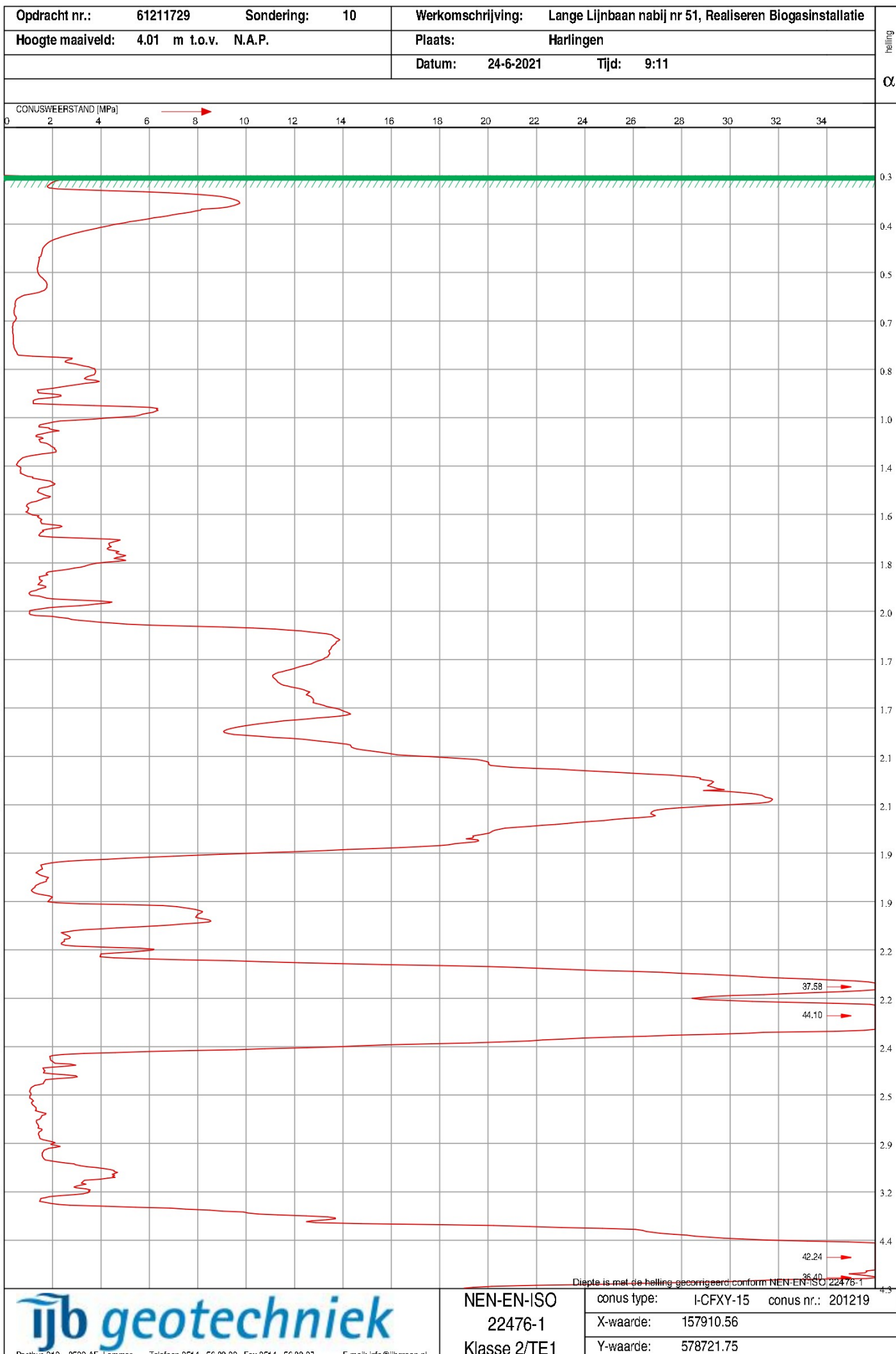


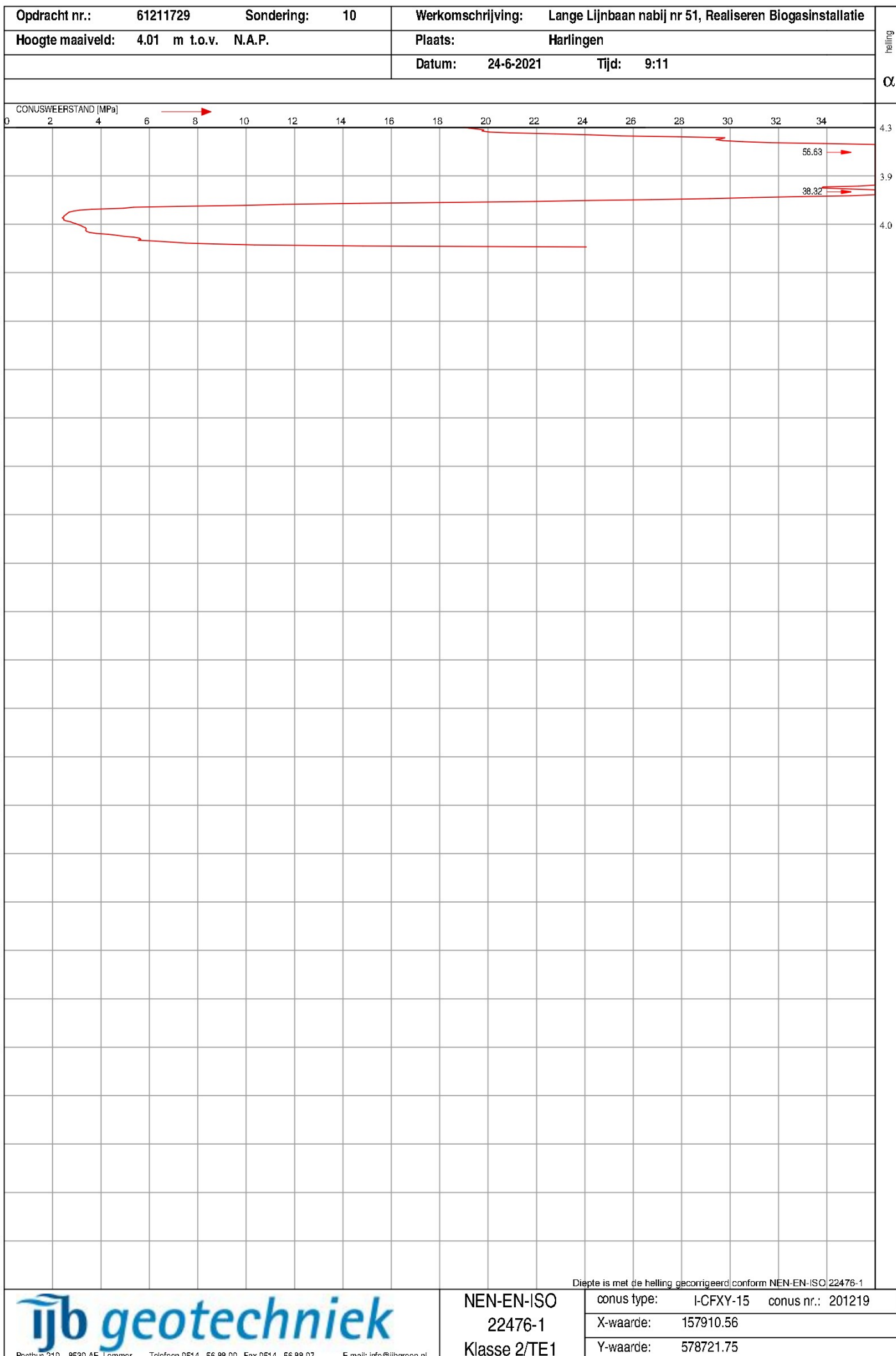


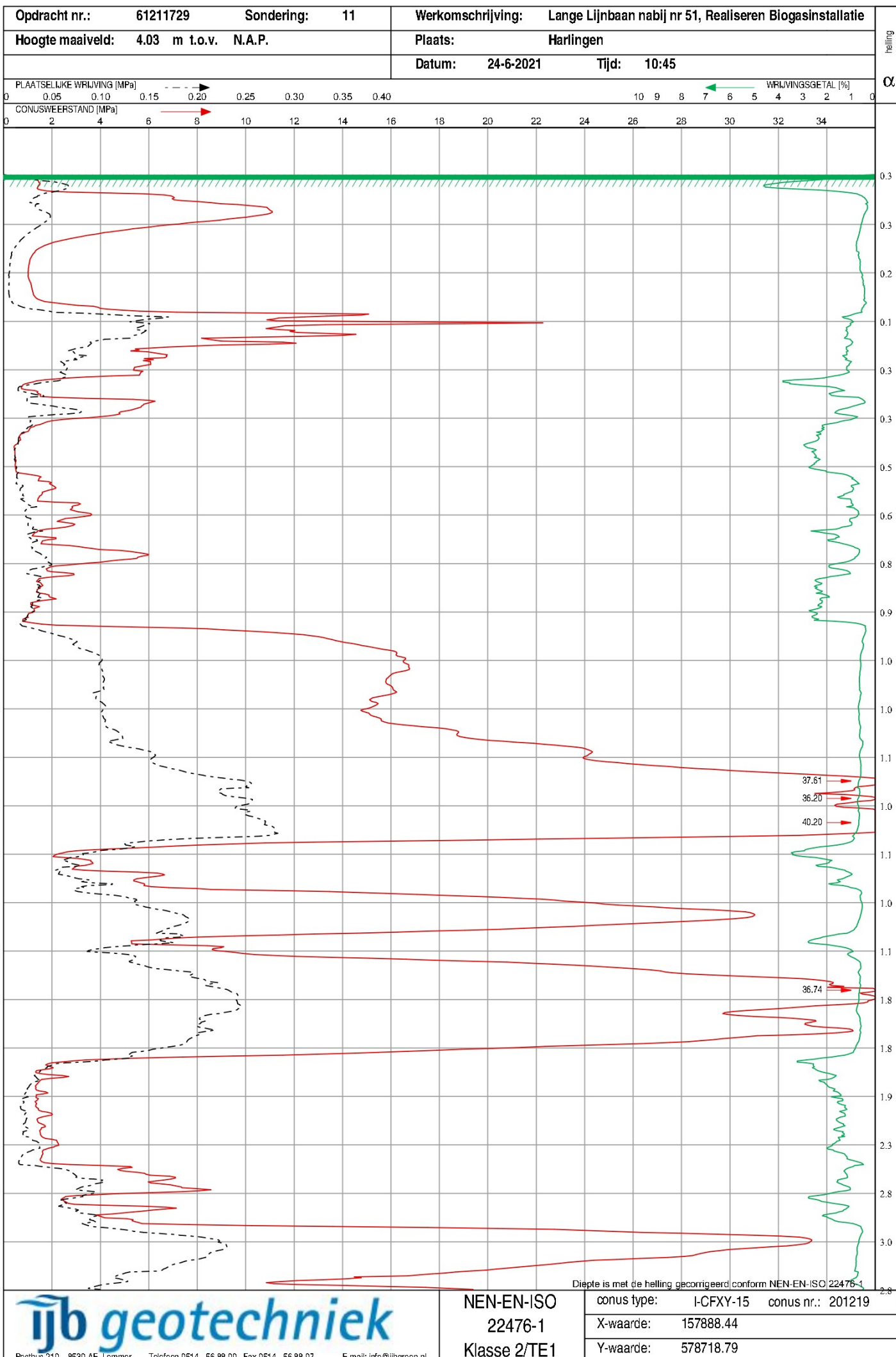
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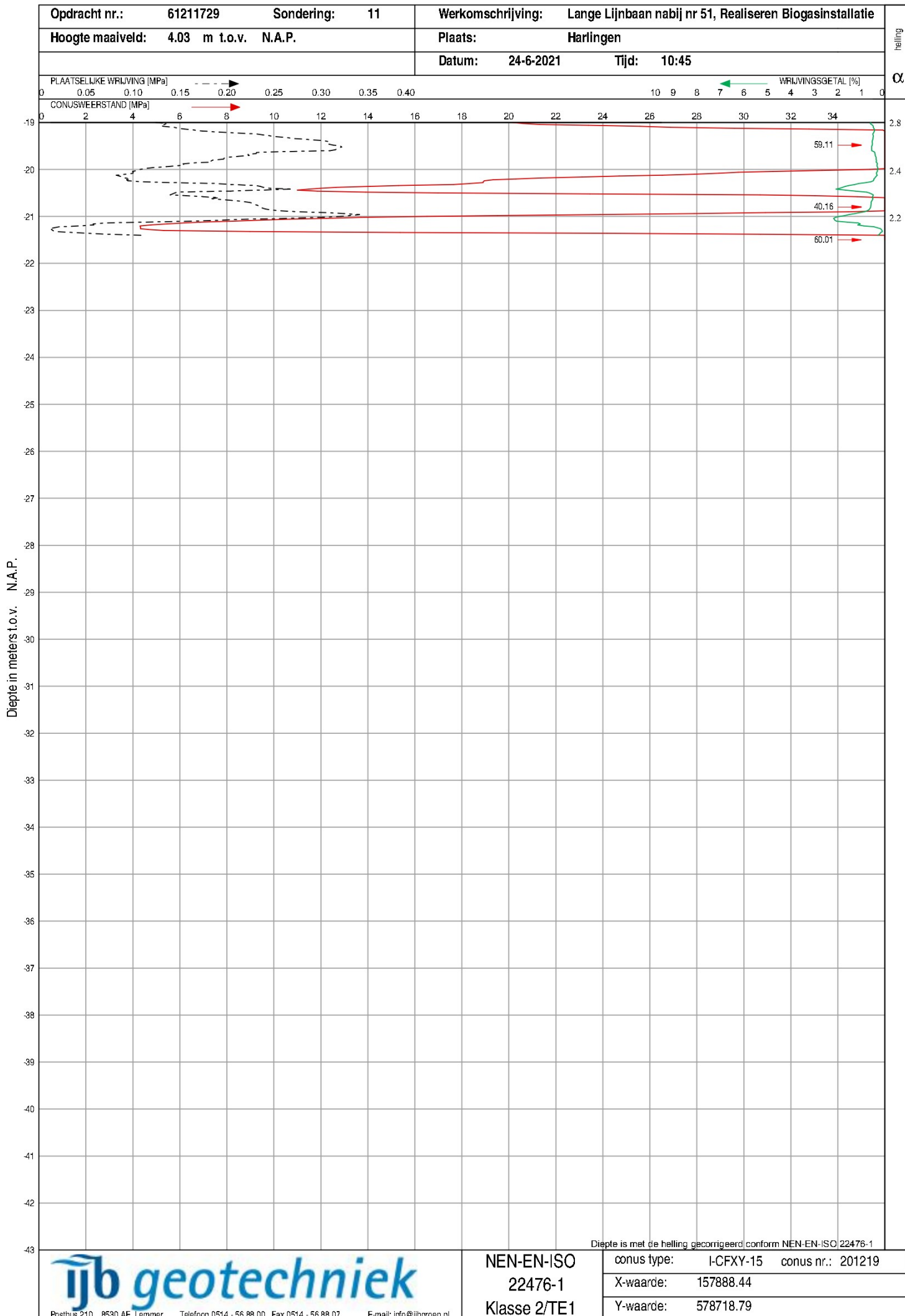


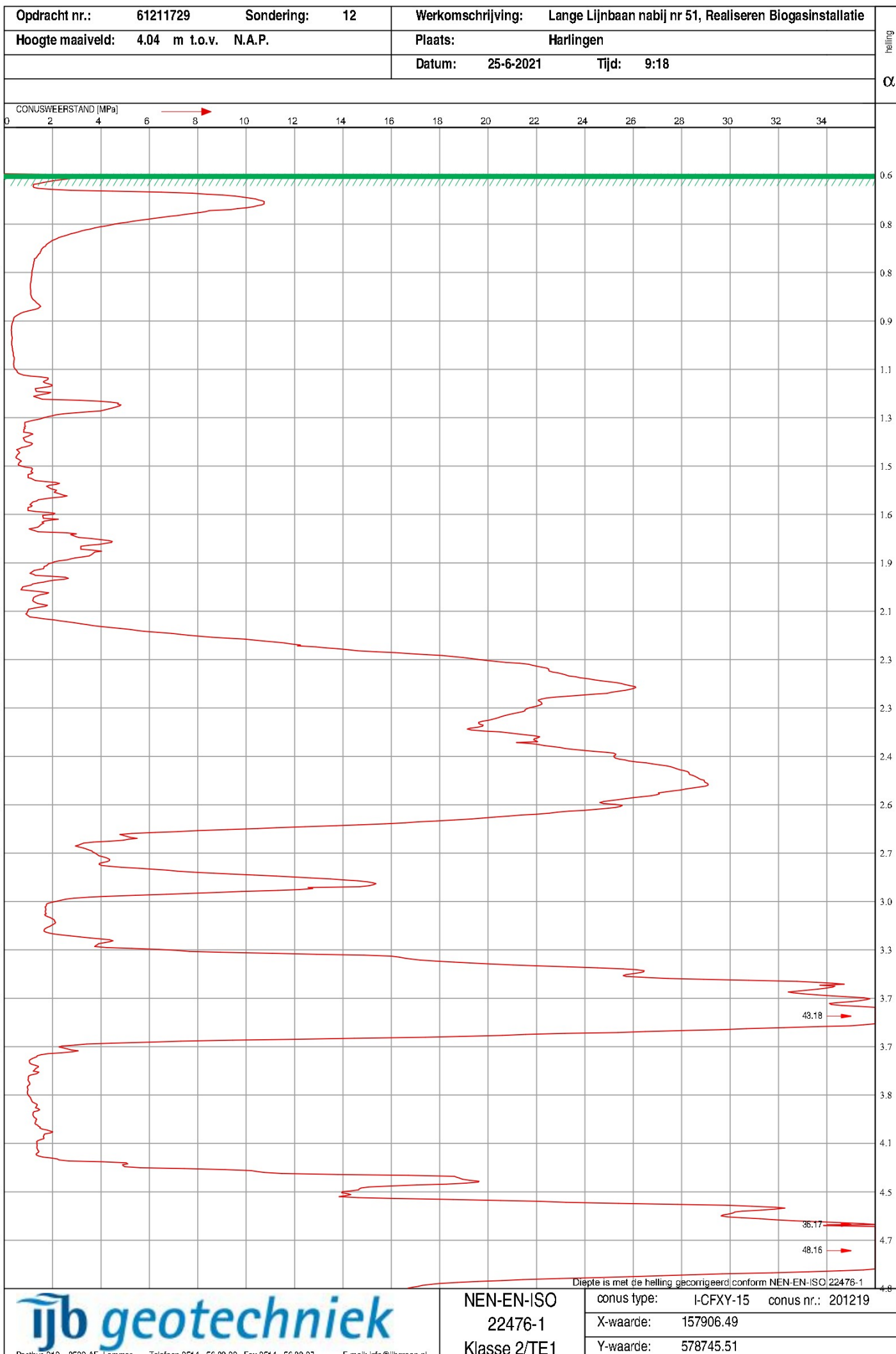


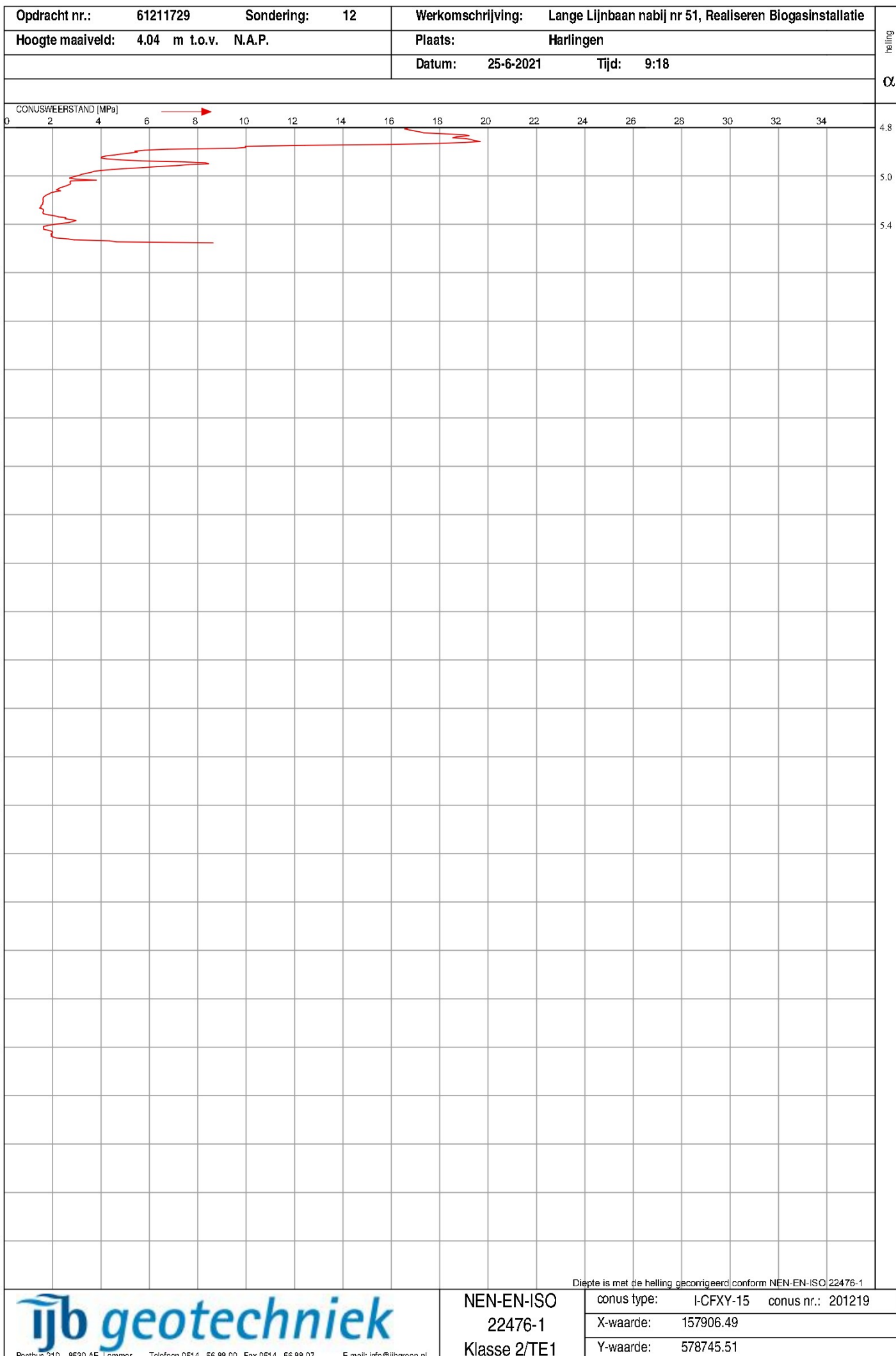


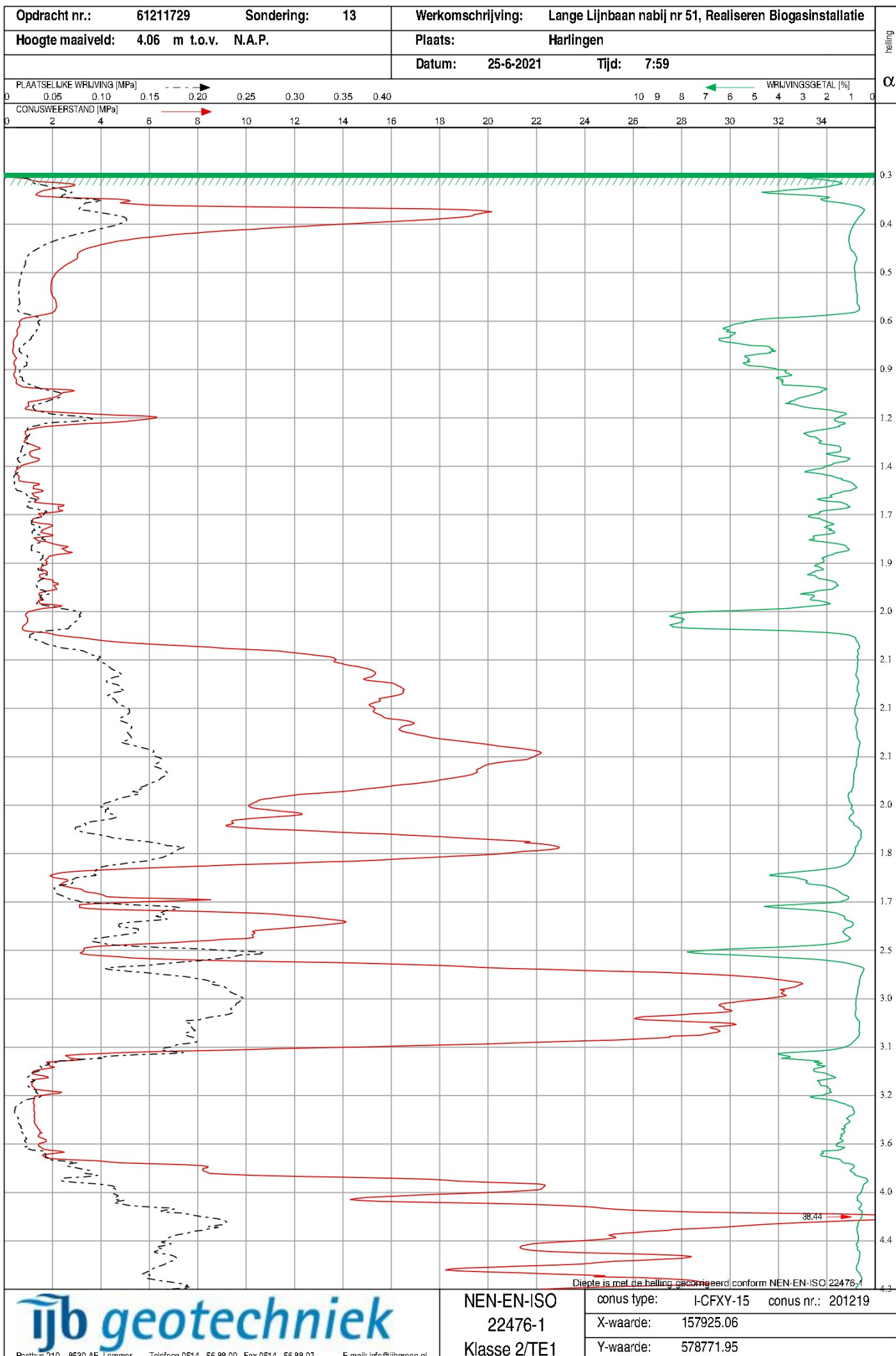


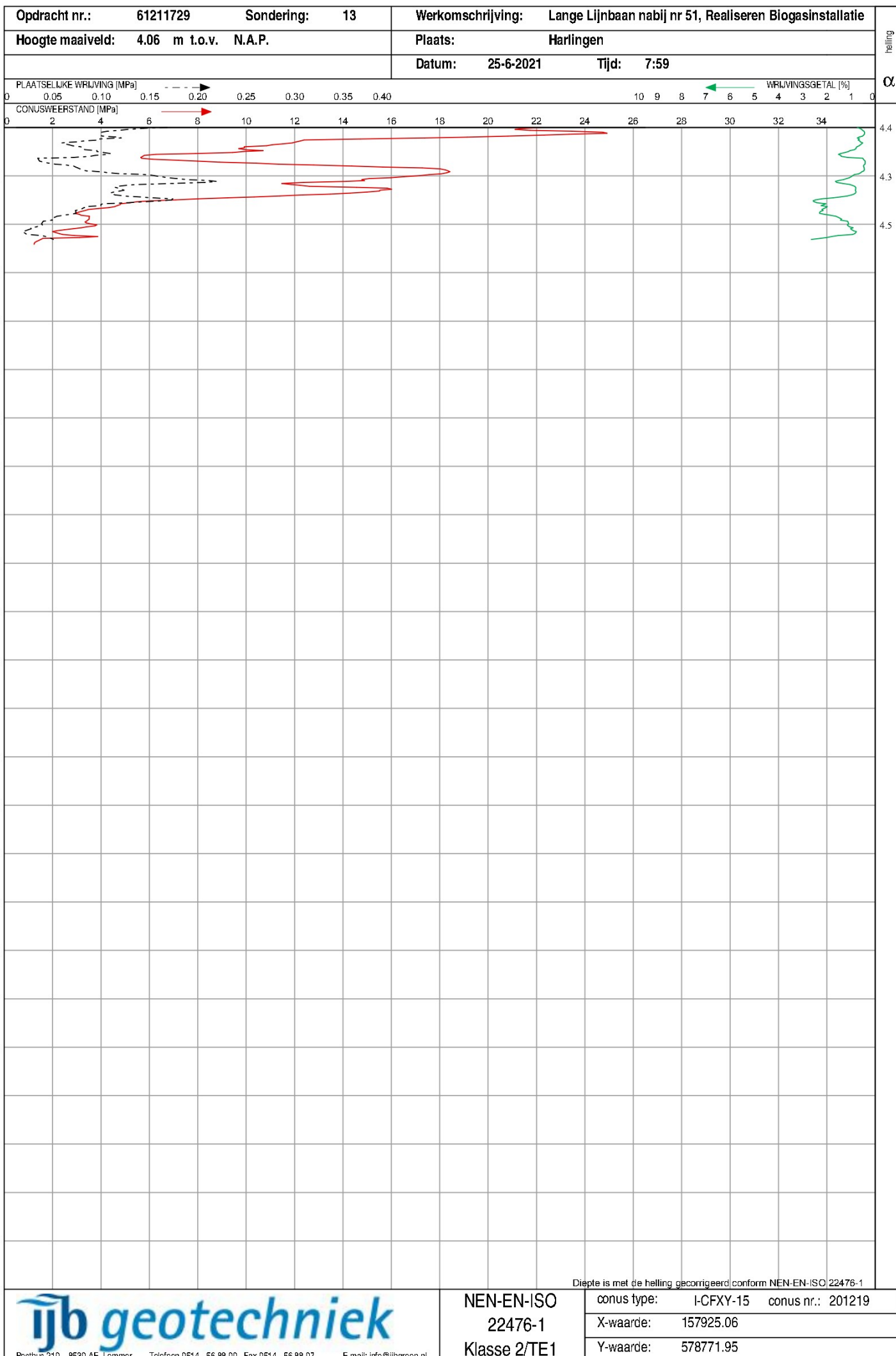


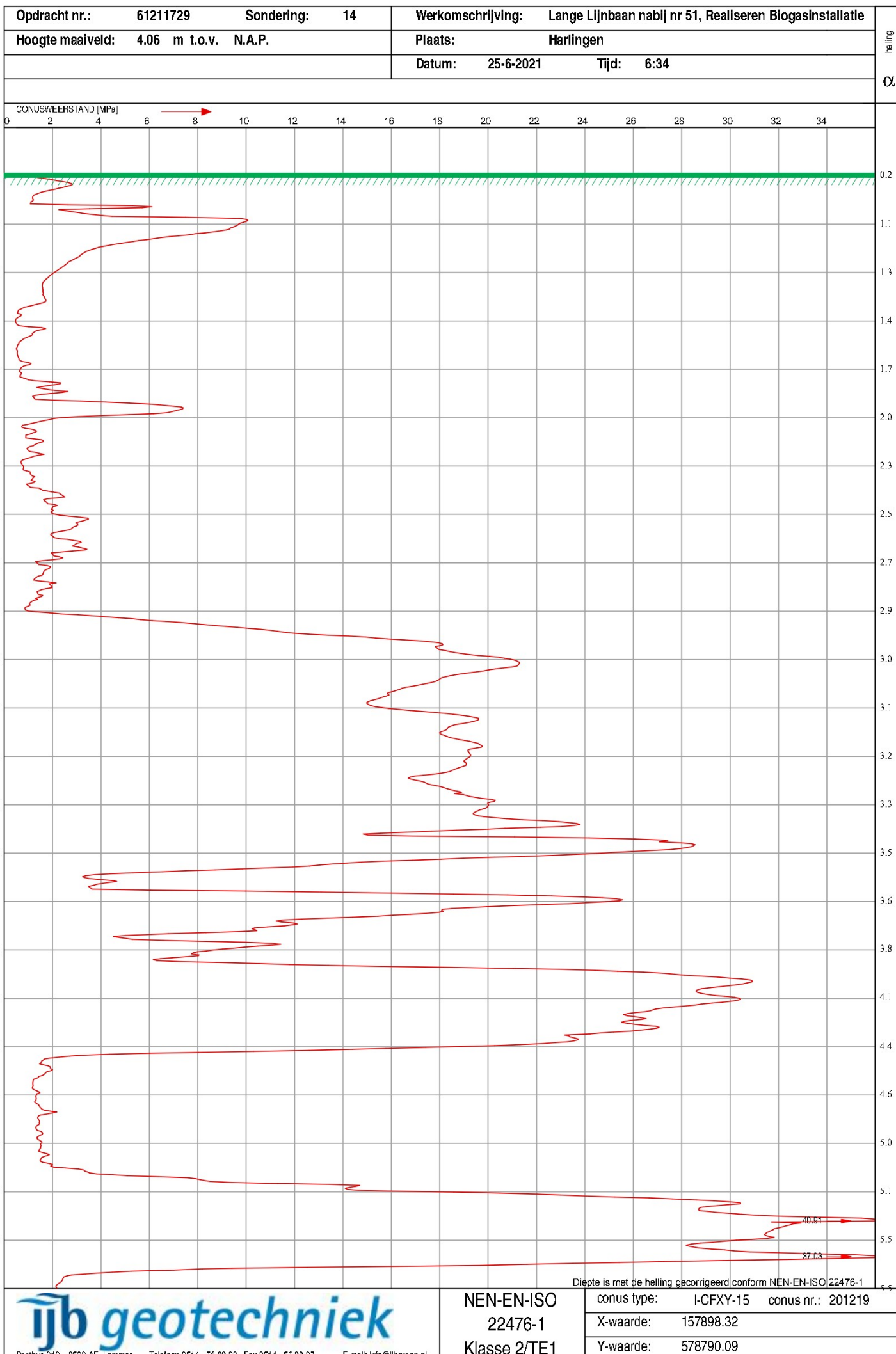


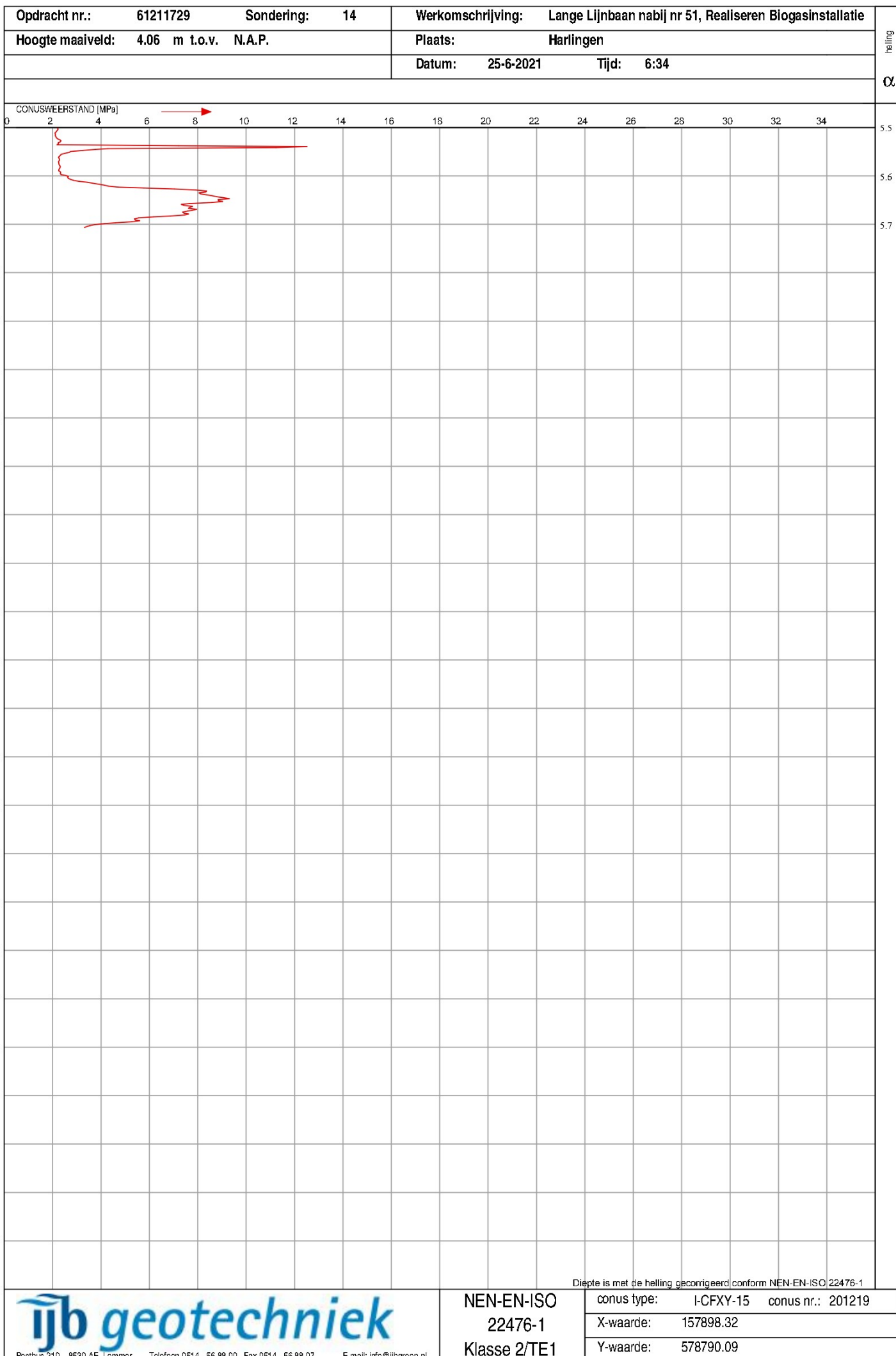


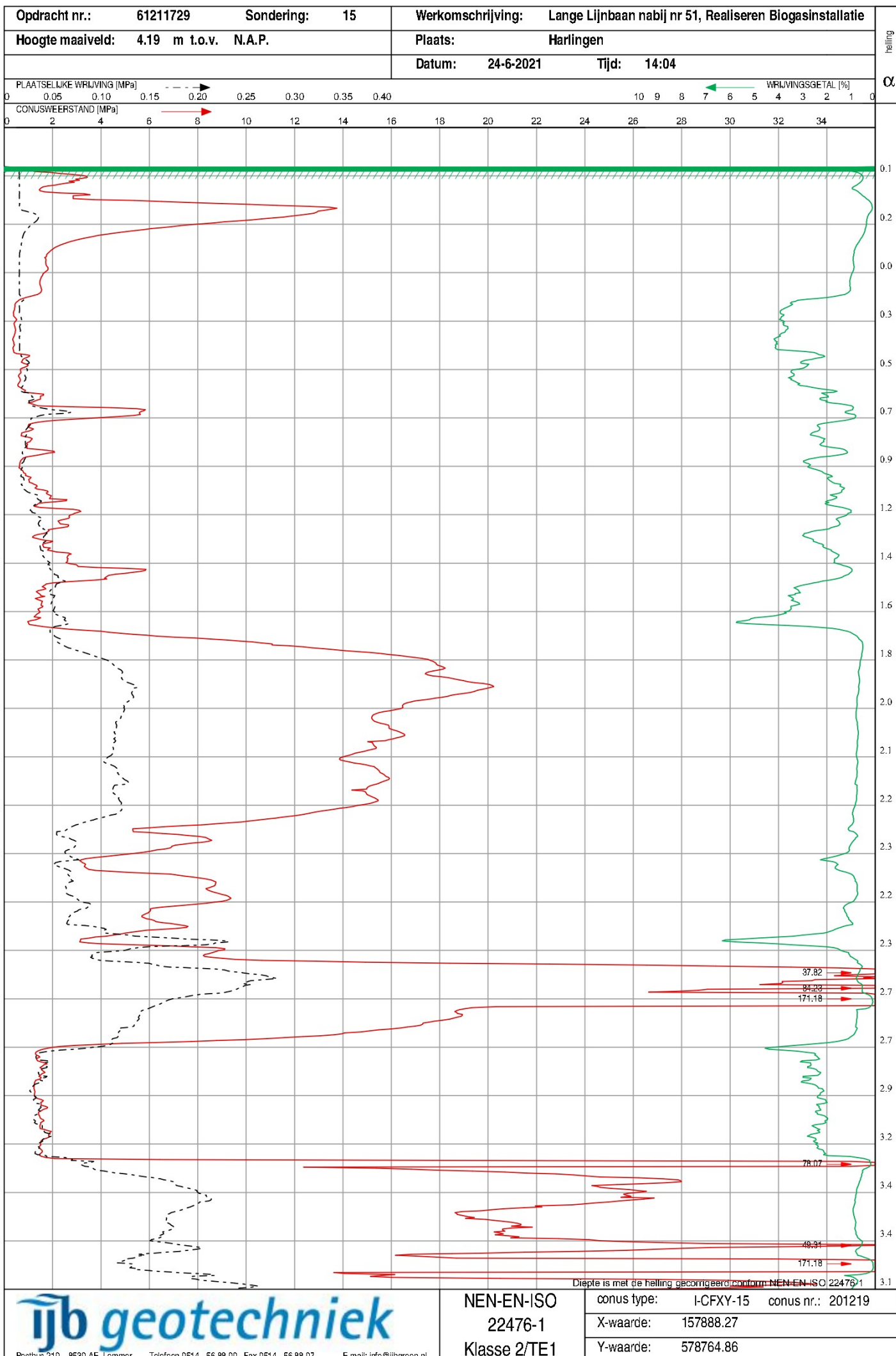


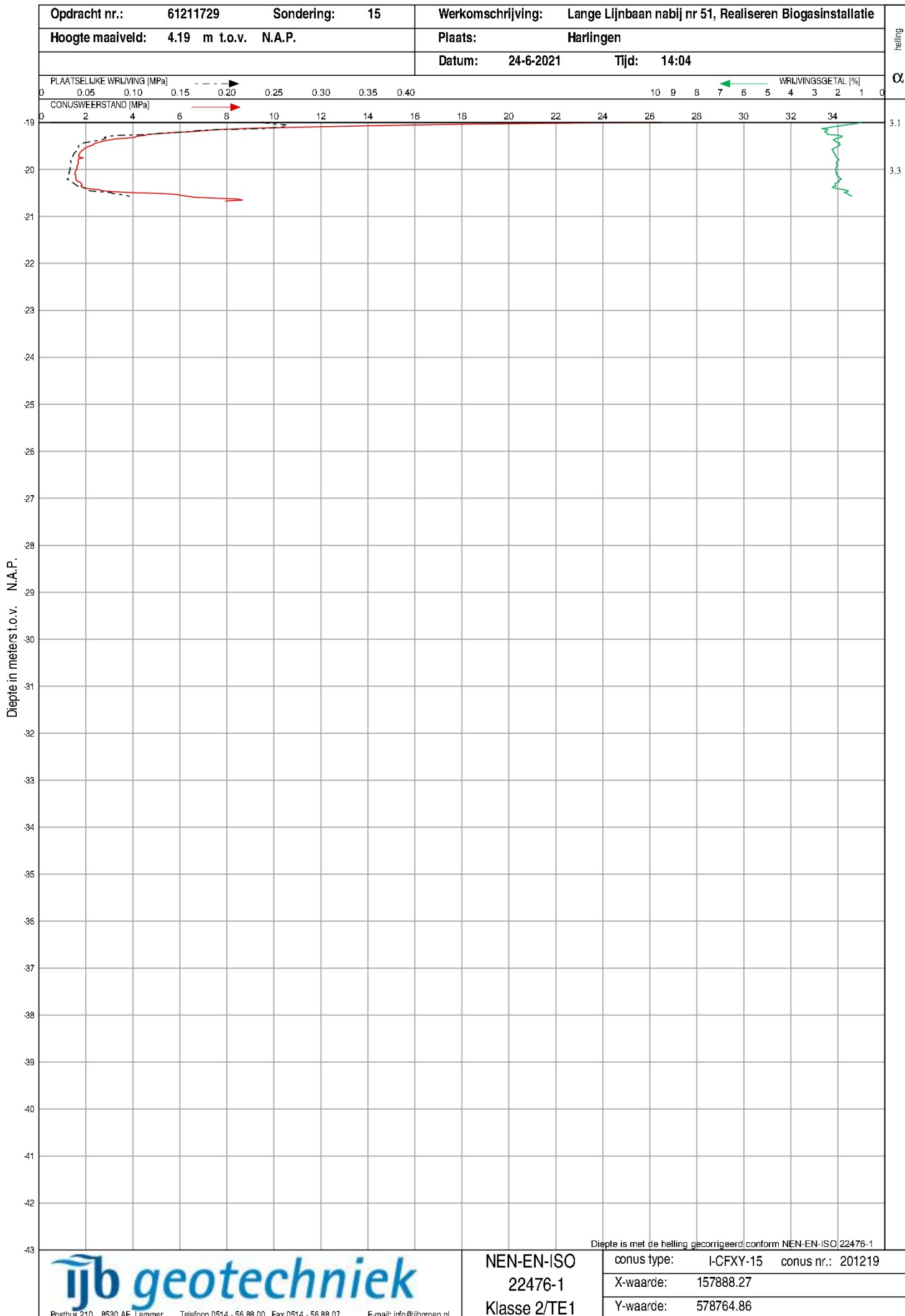




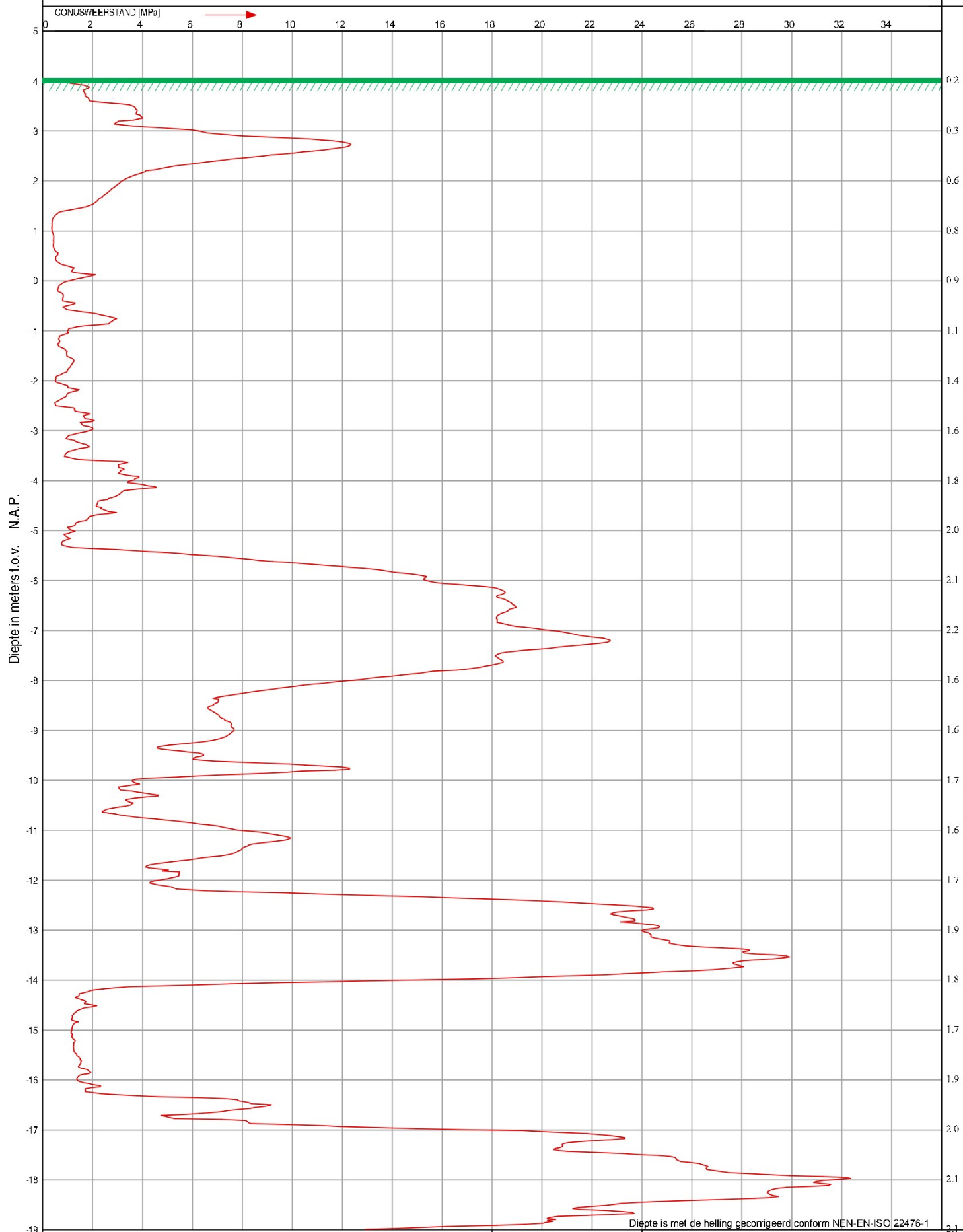


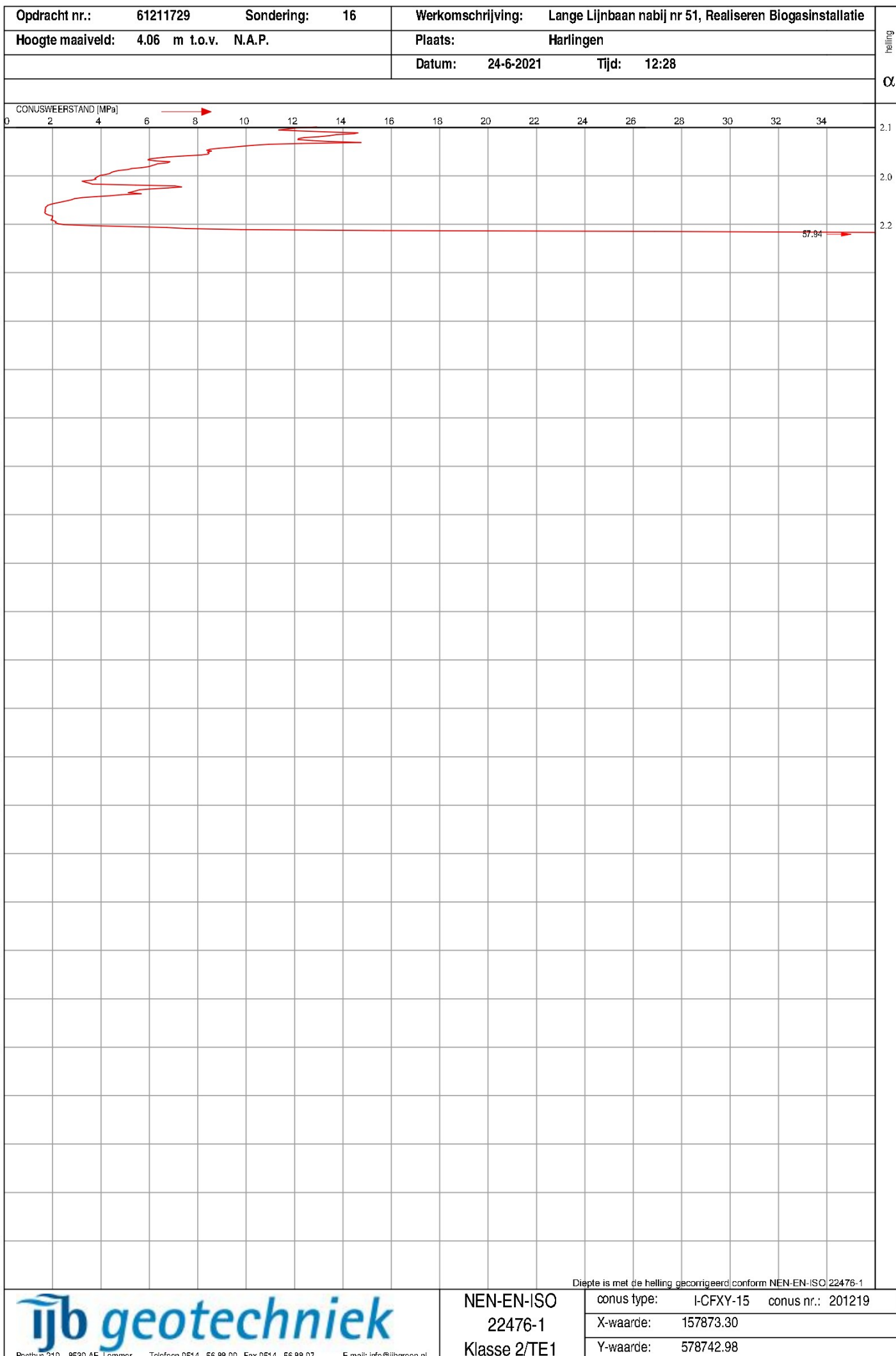


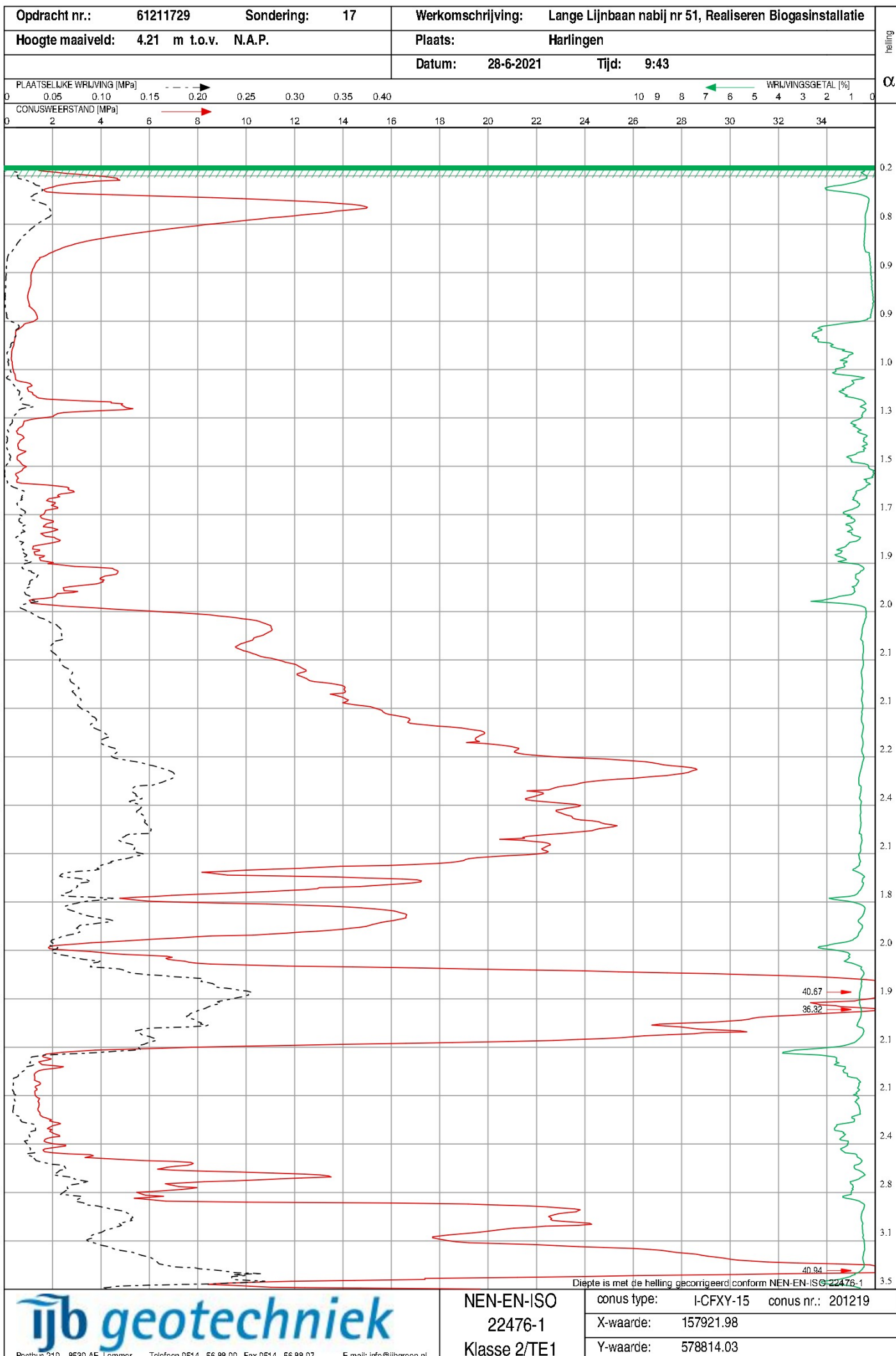


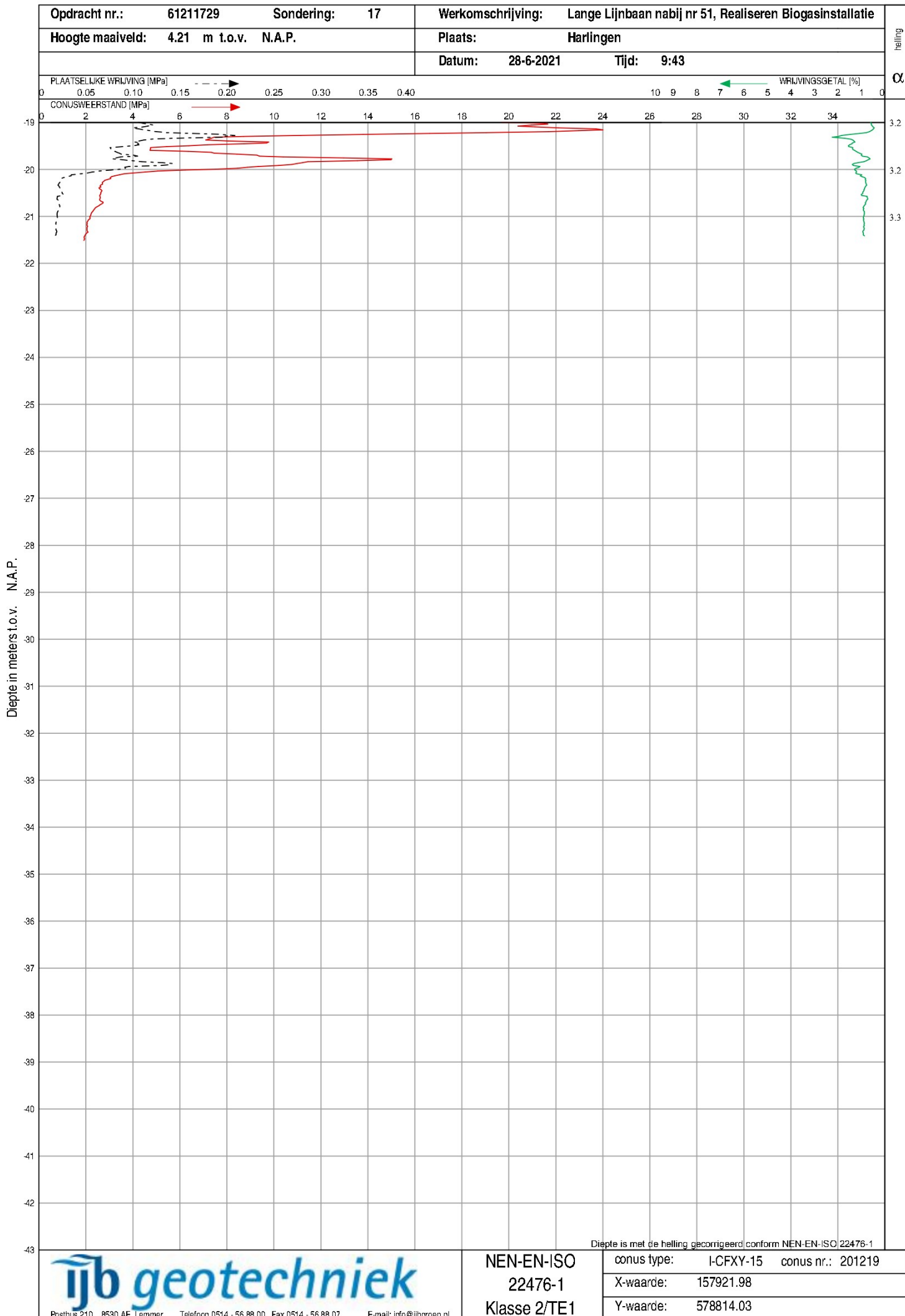


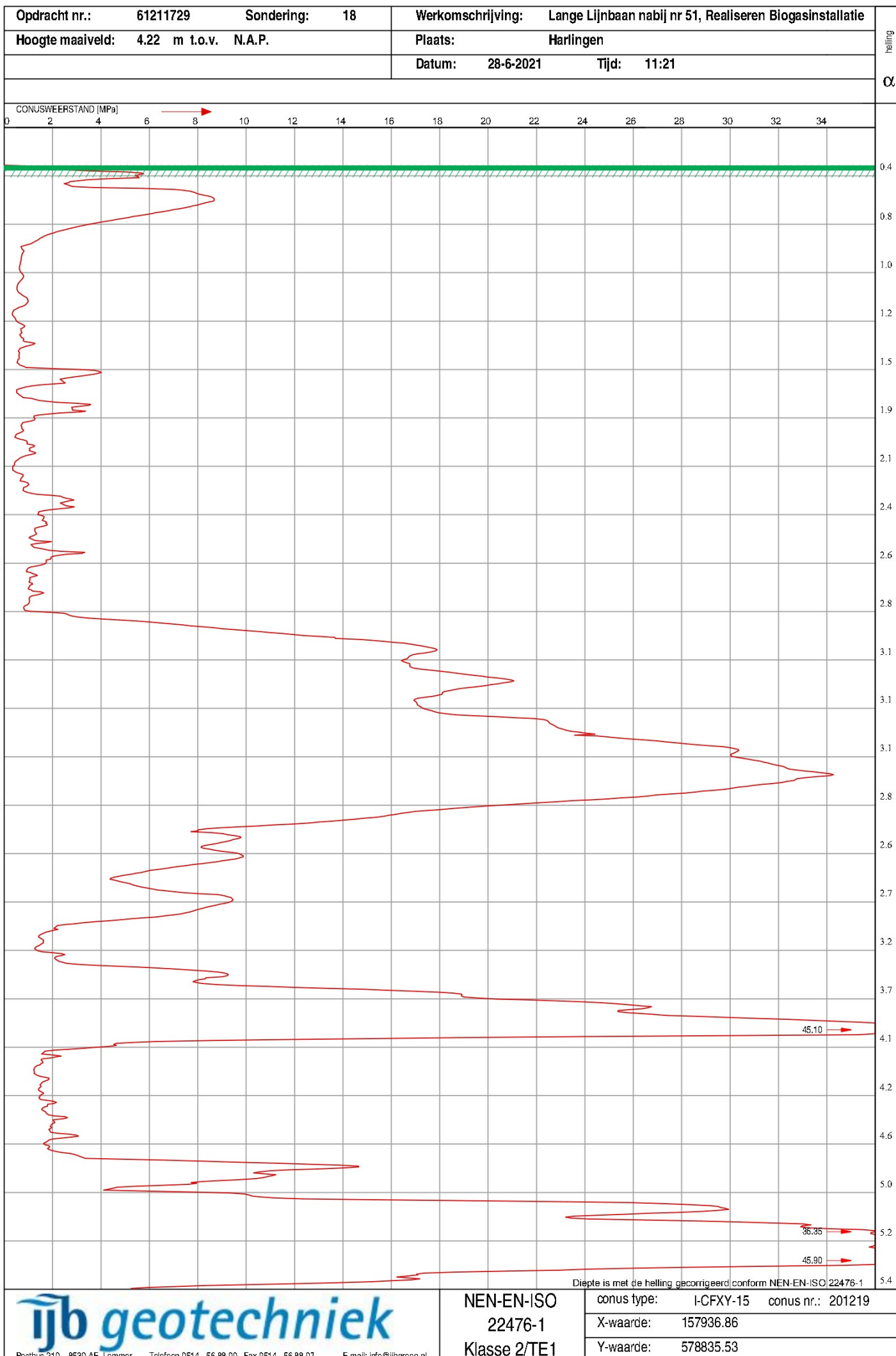
Opdracht nr.: 61211729	Sondering: 16	Werkomschrijving: Lange Lijnbaan nabij nr 51, Realiseren Biogasinstallatie	helling α
Hoogte maaiveld: 4.06 m t.o.v. N.A.P.		Plaats: Harlingen	
		Datum: 24-6-2021 Tijd: 12:28	

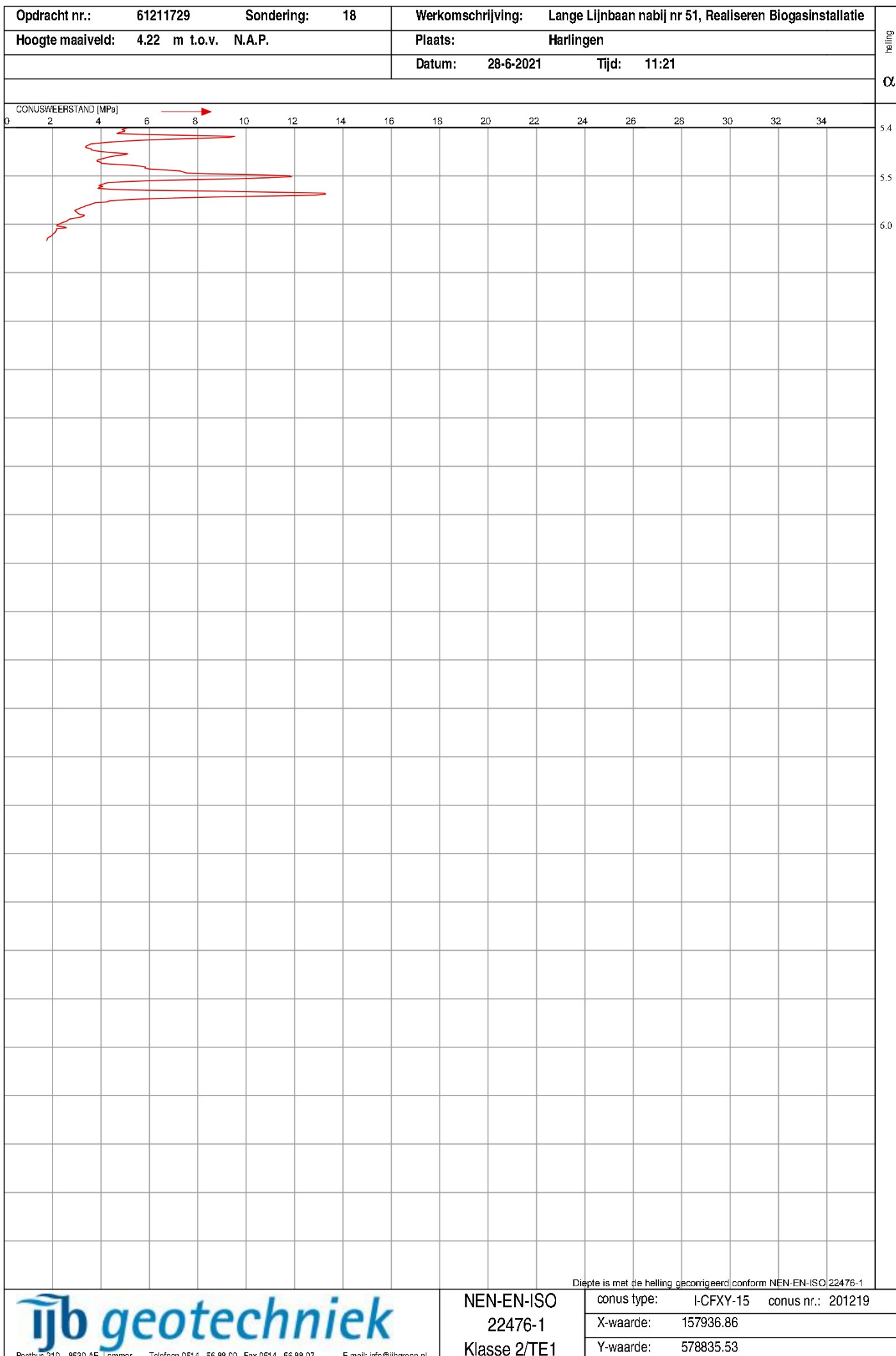


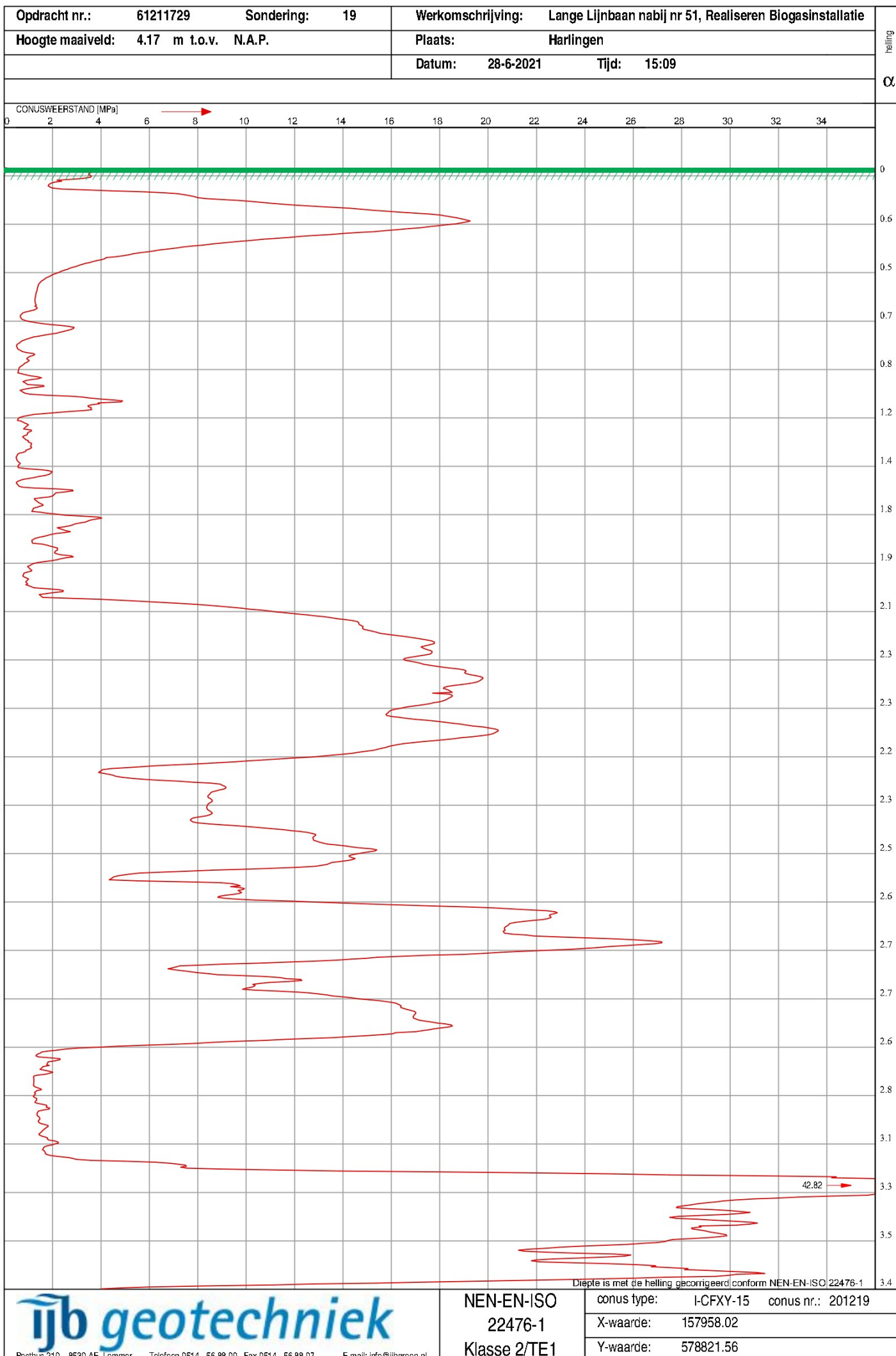


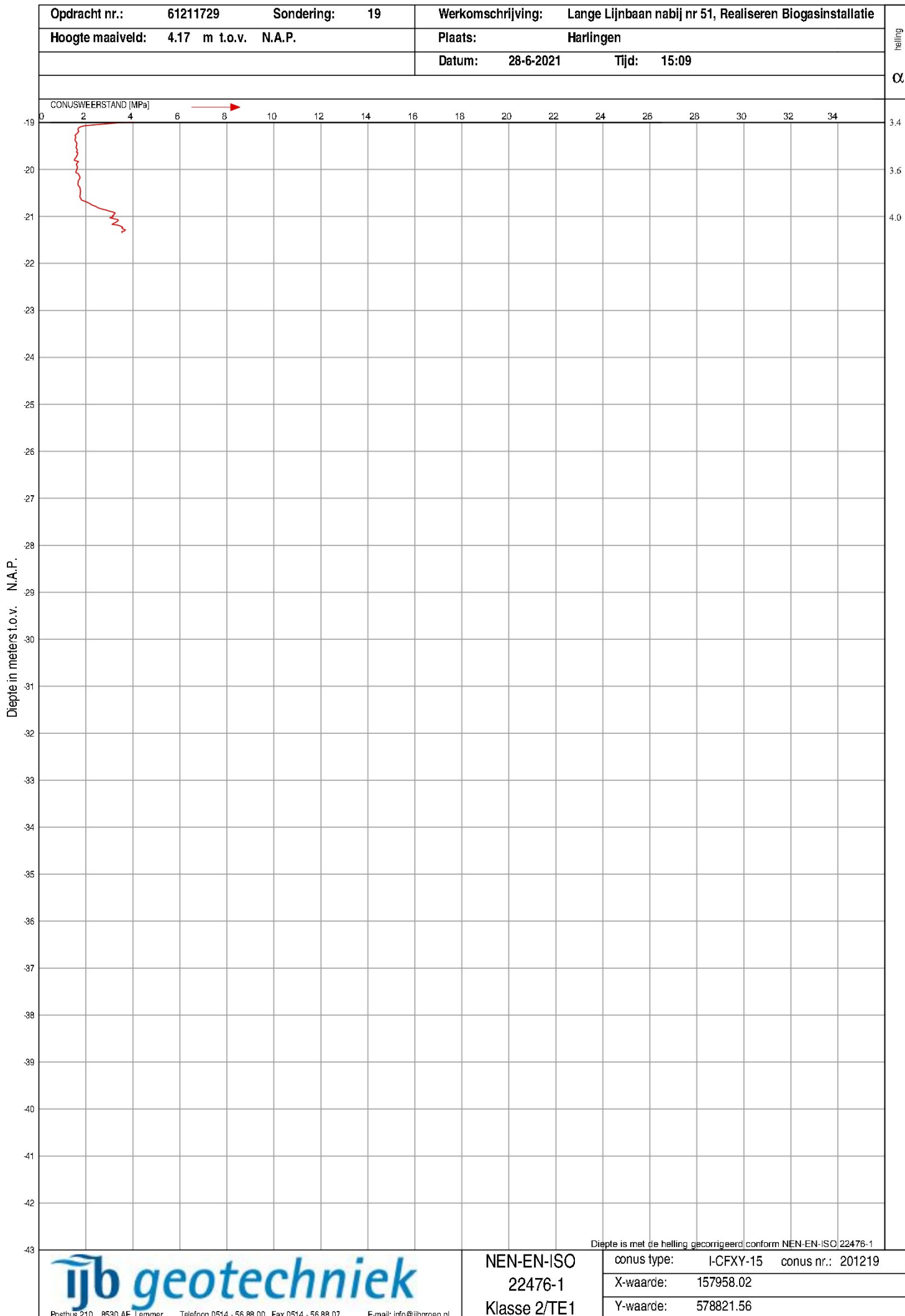


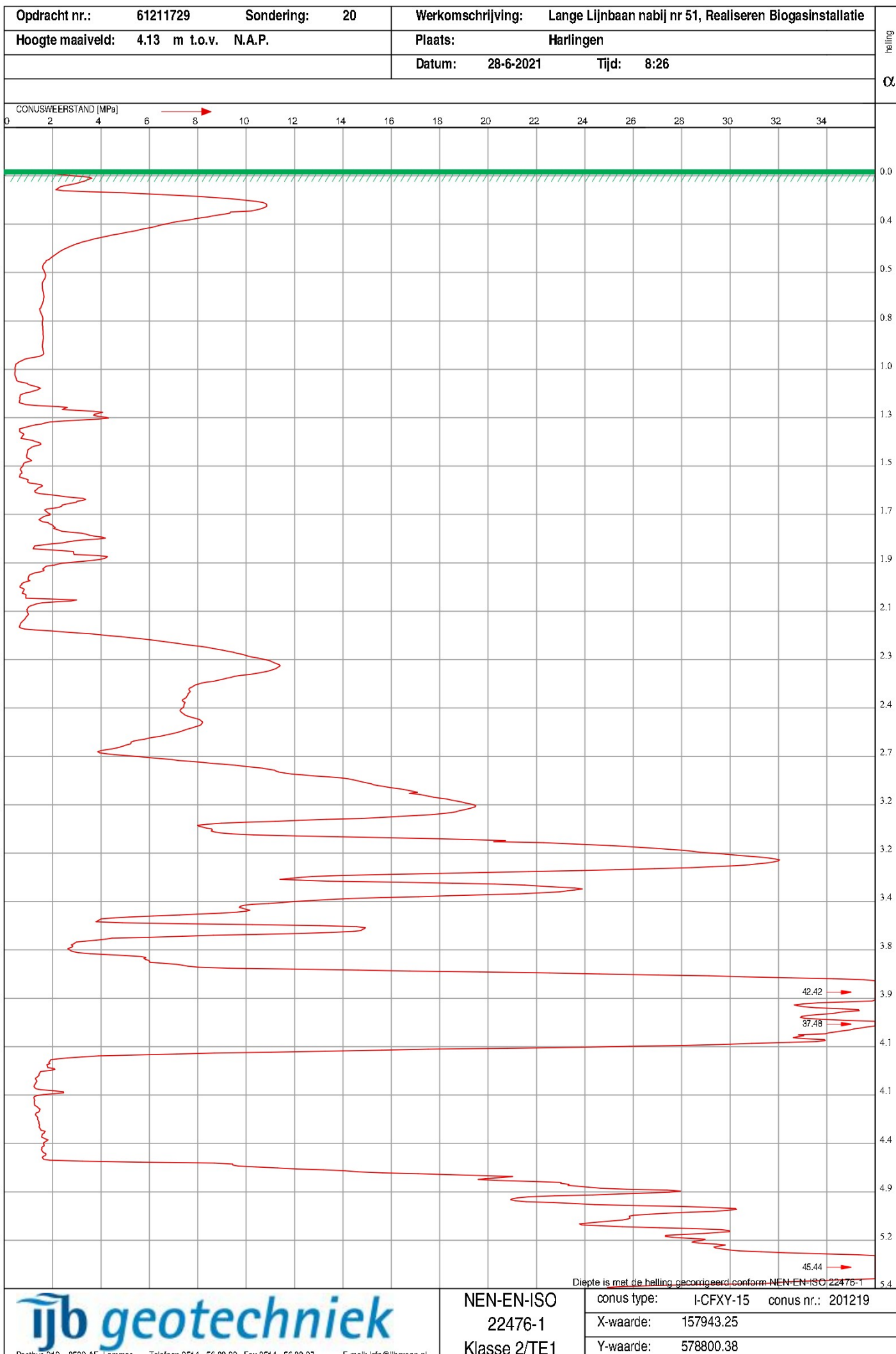


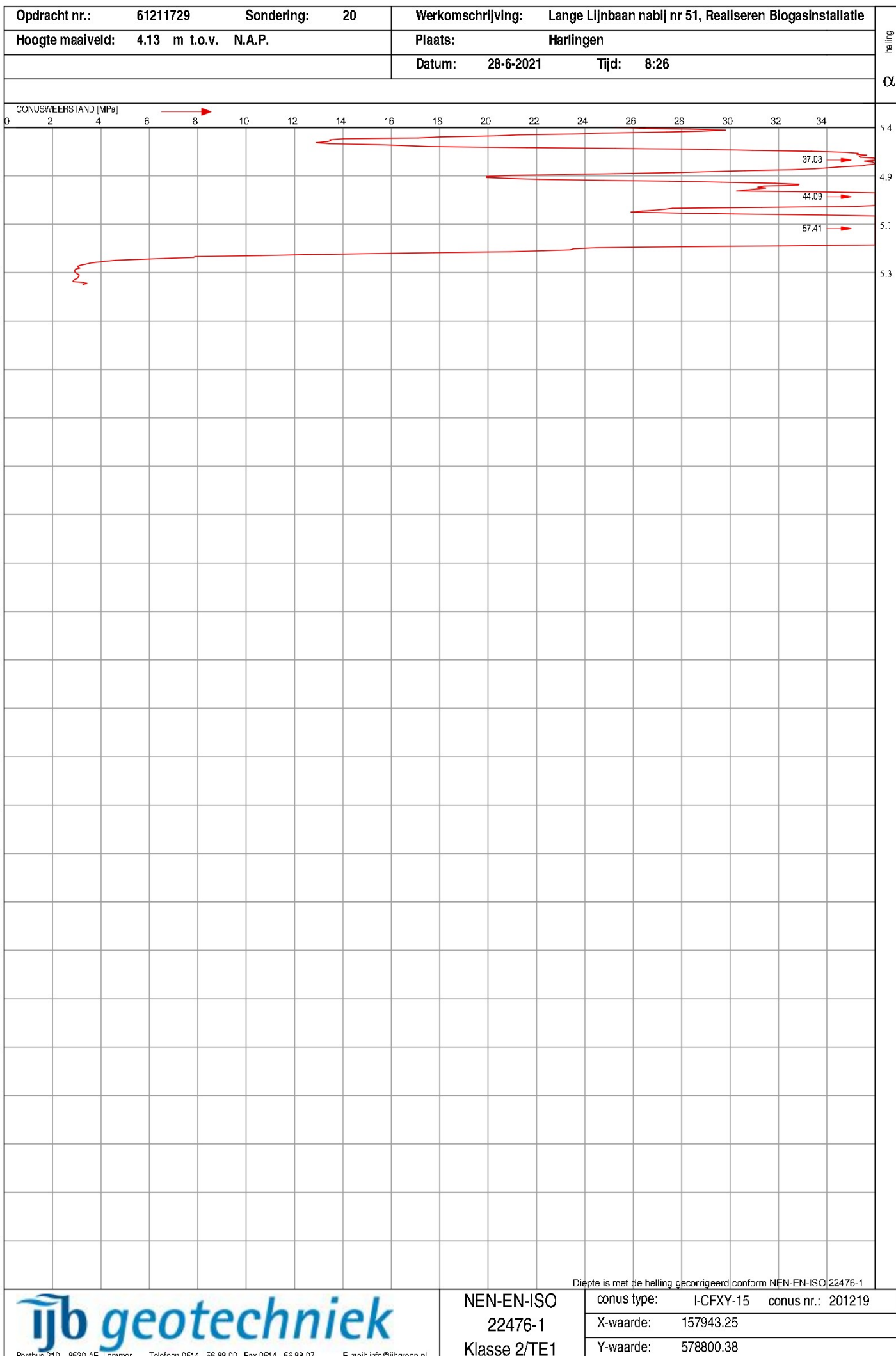


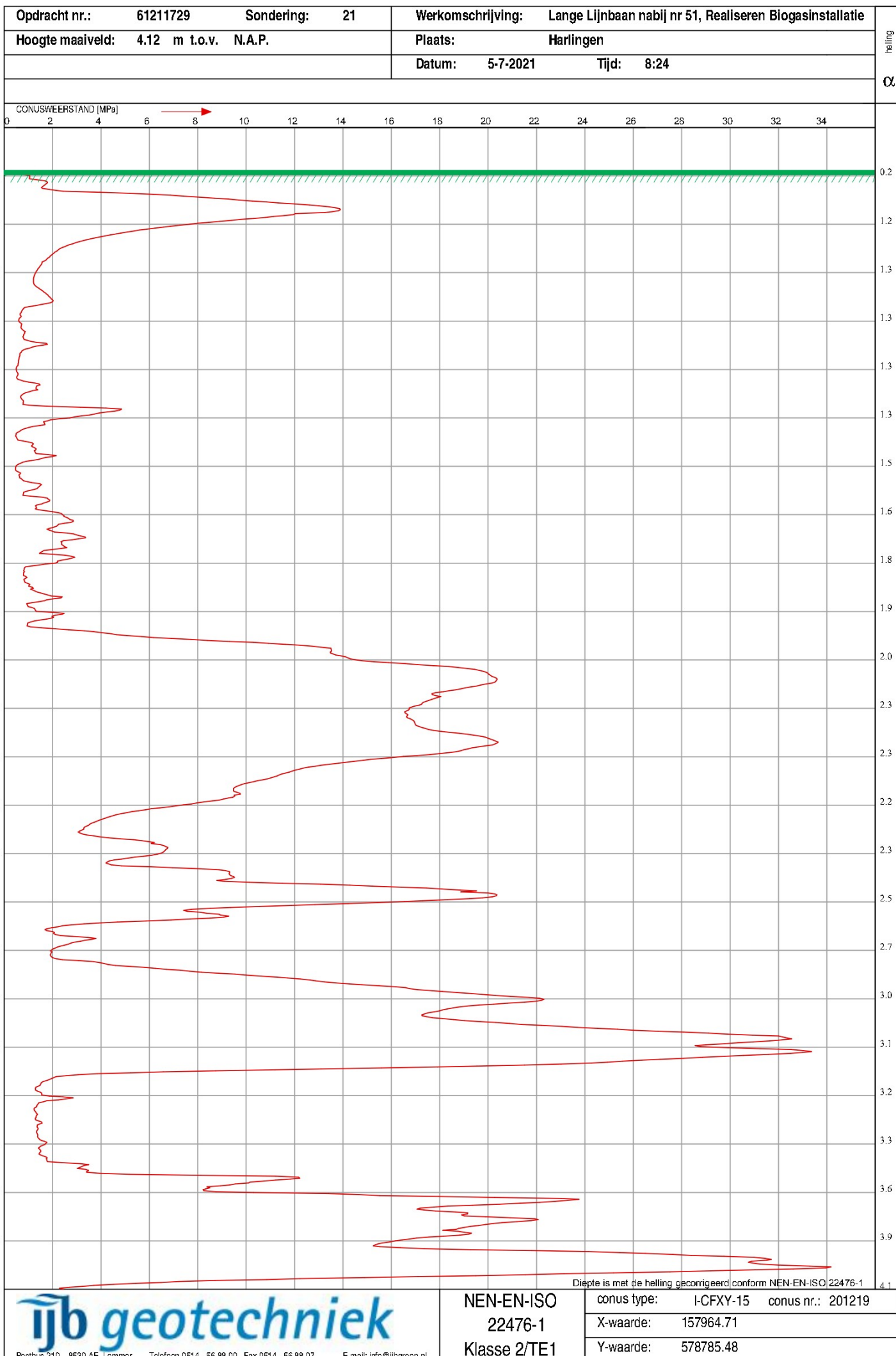


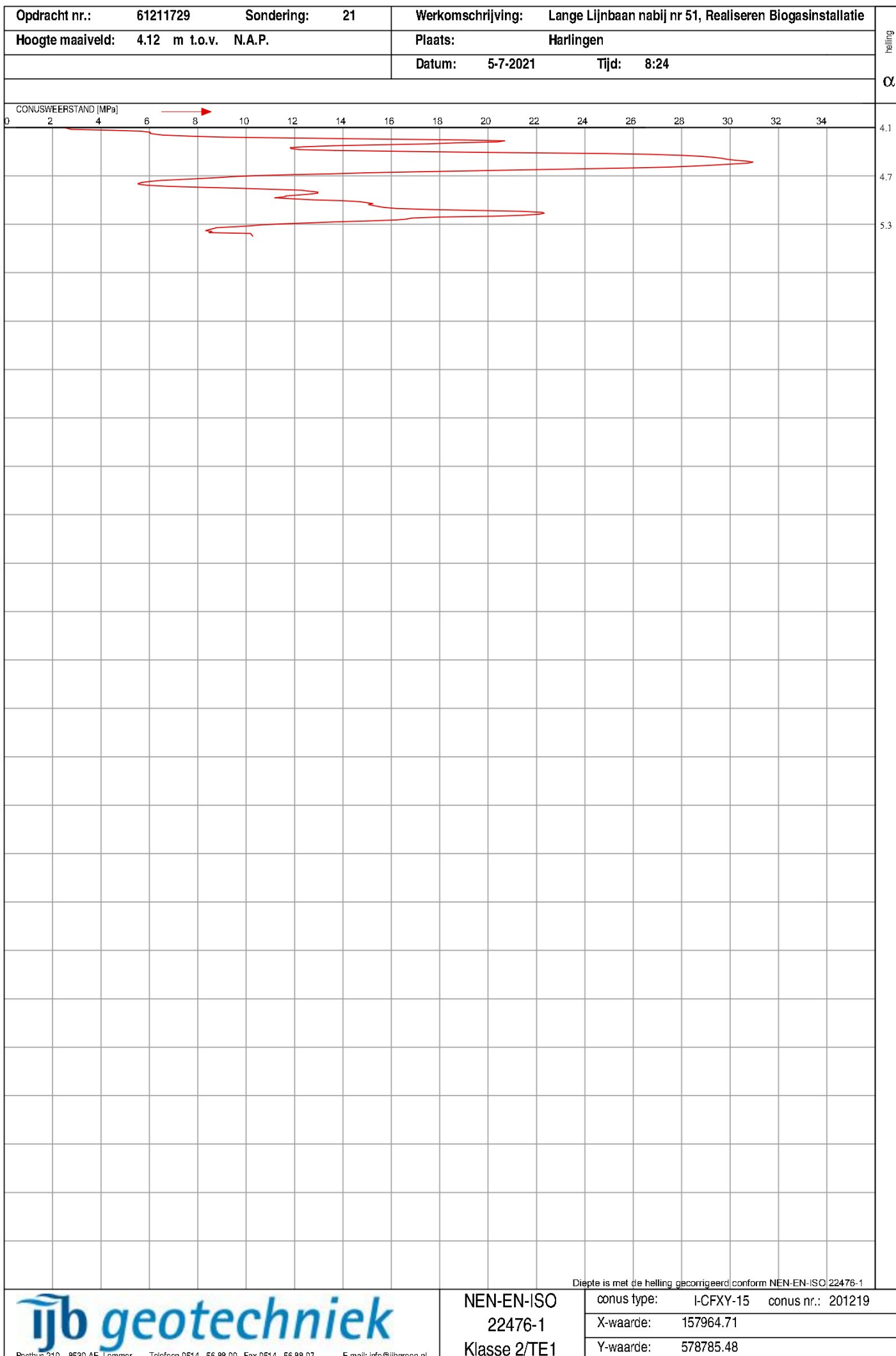


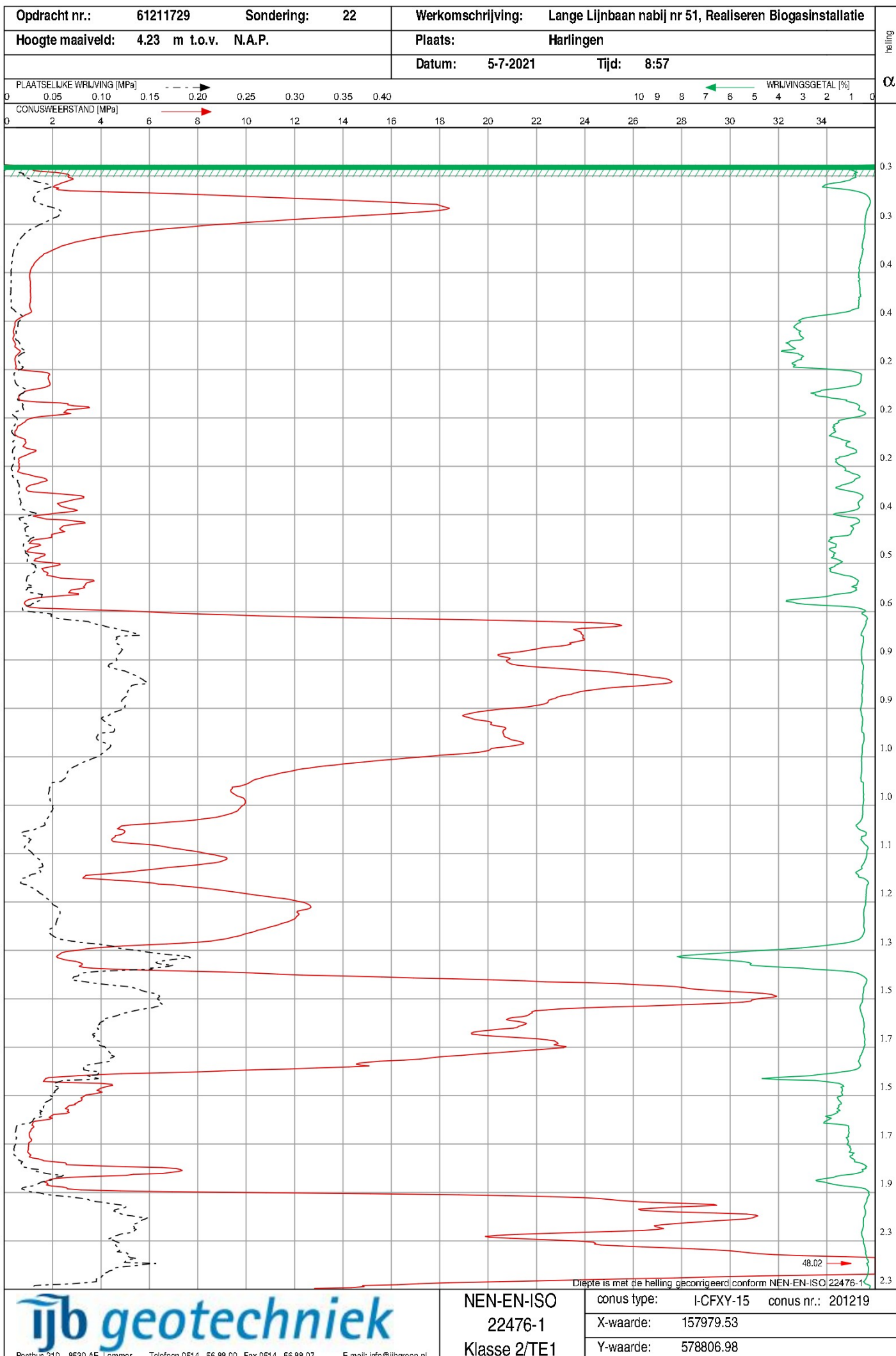


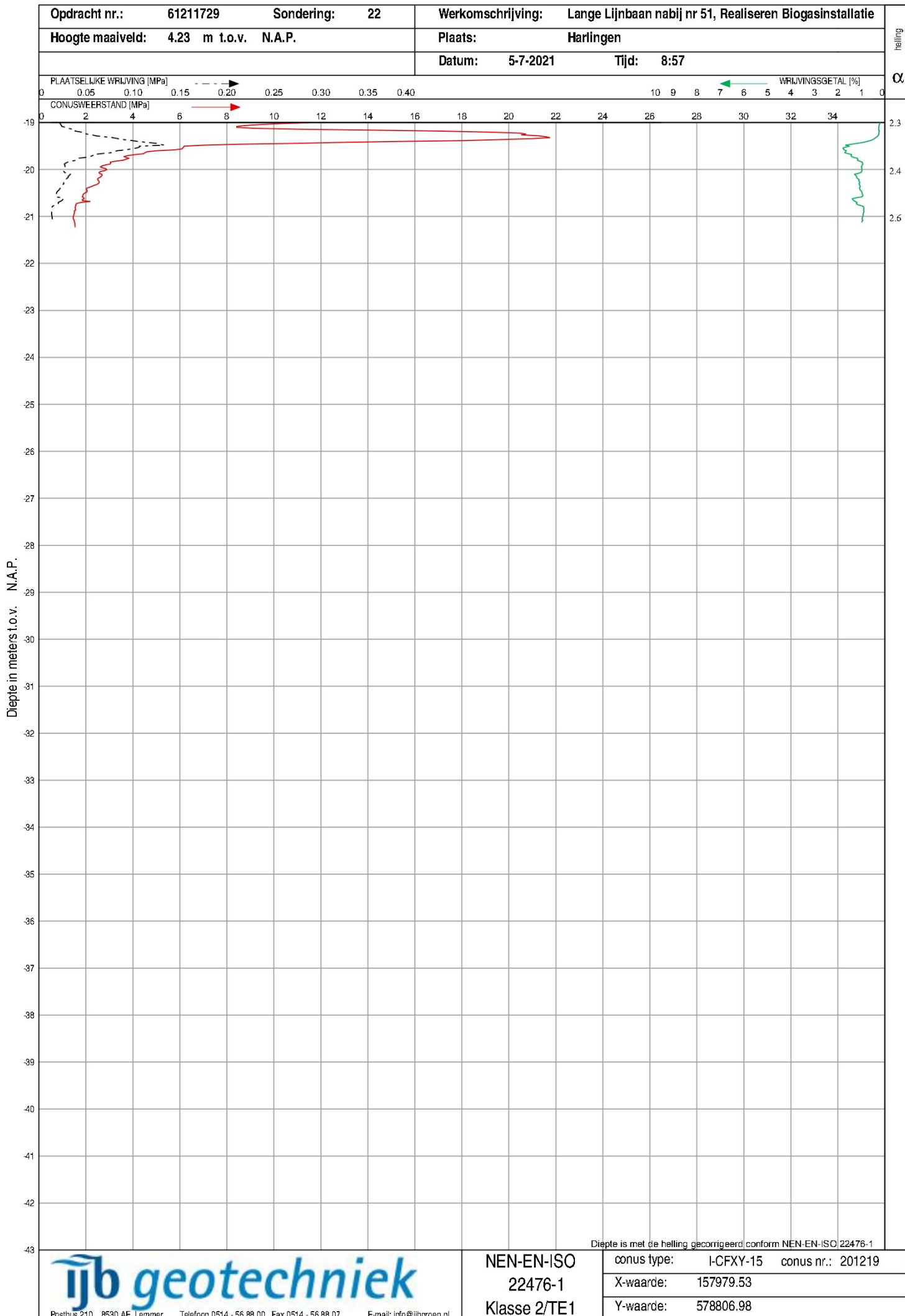


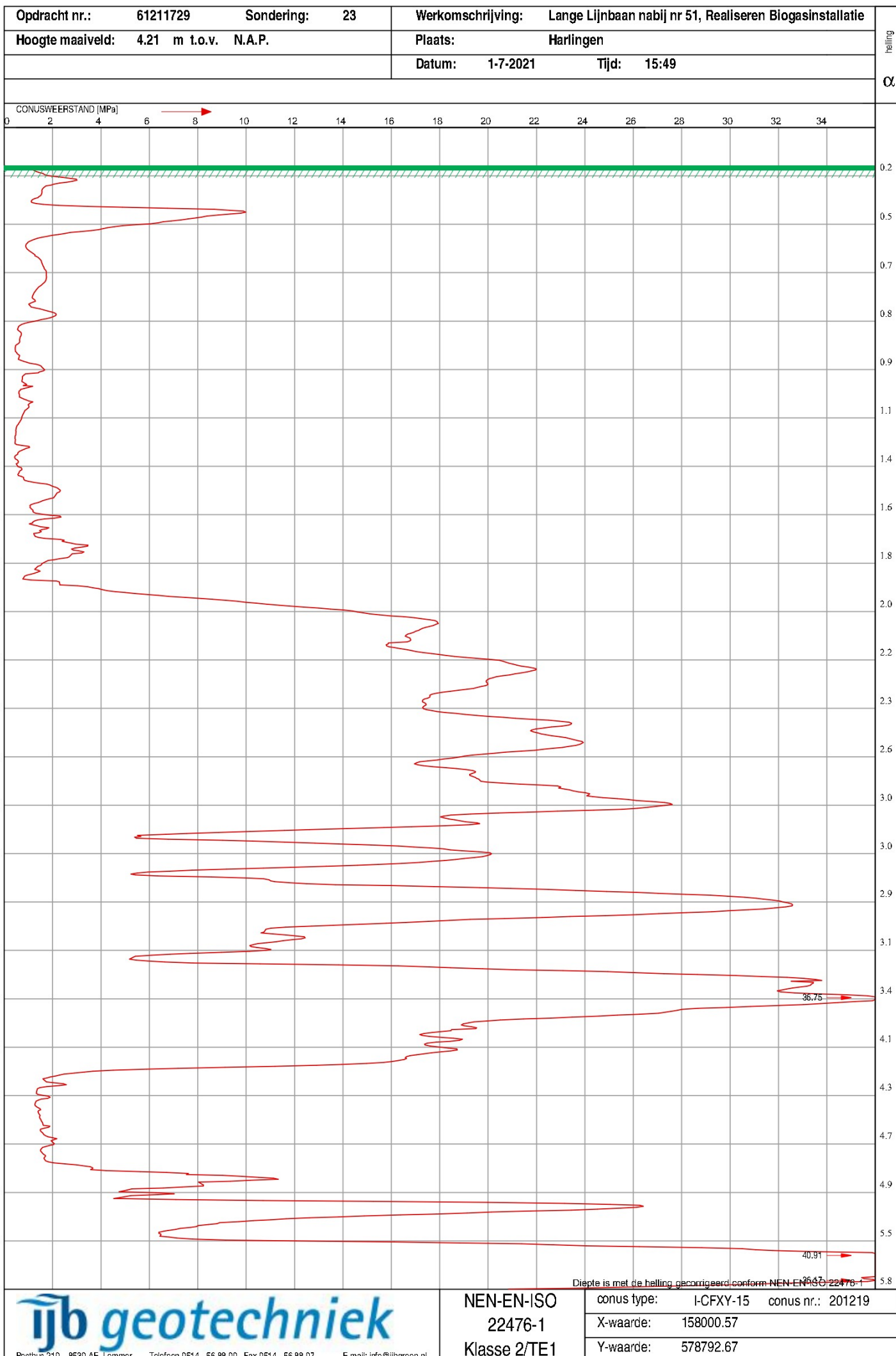


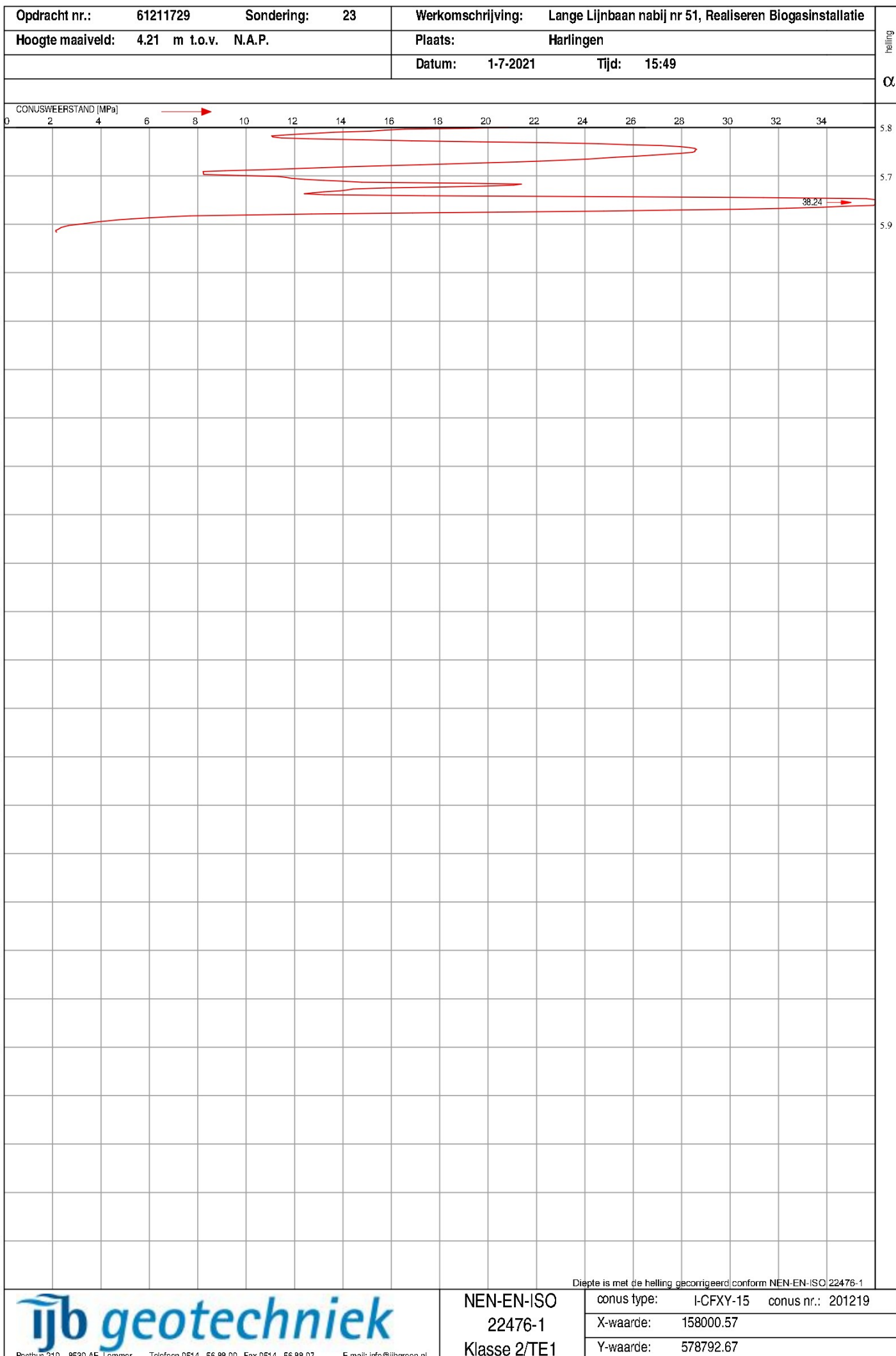


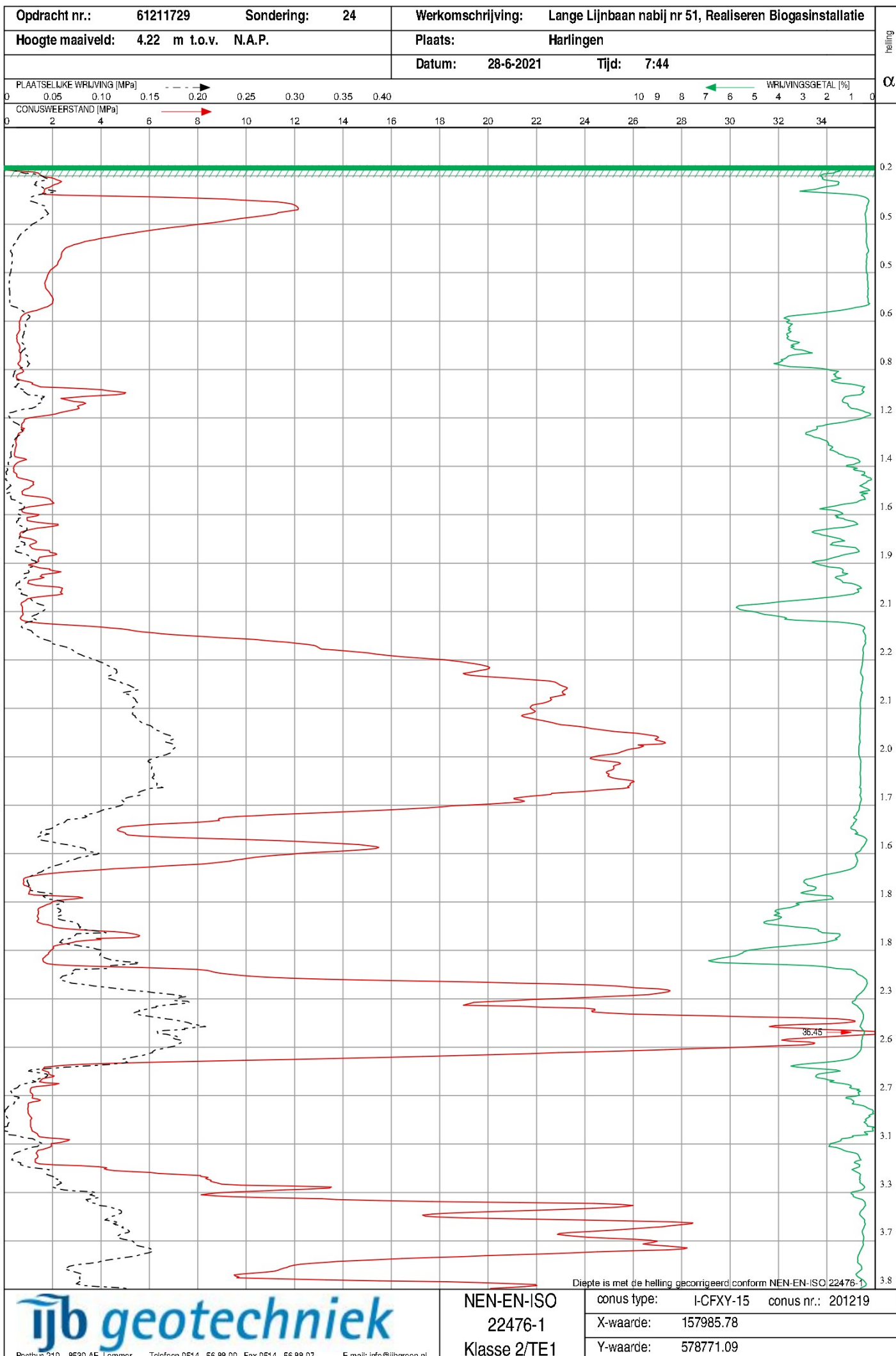


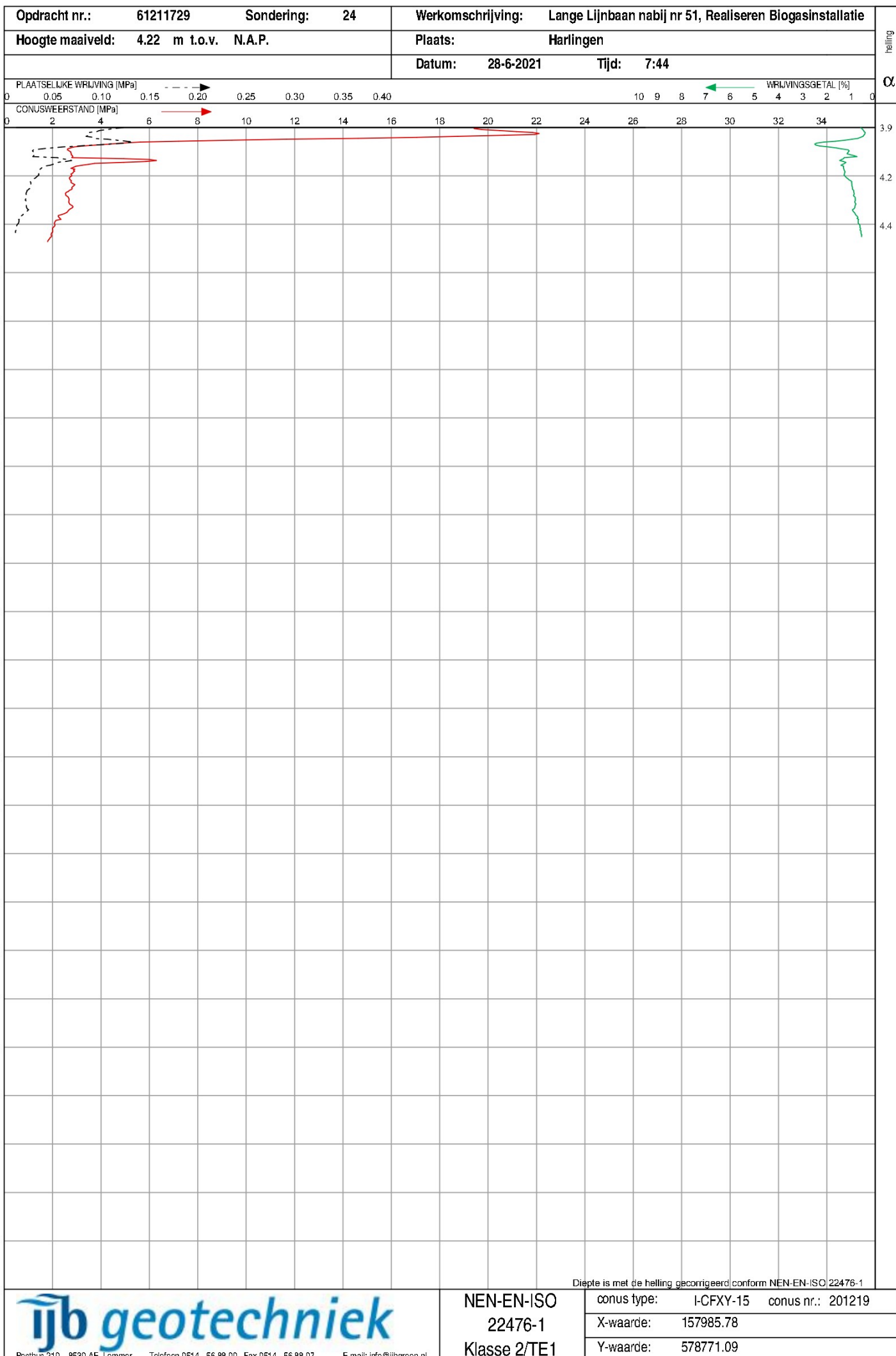


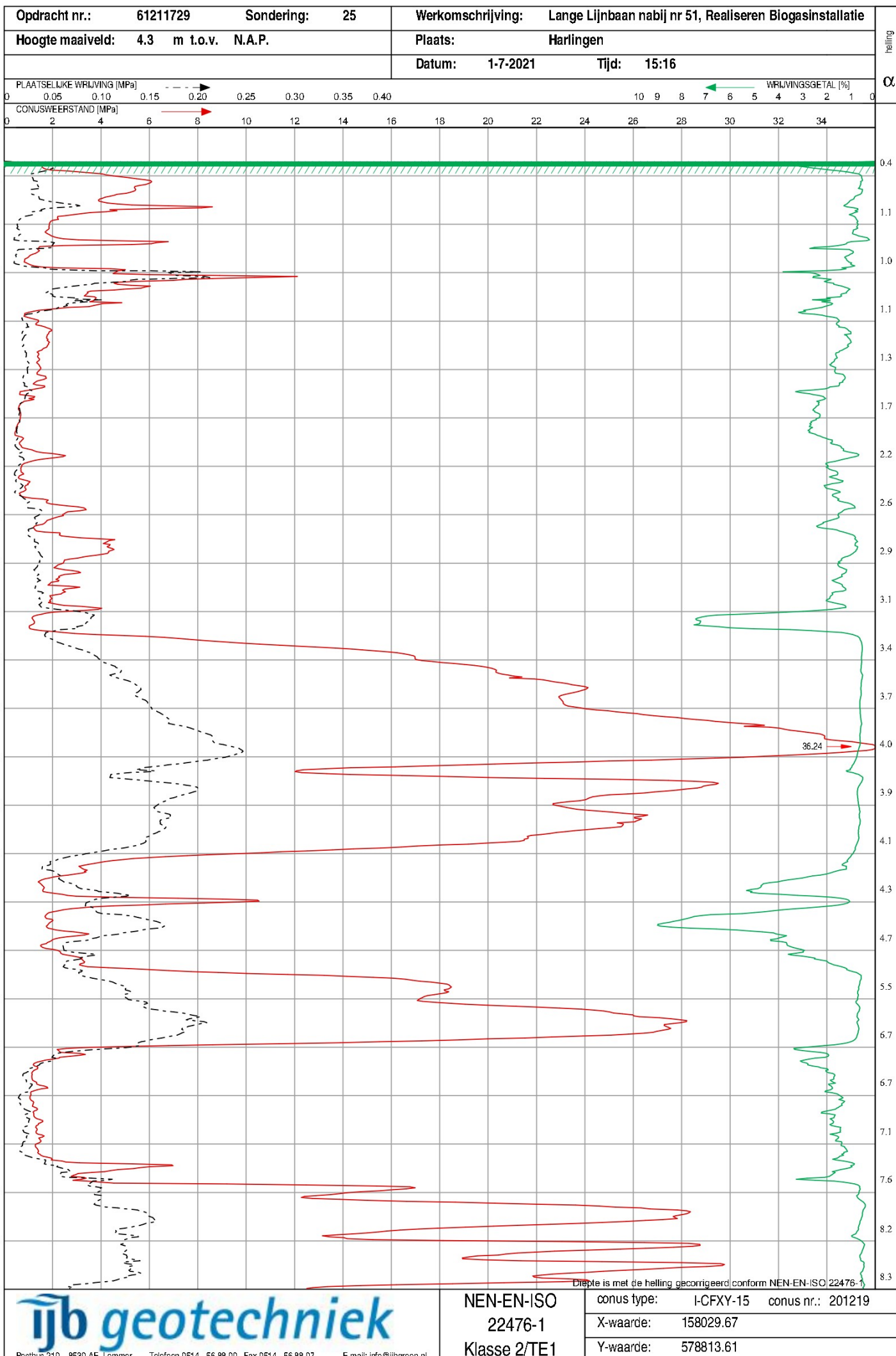


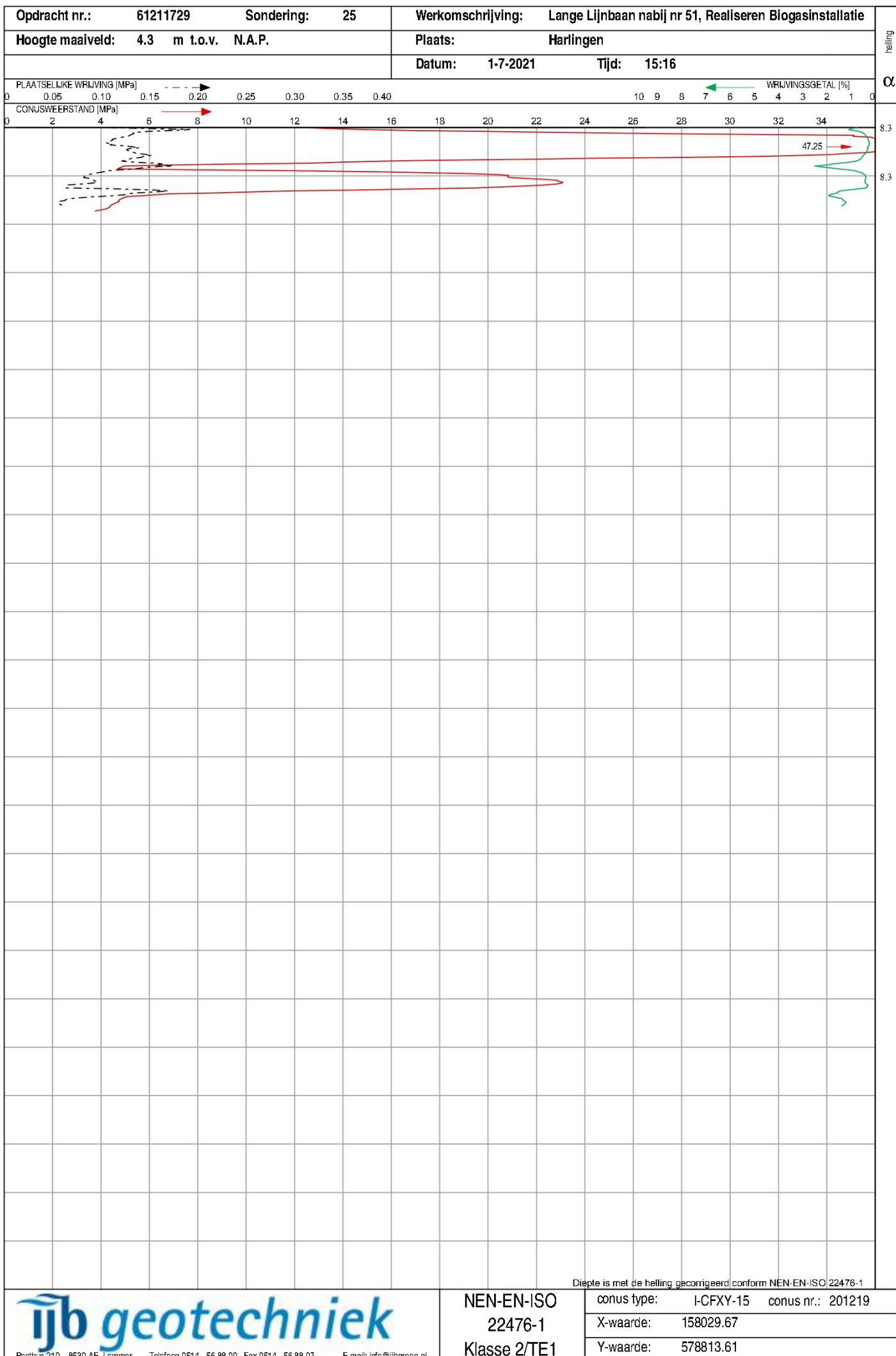


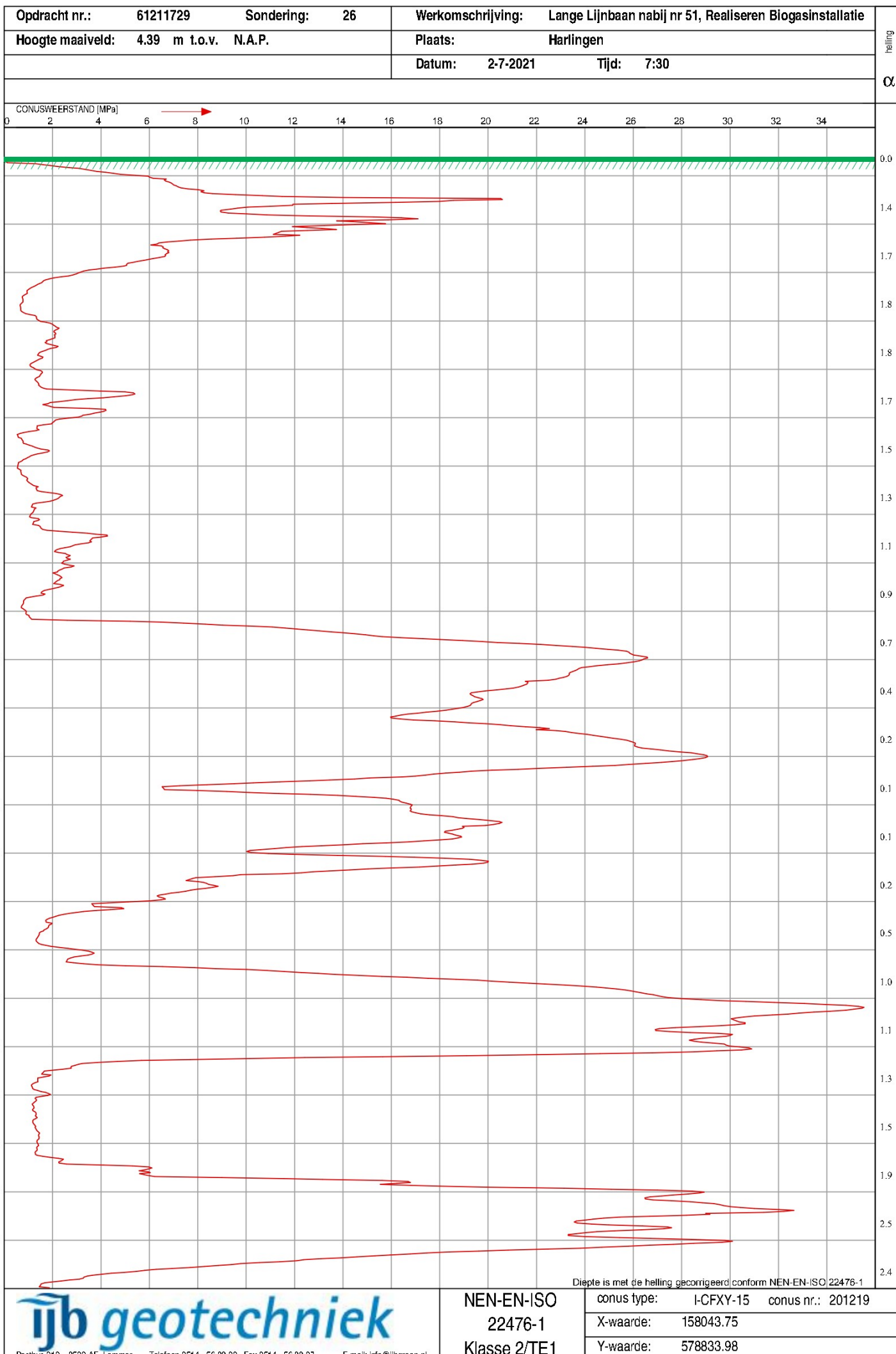


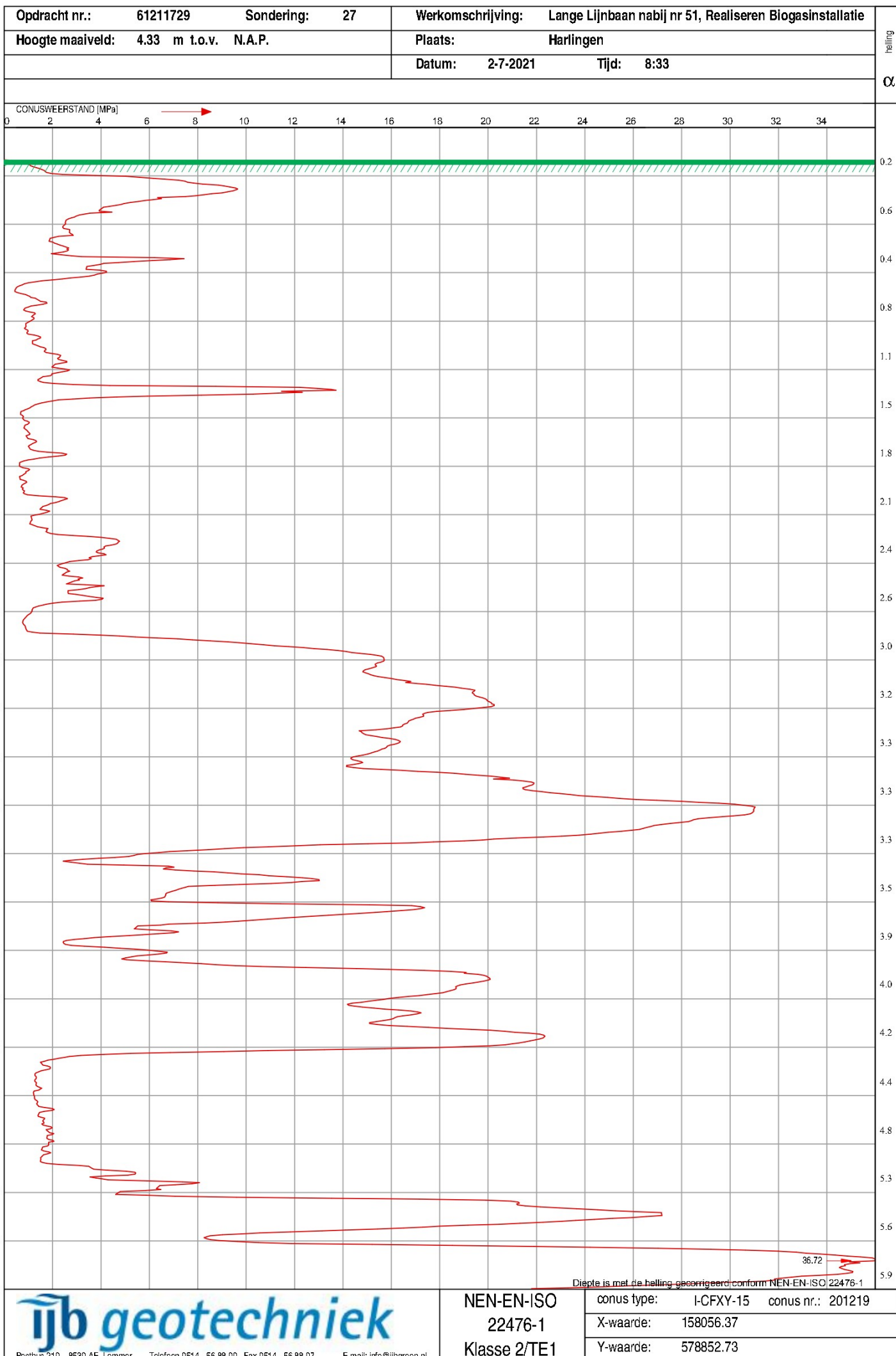


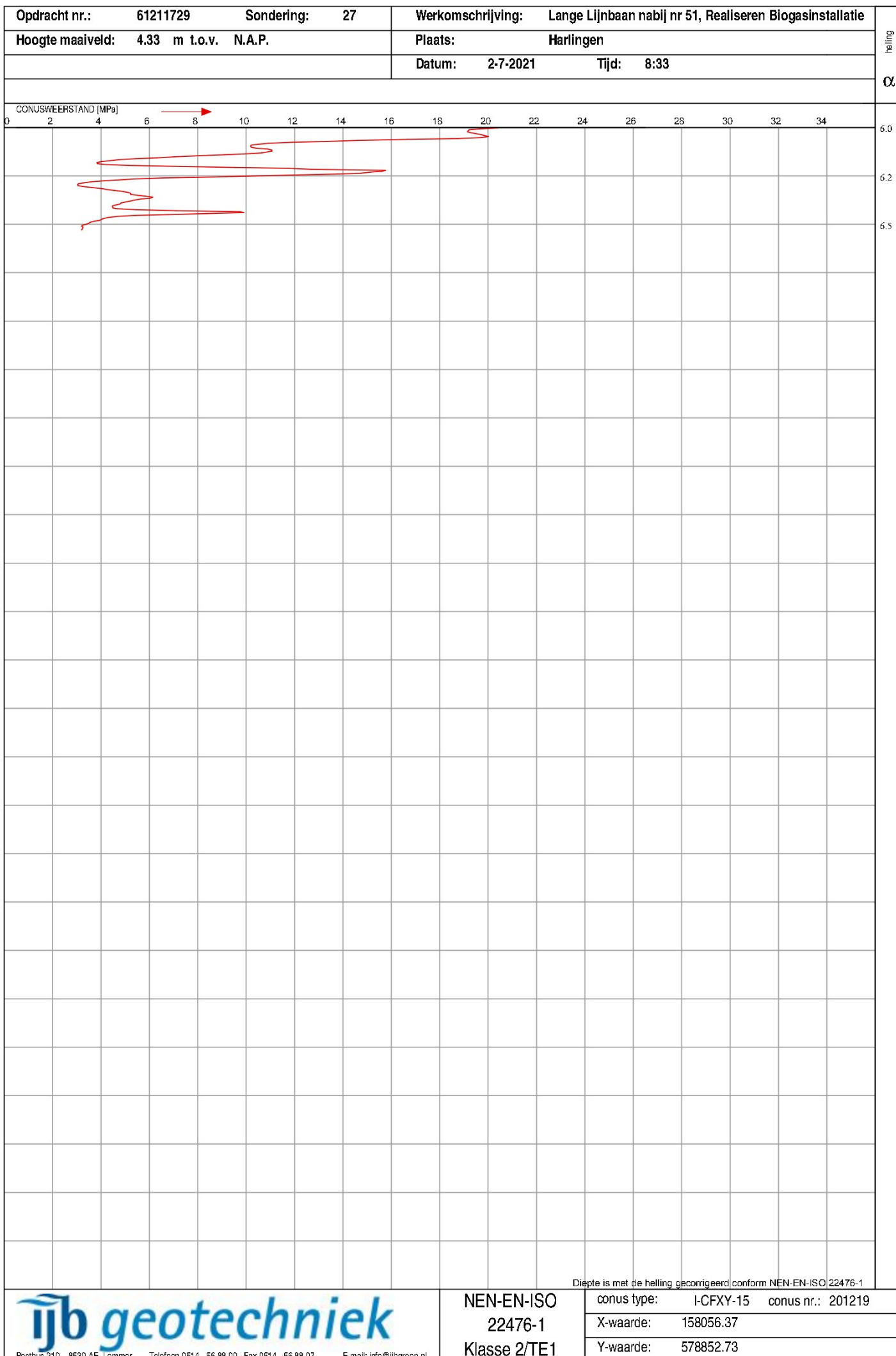


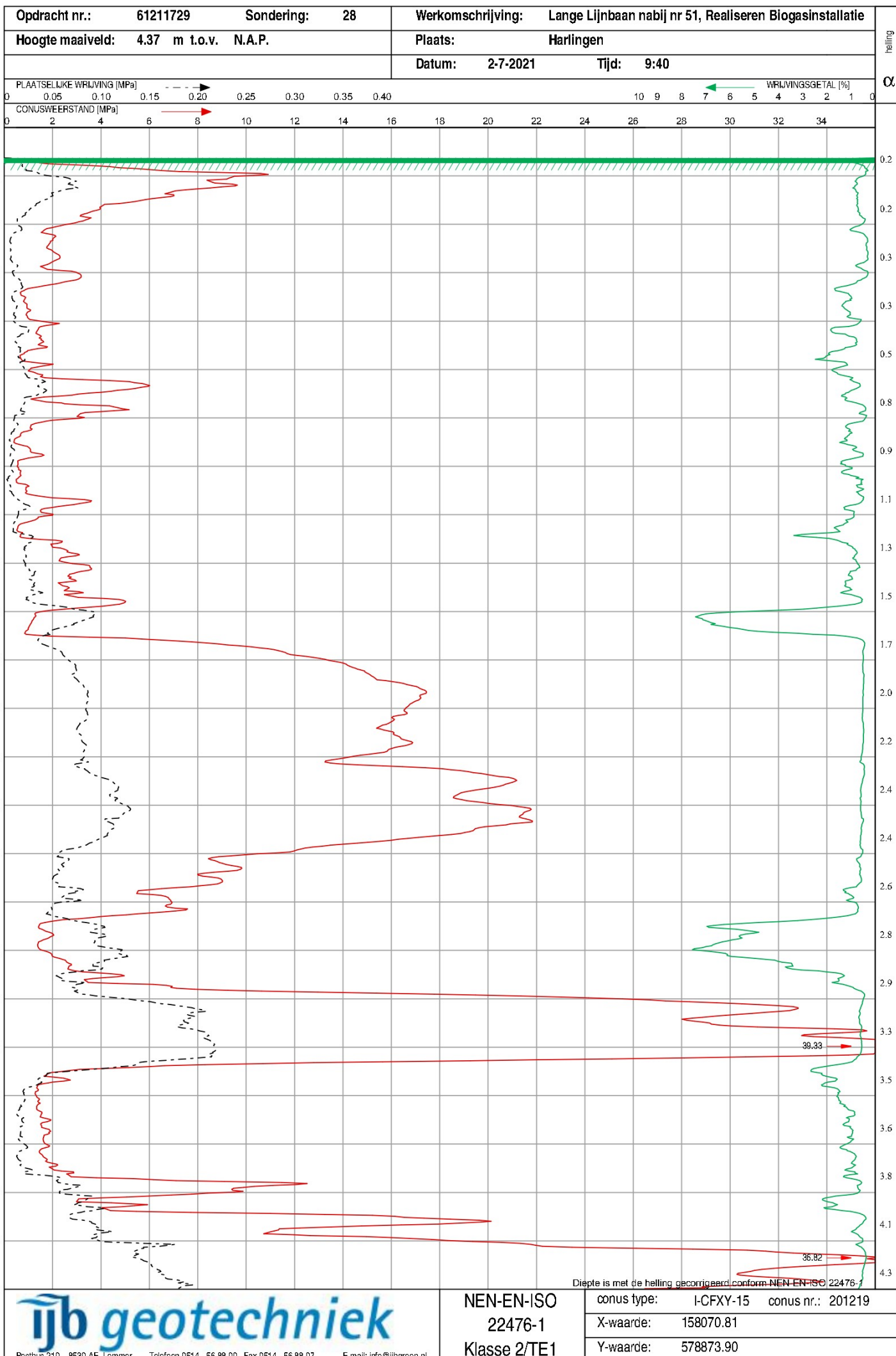












Diepte in meters t.o.v. N.A.P.

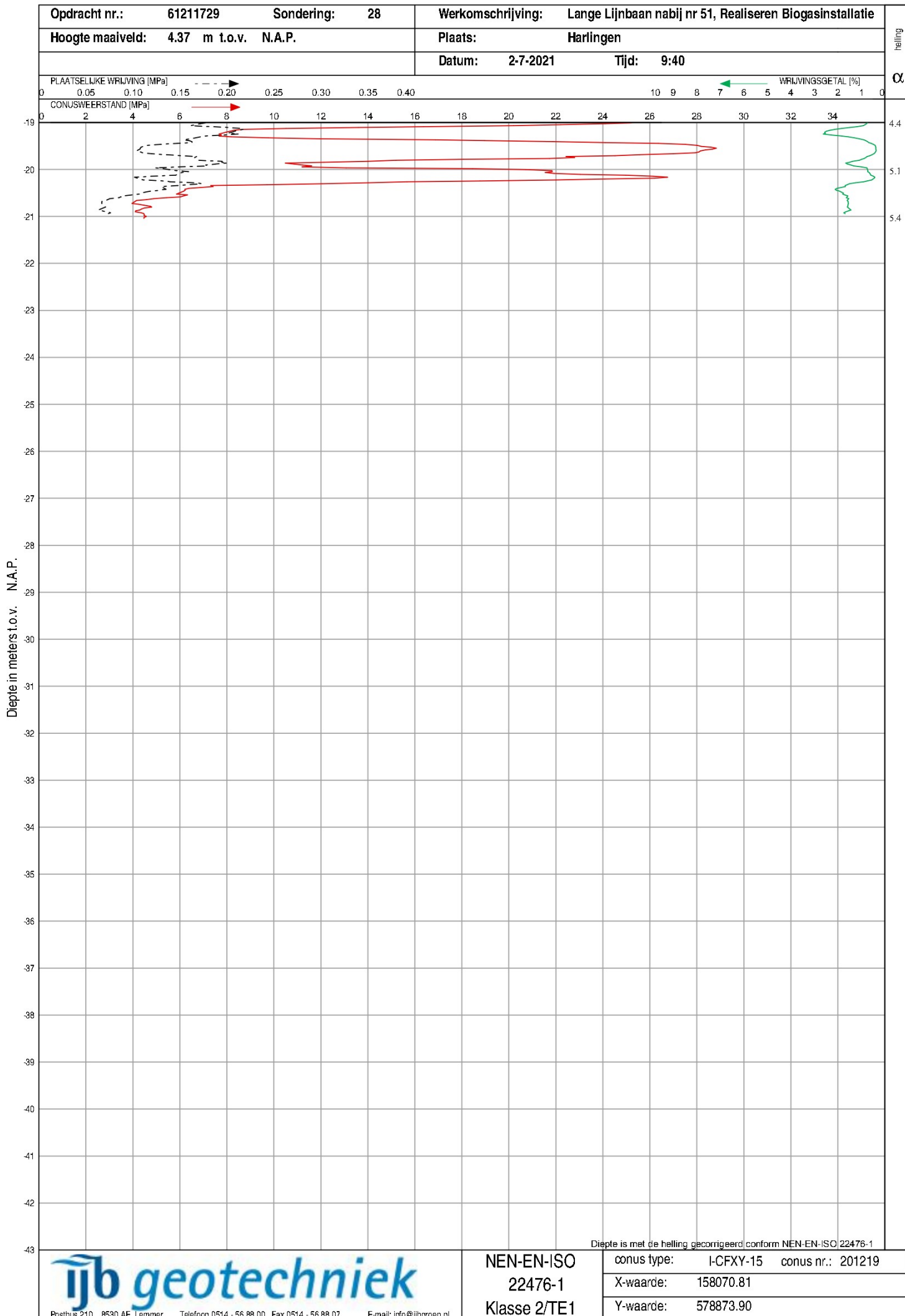
Diepte is met de helling gecorrigeerd conform NEN-EN-ISO 22476-1

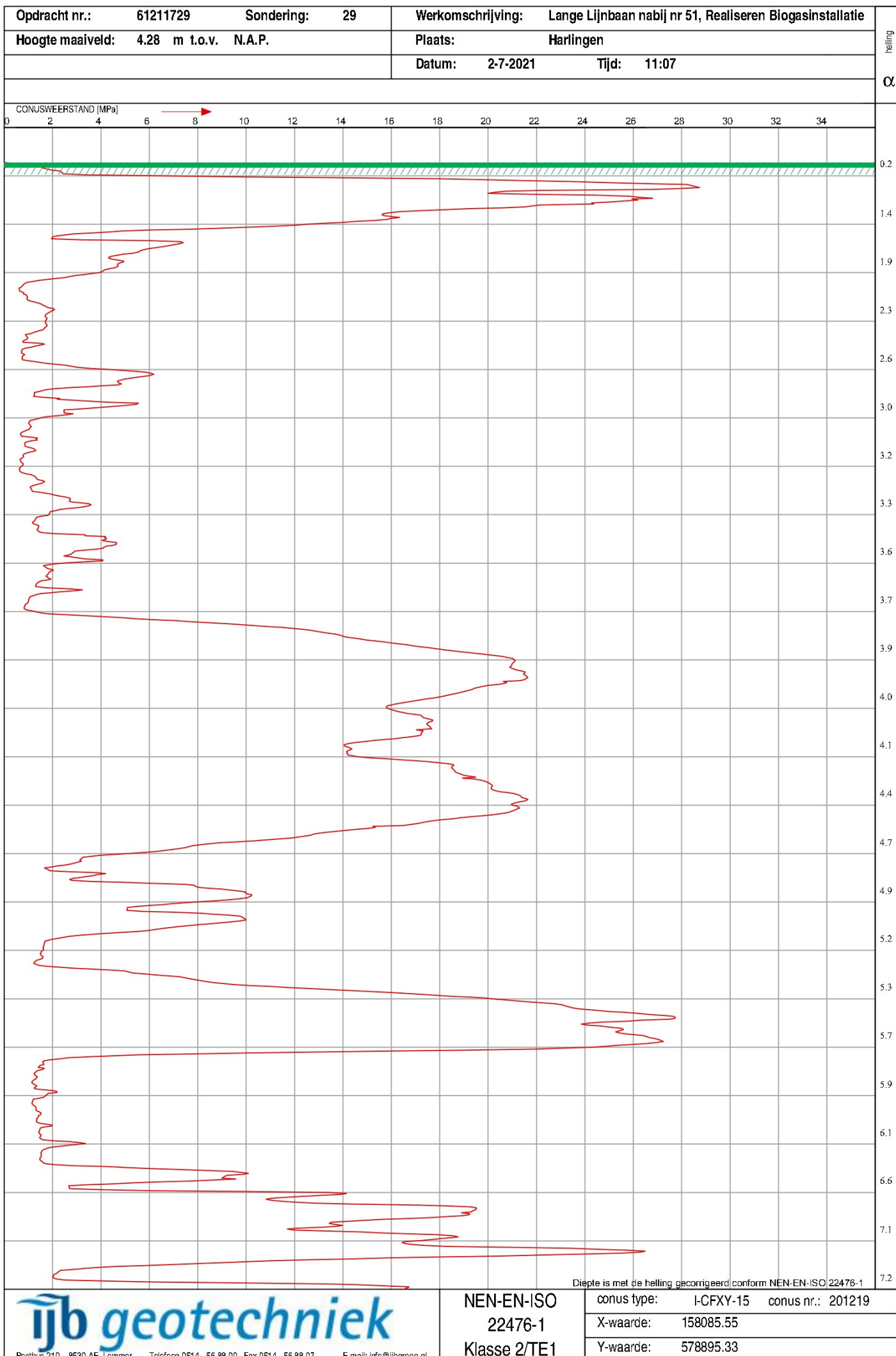


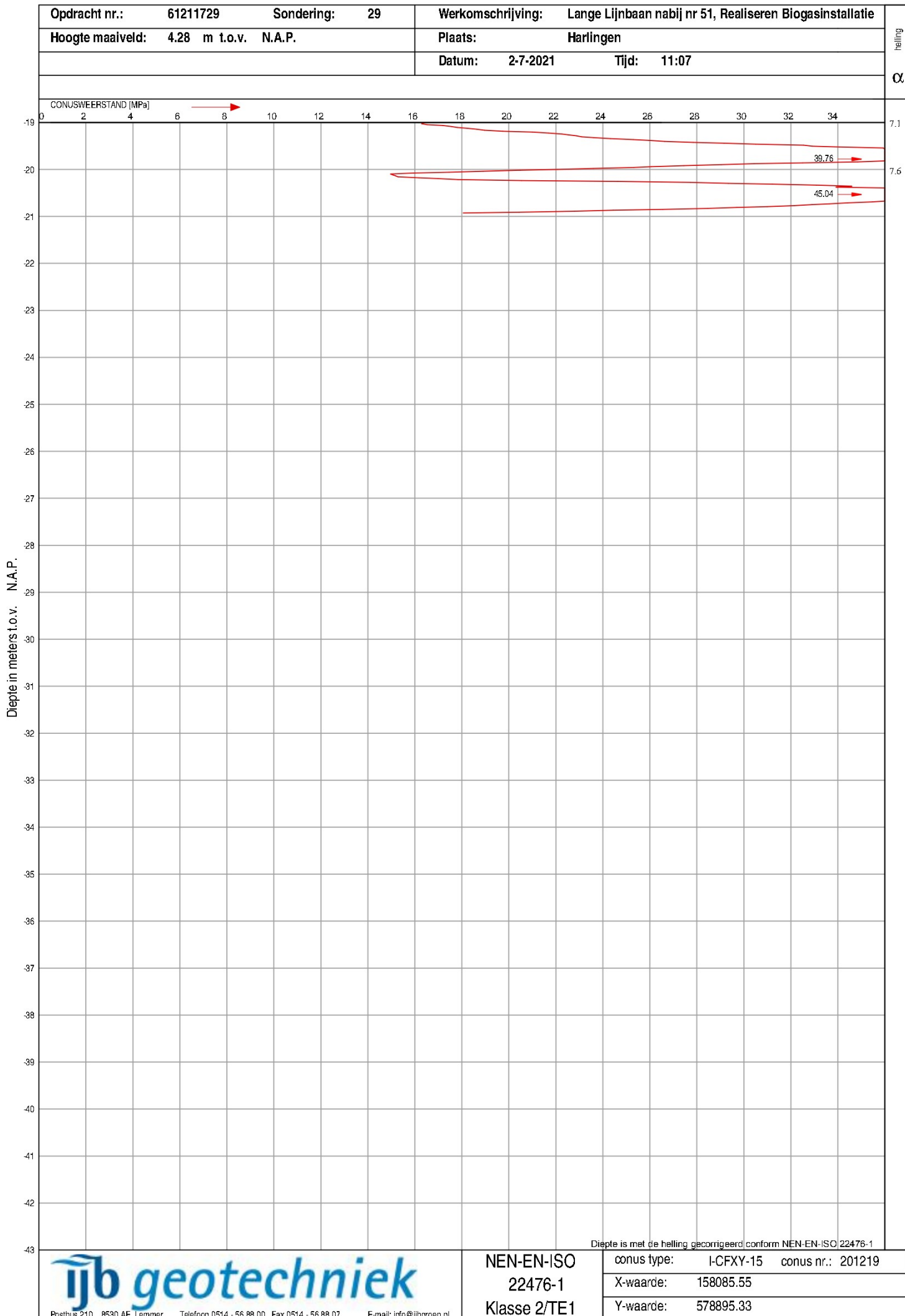
Postbus 210, 8530 AF Lemmer. Telefoon 0514 - 56 88 00. Fax 0514 - 56 88 07 E-mail: info@liboroo.nl

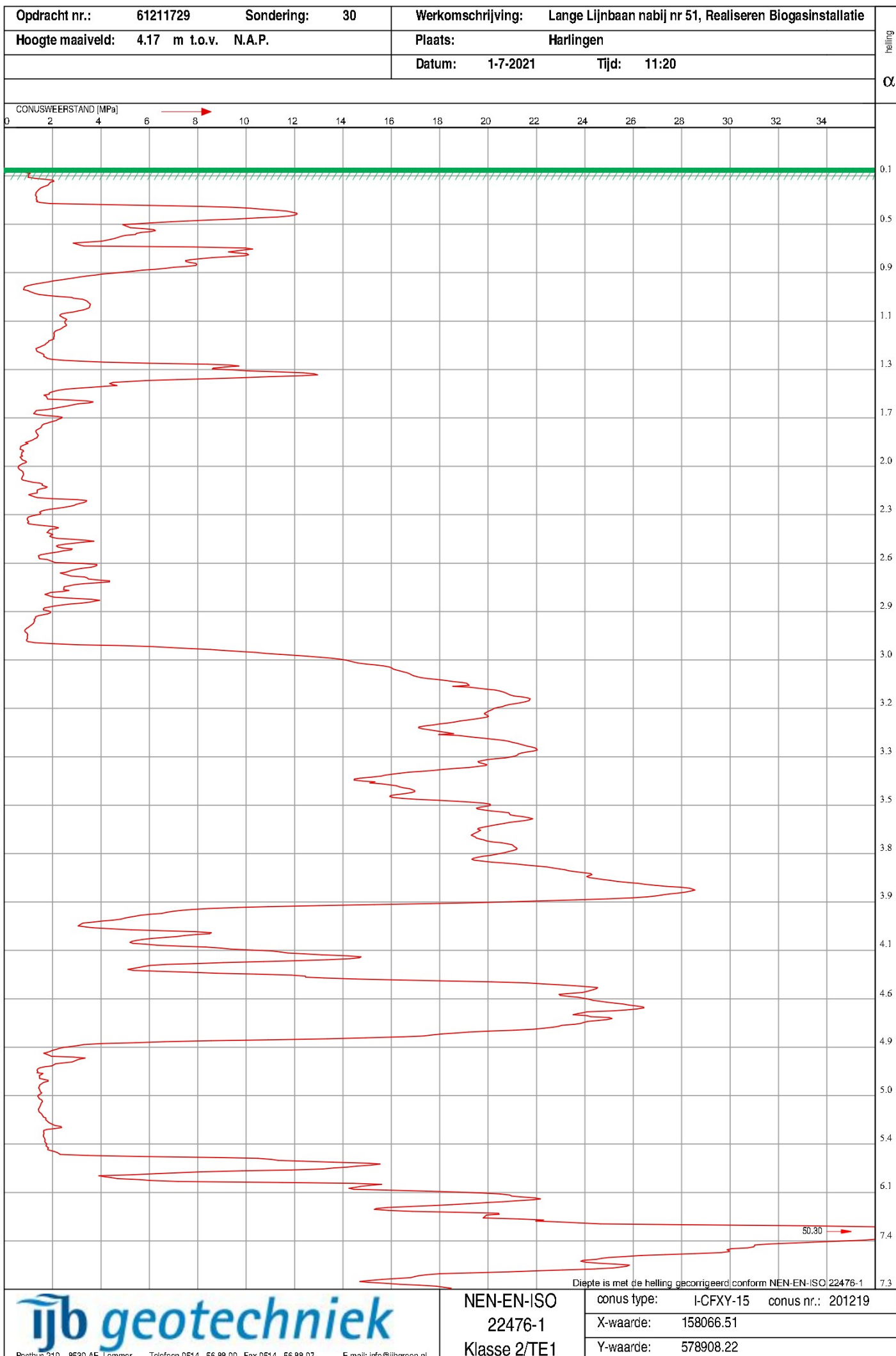
NEN-EN-ISO
22476-1
Klasse 2/TE1

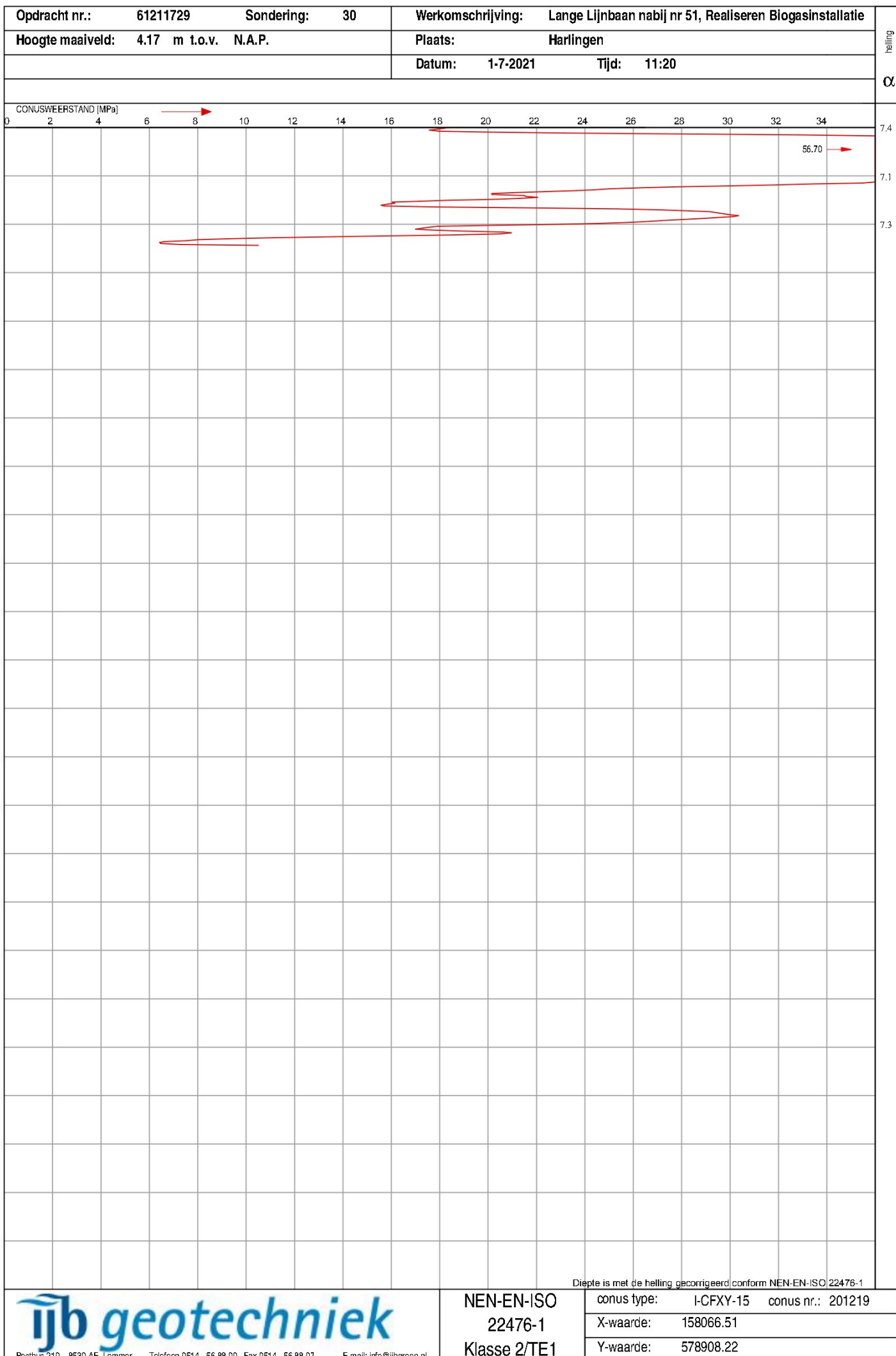
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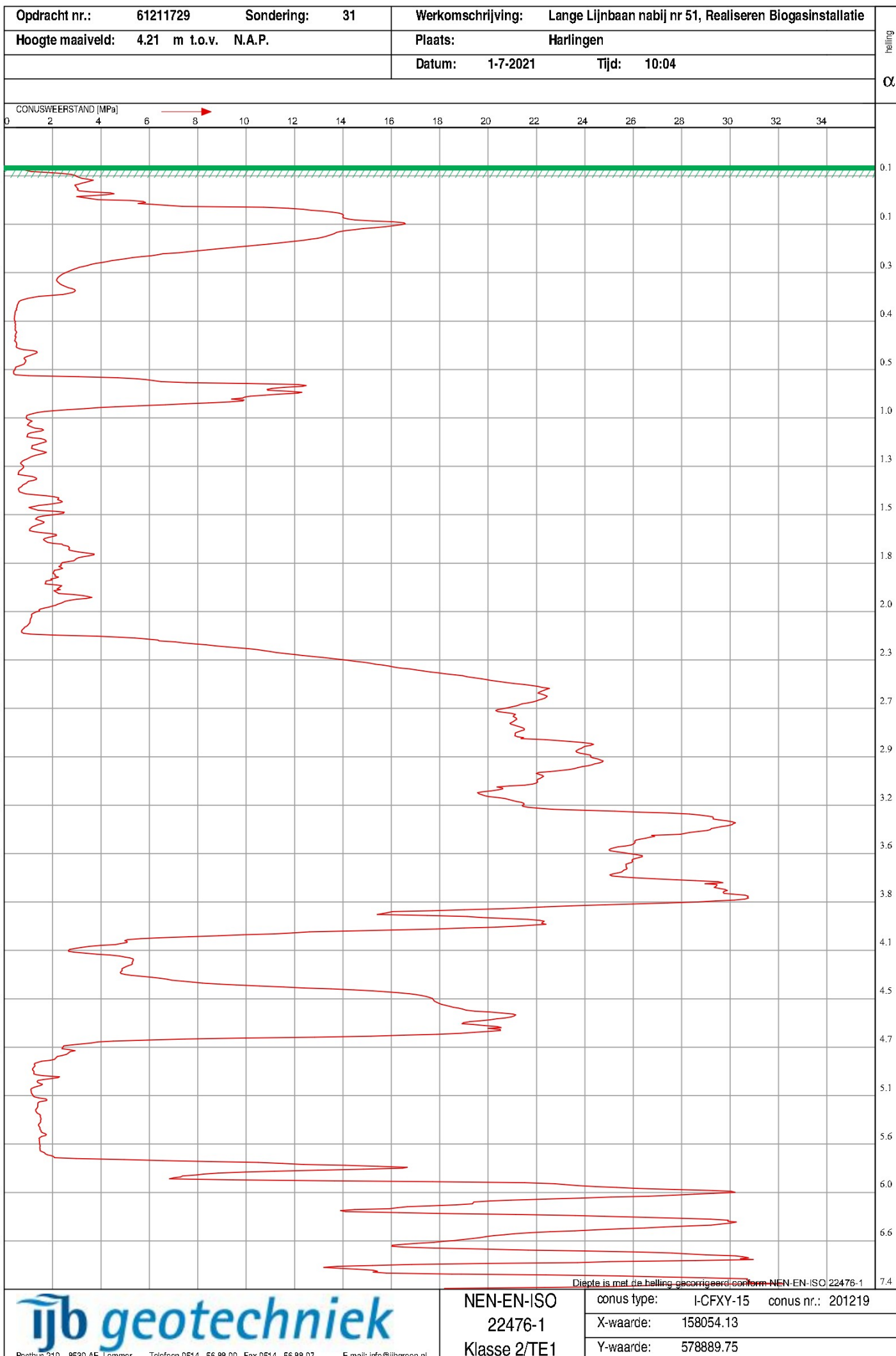


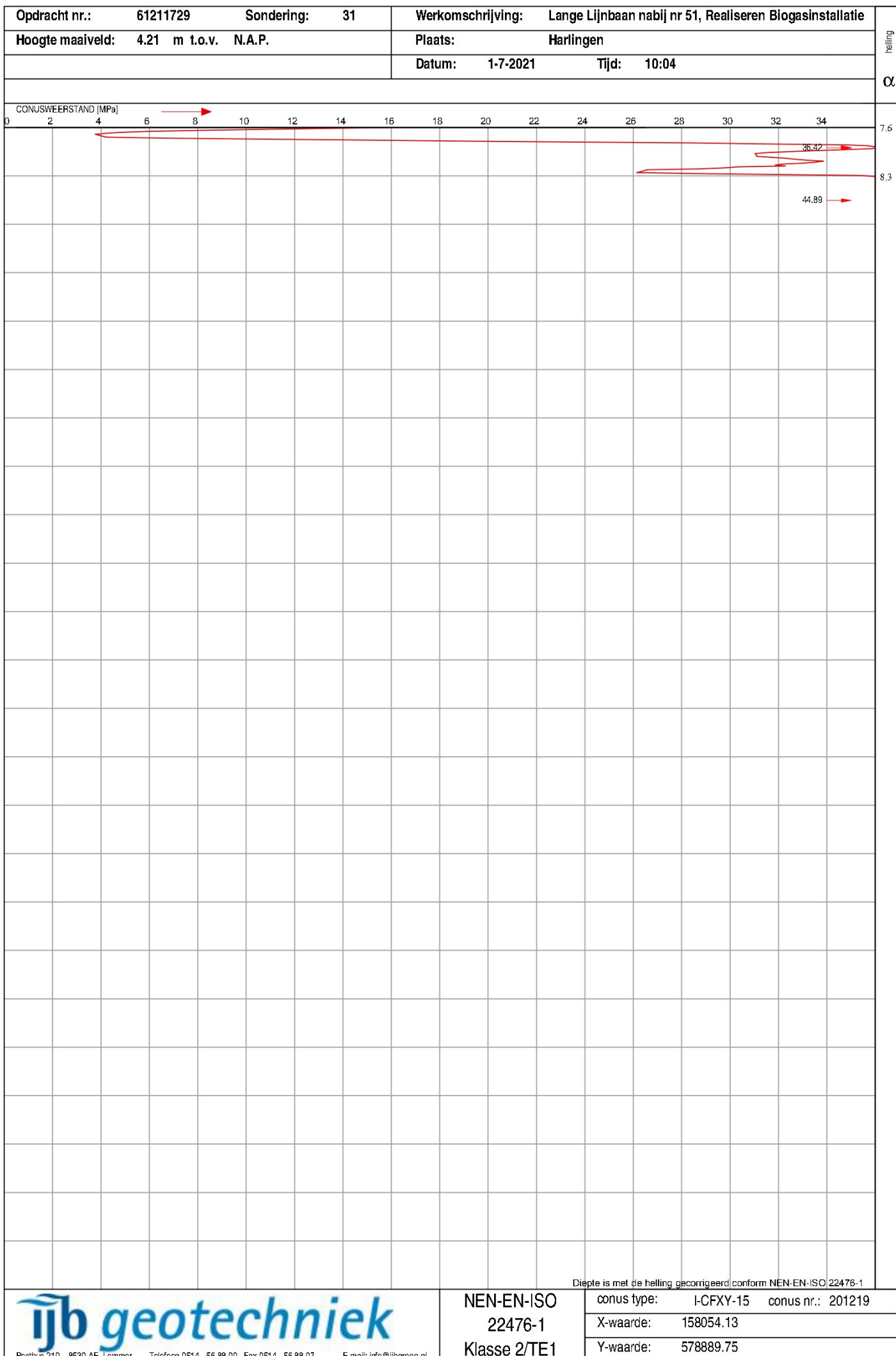


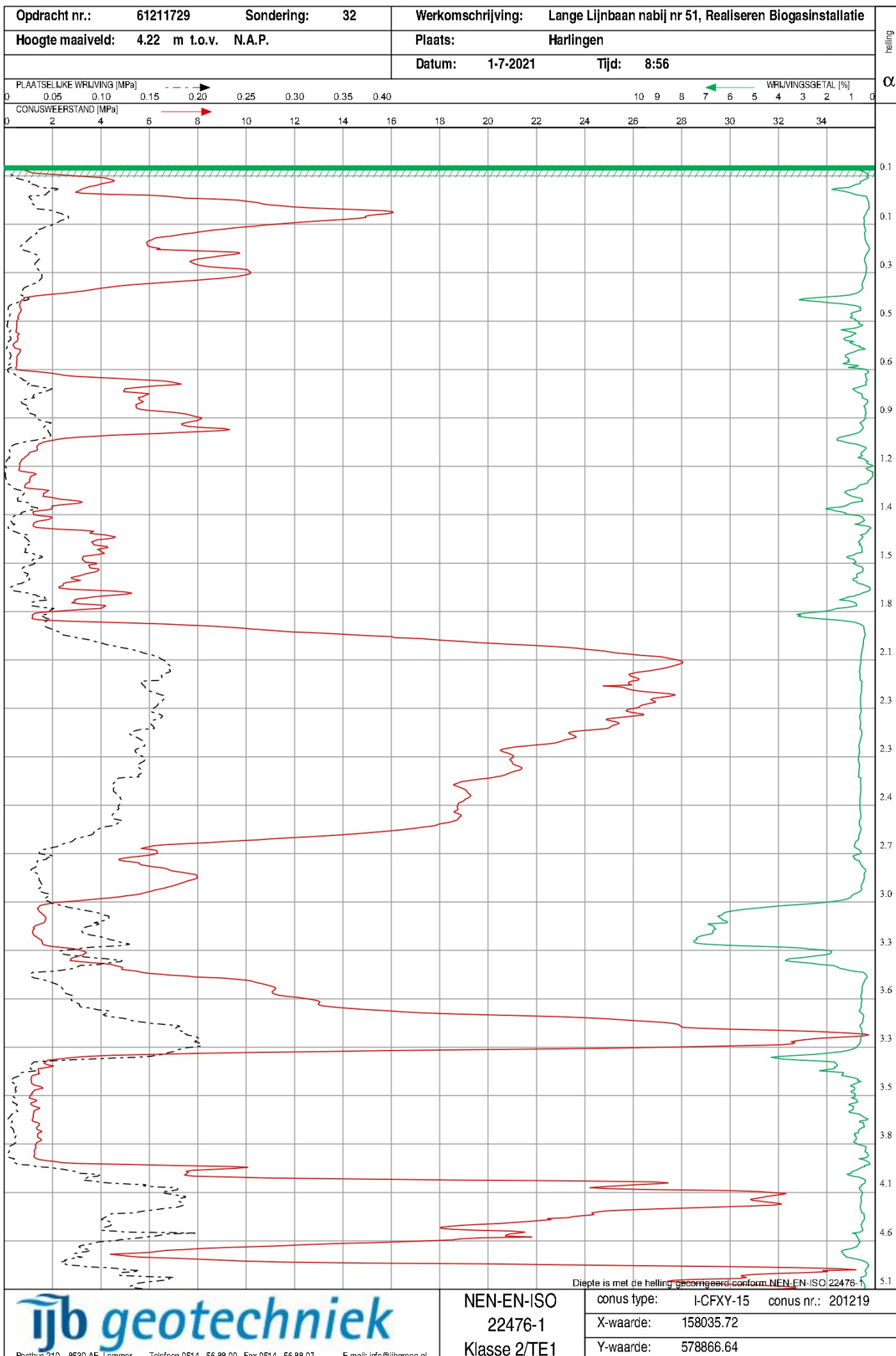


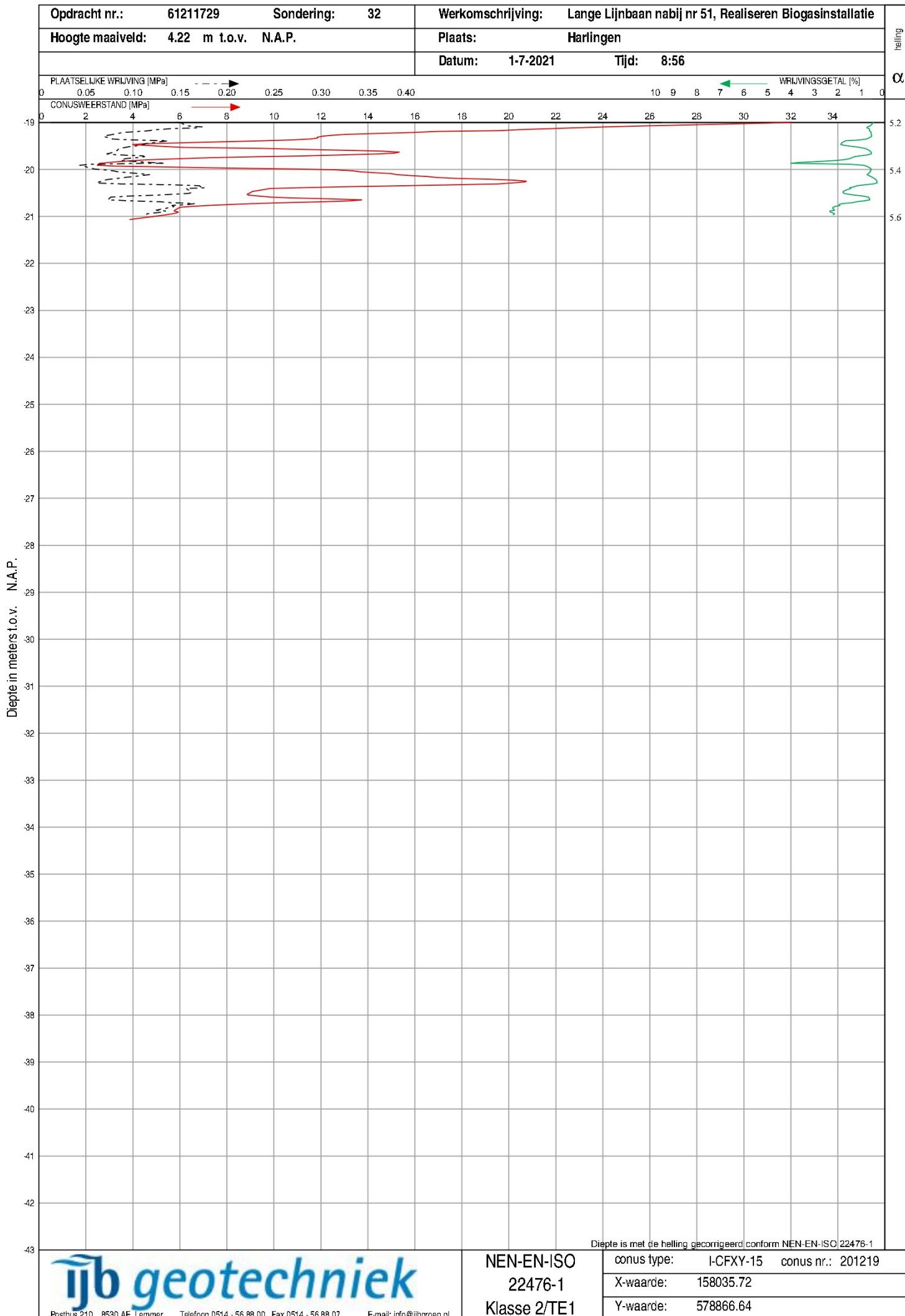


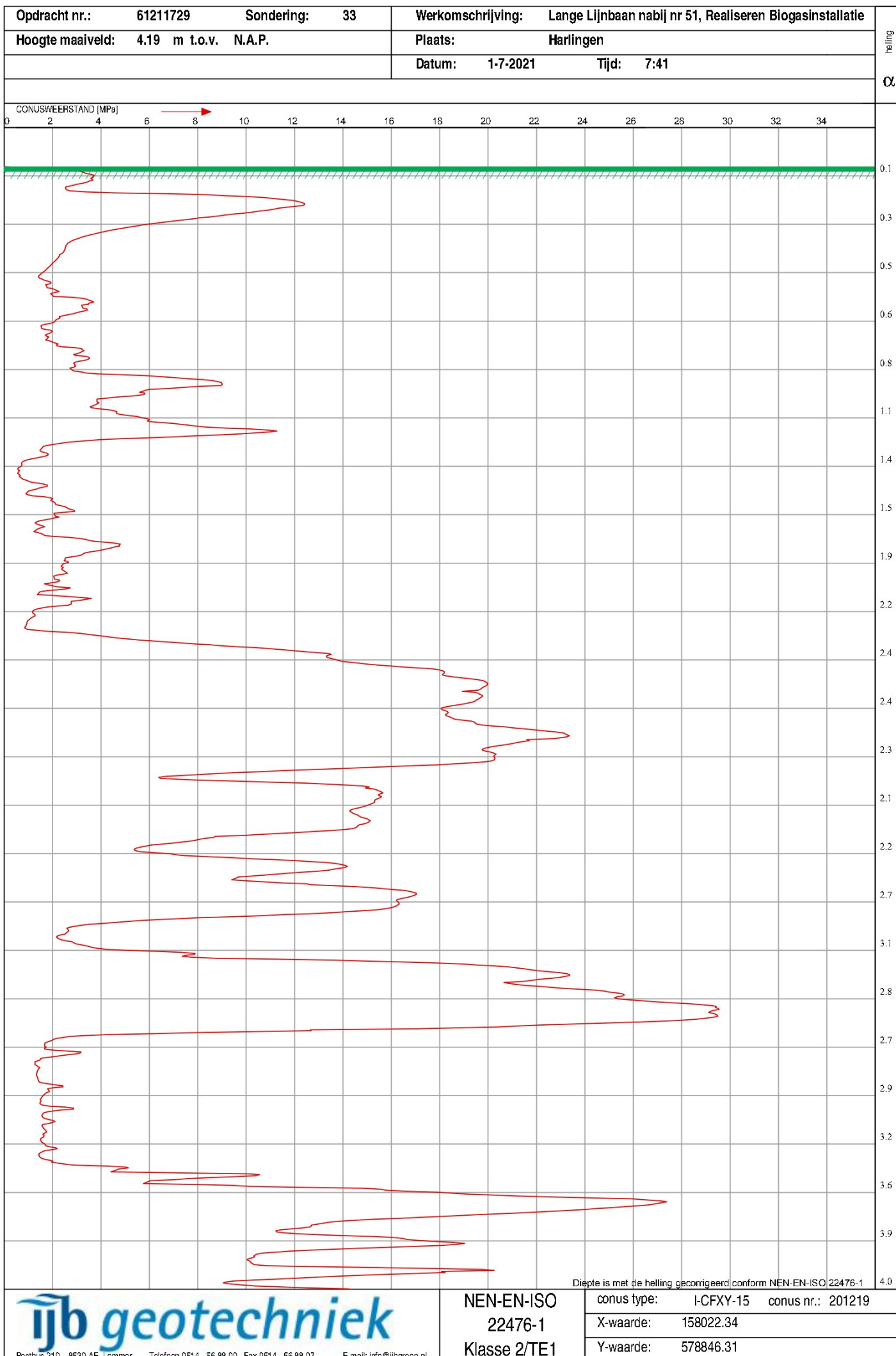


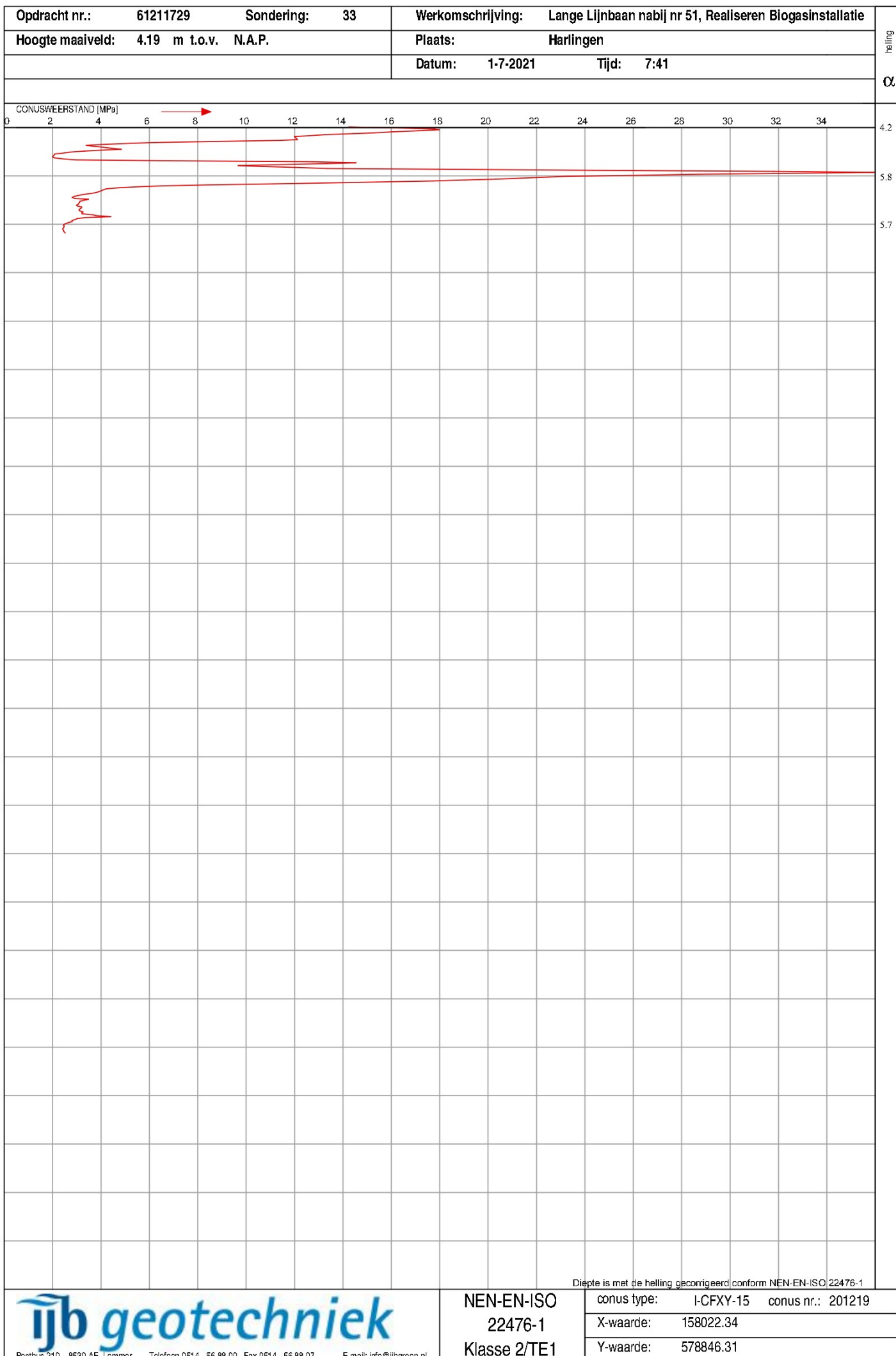










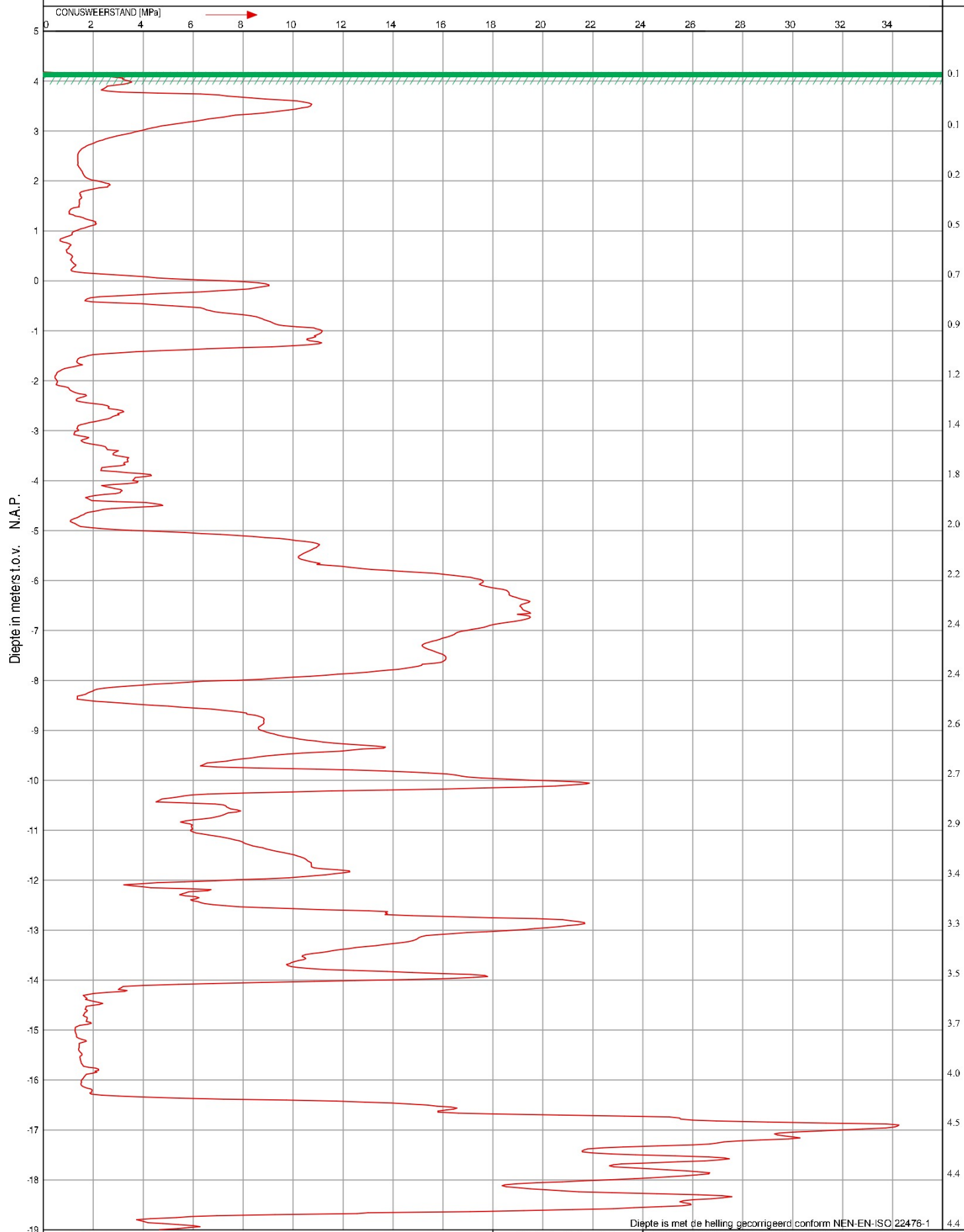


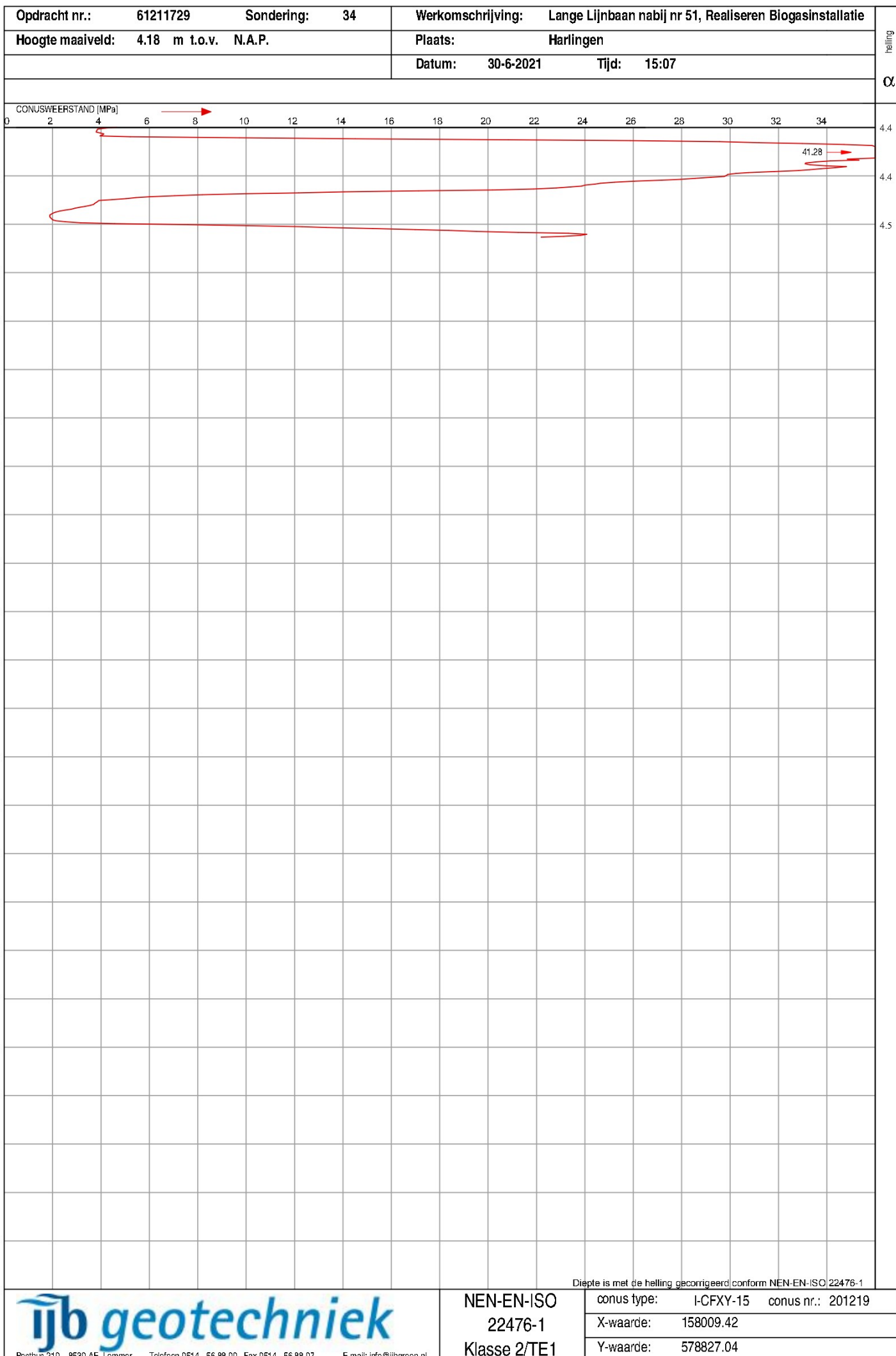
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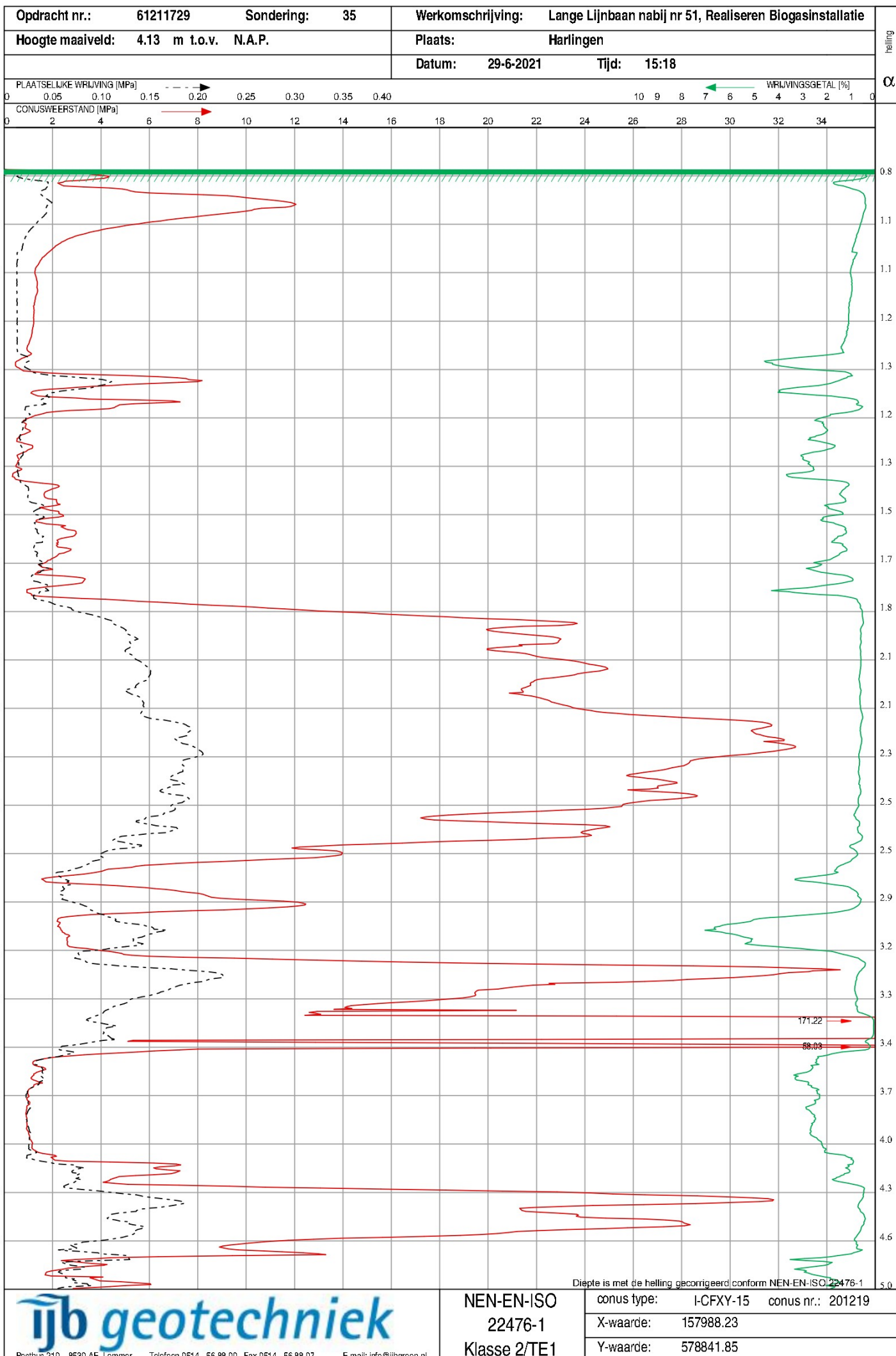
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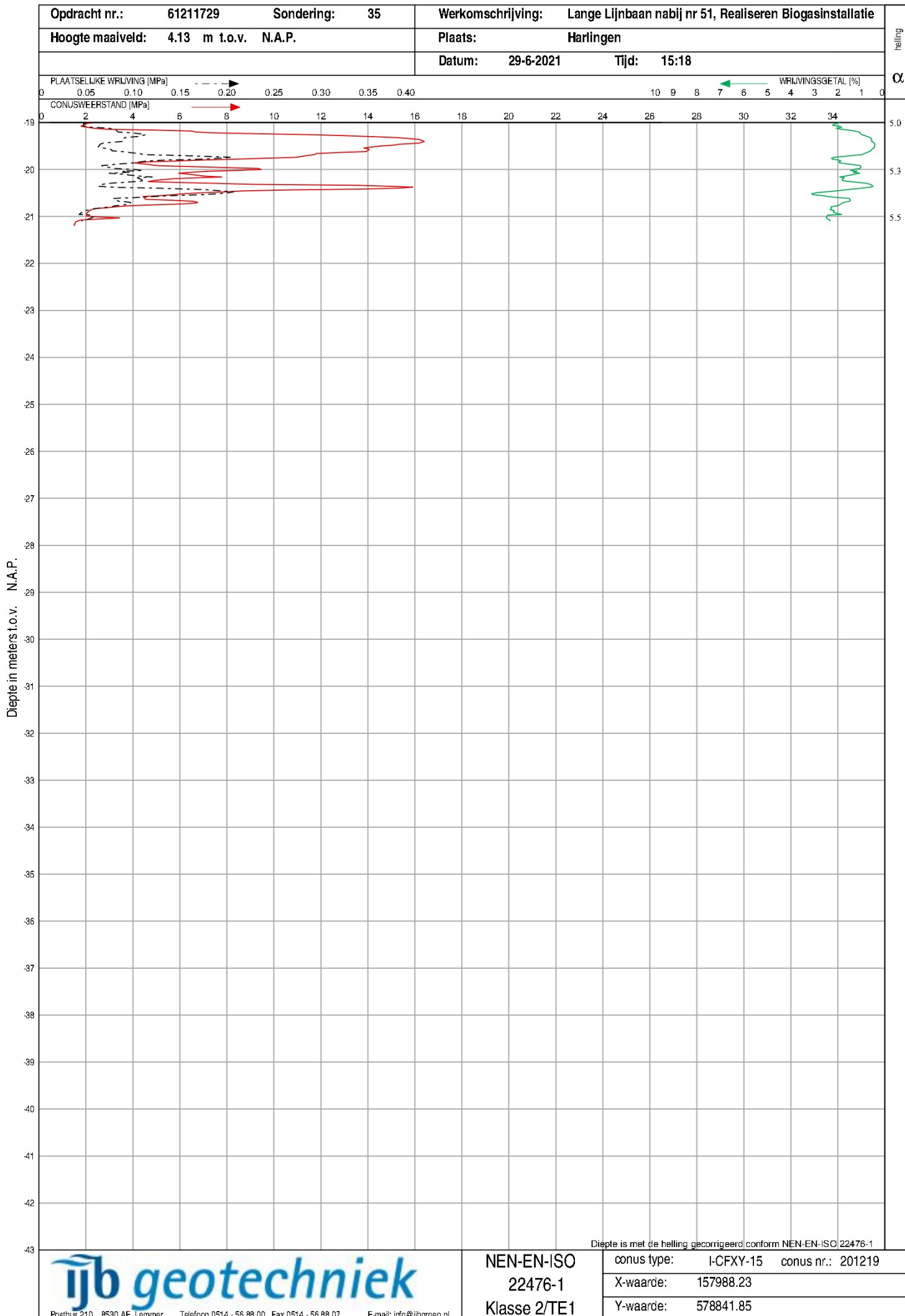
Postbus 210, 8530 AF Lemmer, Telefoon 0514 - 56 88 00, Fax 0514 - 56 88 07, E-mail: info@liboroo.nl

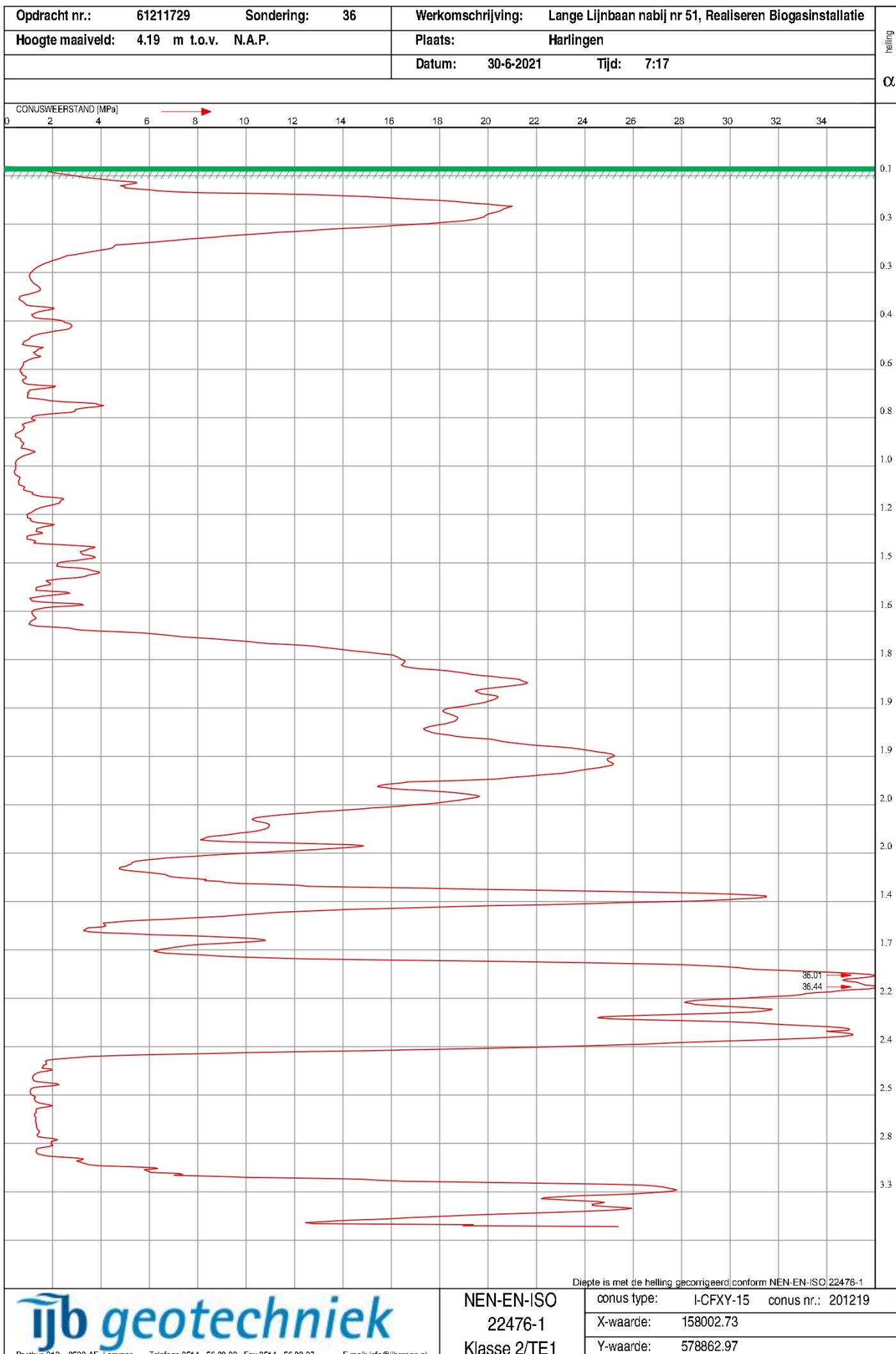
Opdracht nr.: 61211729	Sondering: 34	Werkomschrijving: Lange Lijnbaan nabij nr 51, Realiseren Biogasinstallatie	helling α
Hoogte maaiveld: 4.18 m t.o.v. N.A.P.		Plaats: Harlingen	
		Datum: 30-6-2021 Tijd: 15:07	

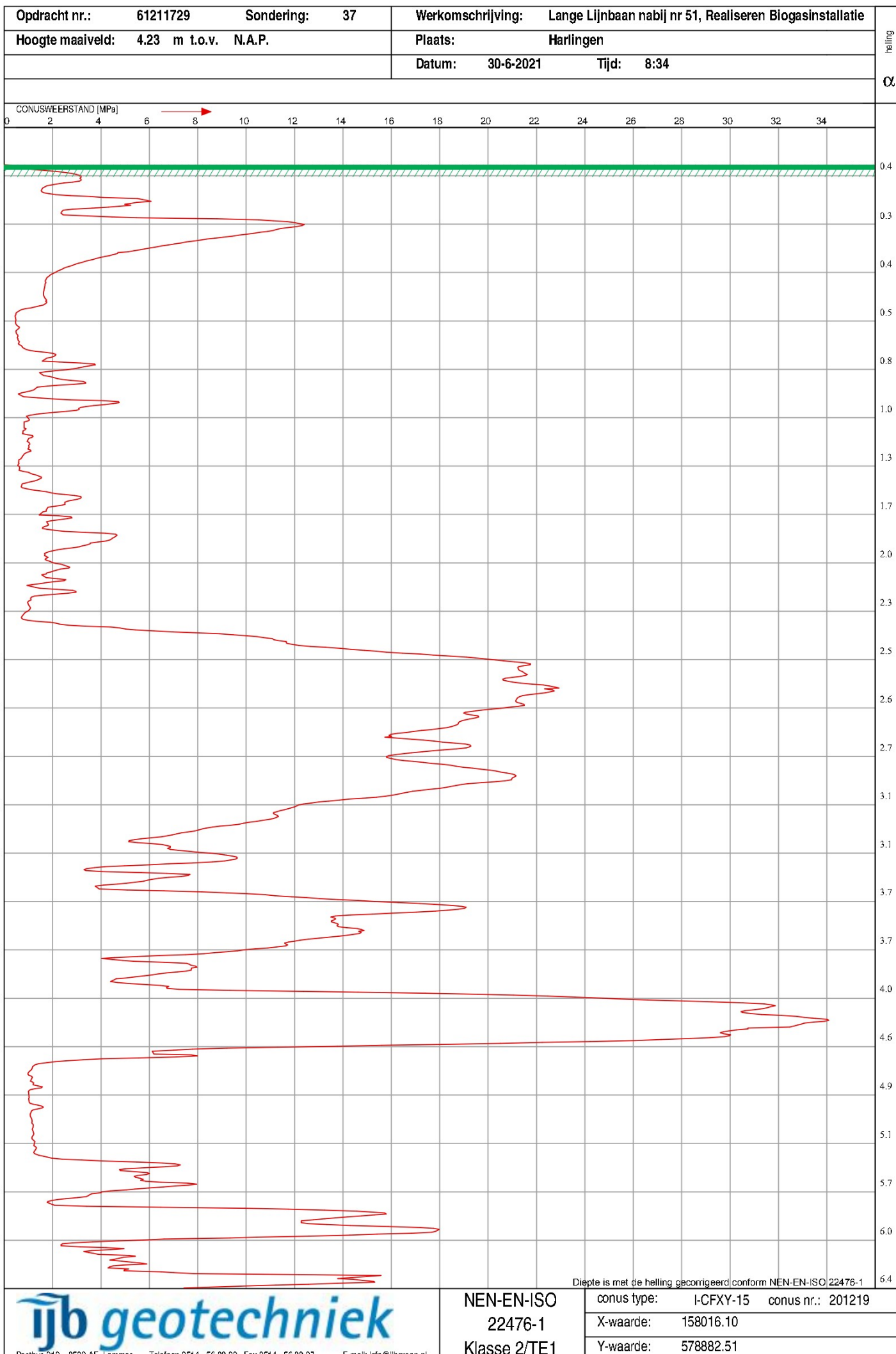


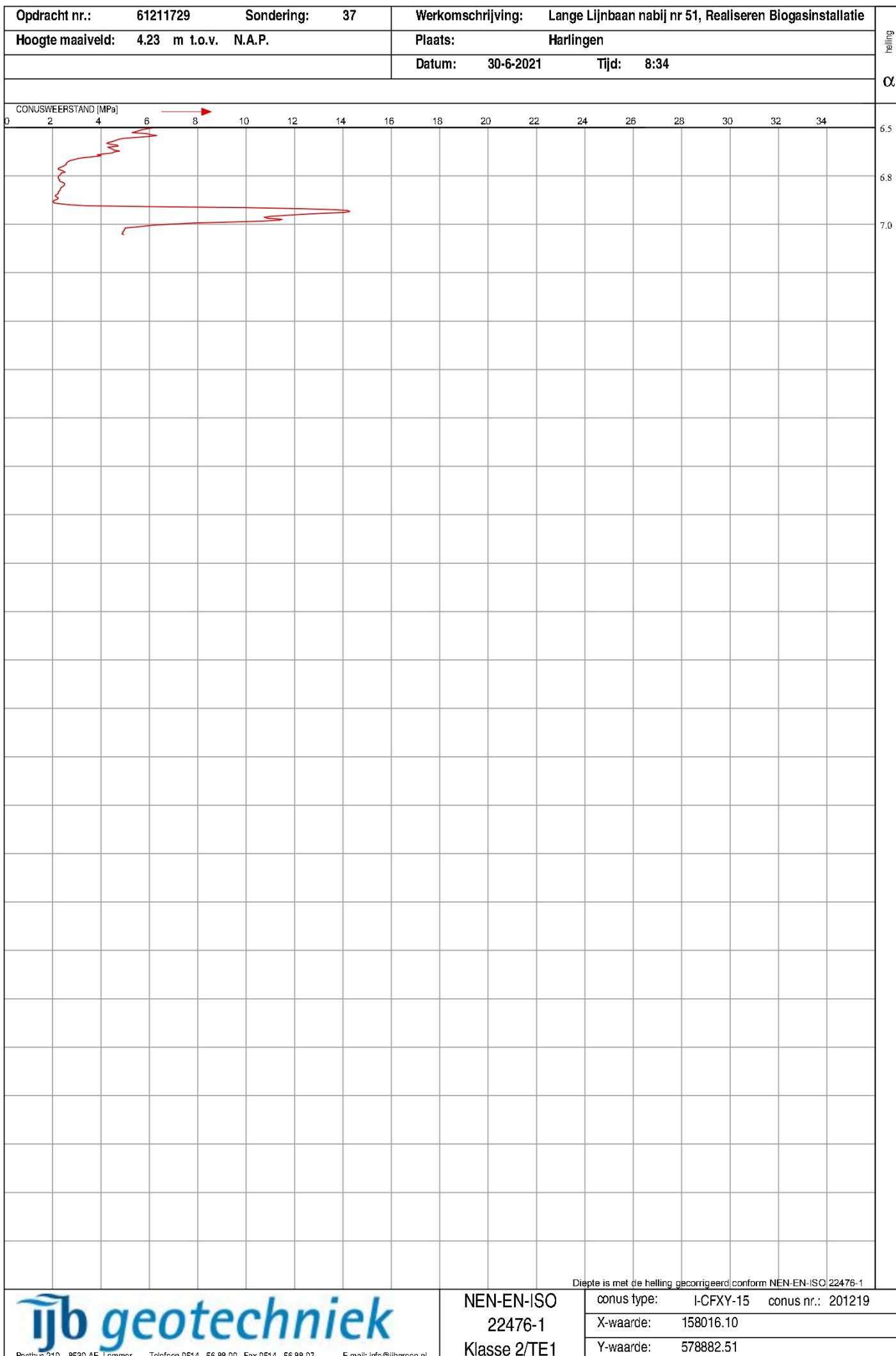






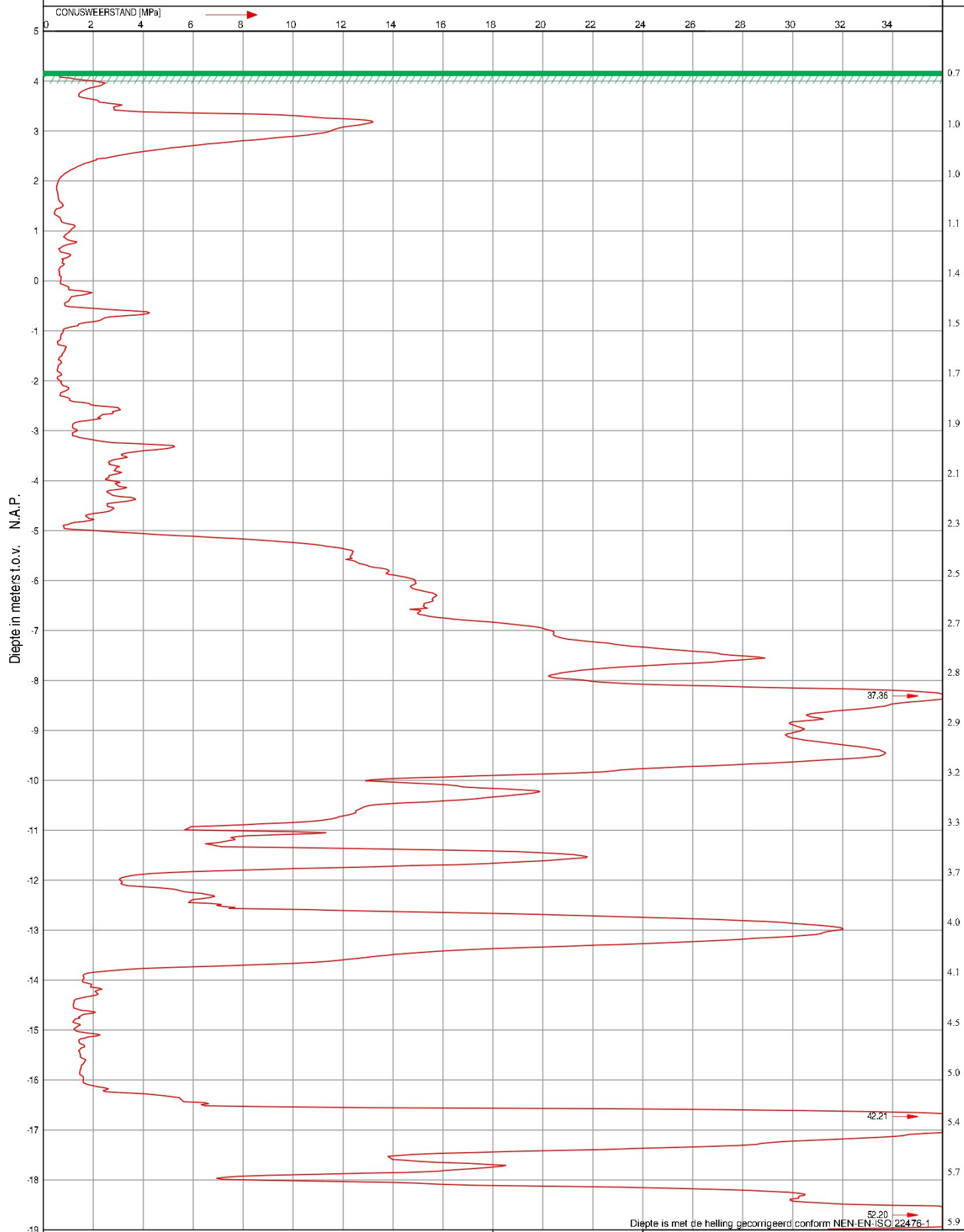


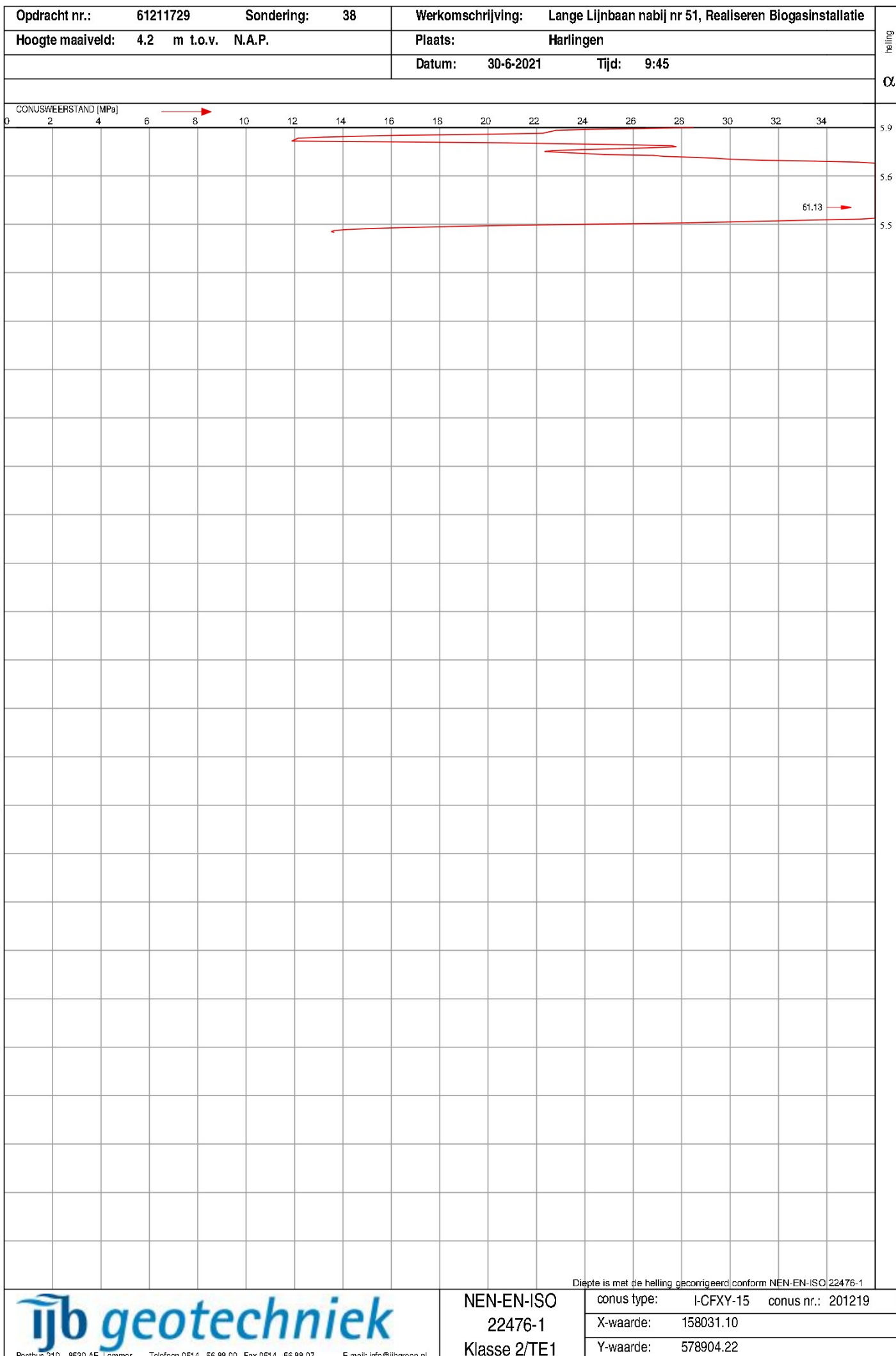




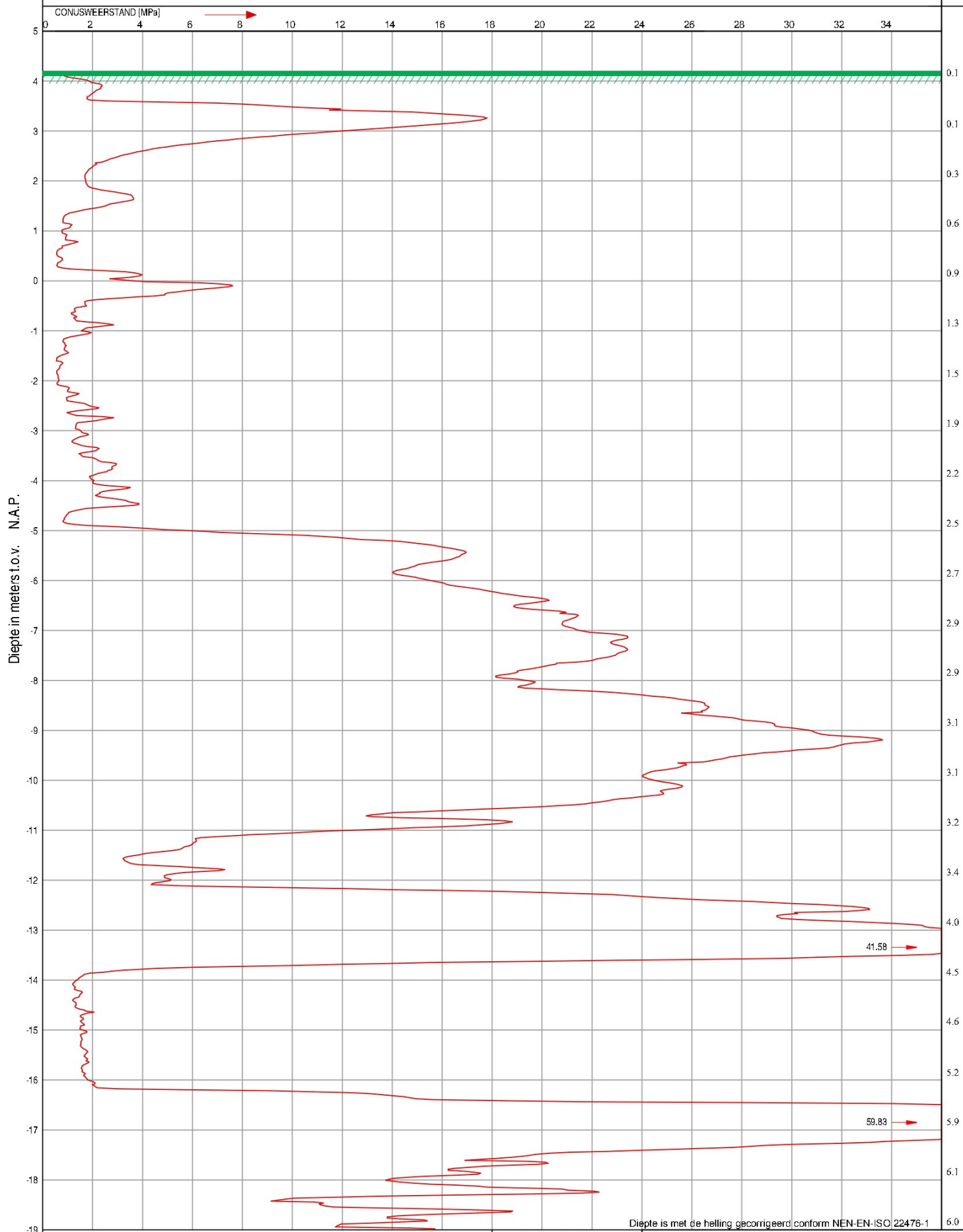
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	Datum: 30-6-2021	Tijd: 9:45

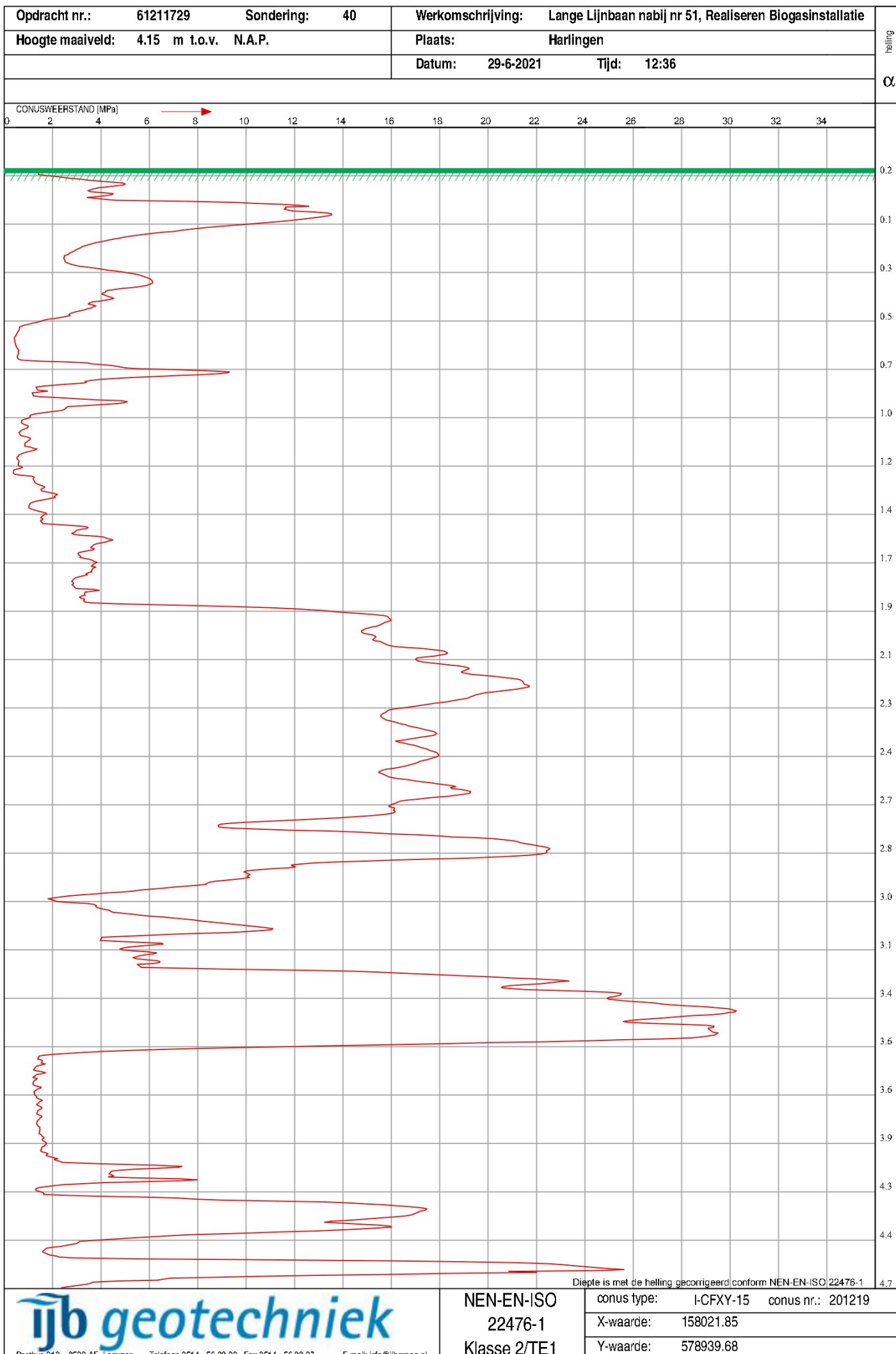
helling

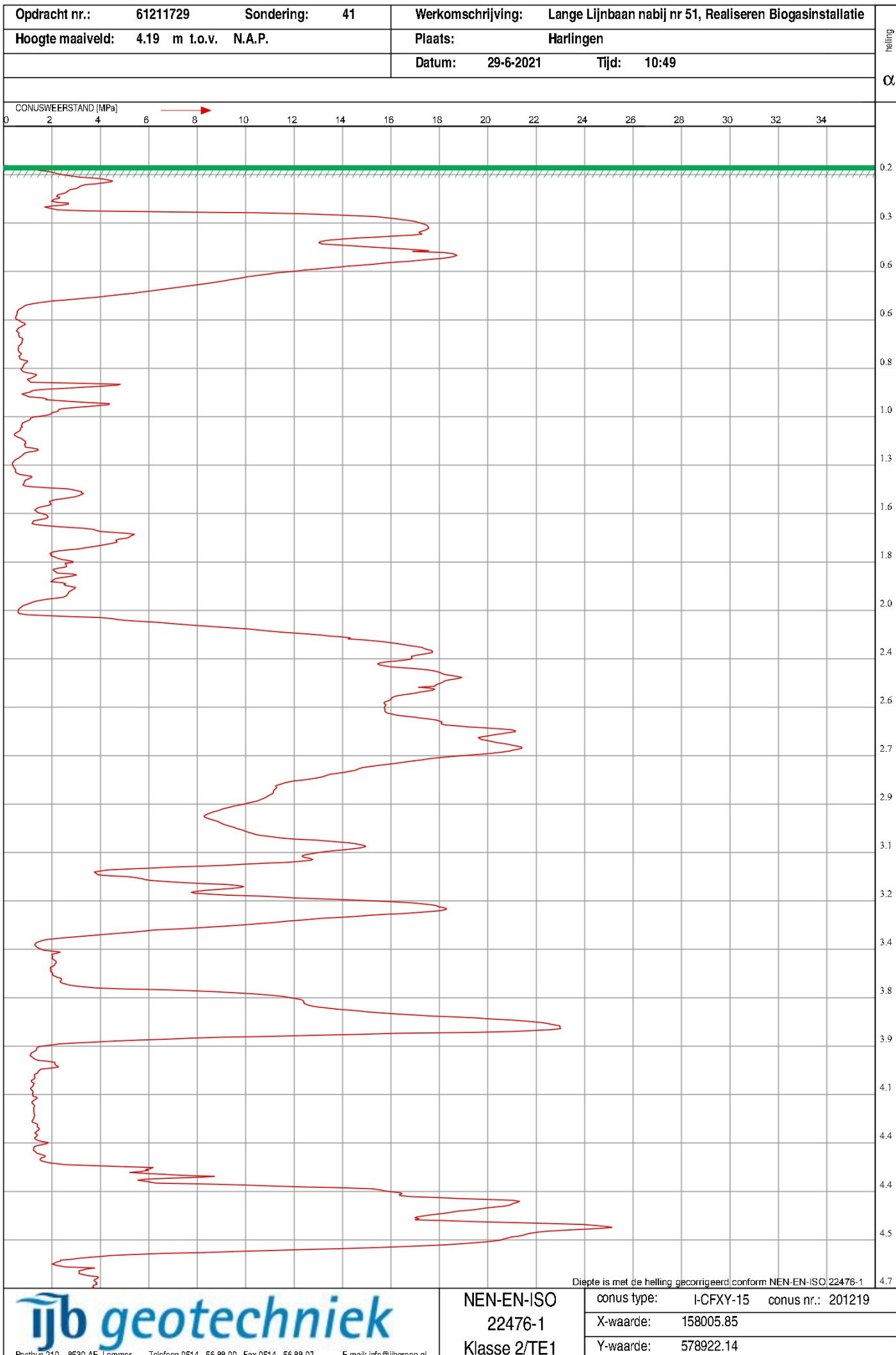
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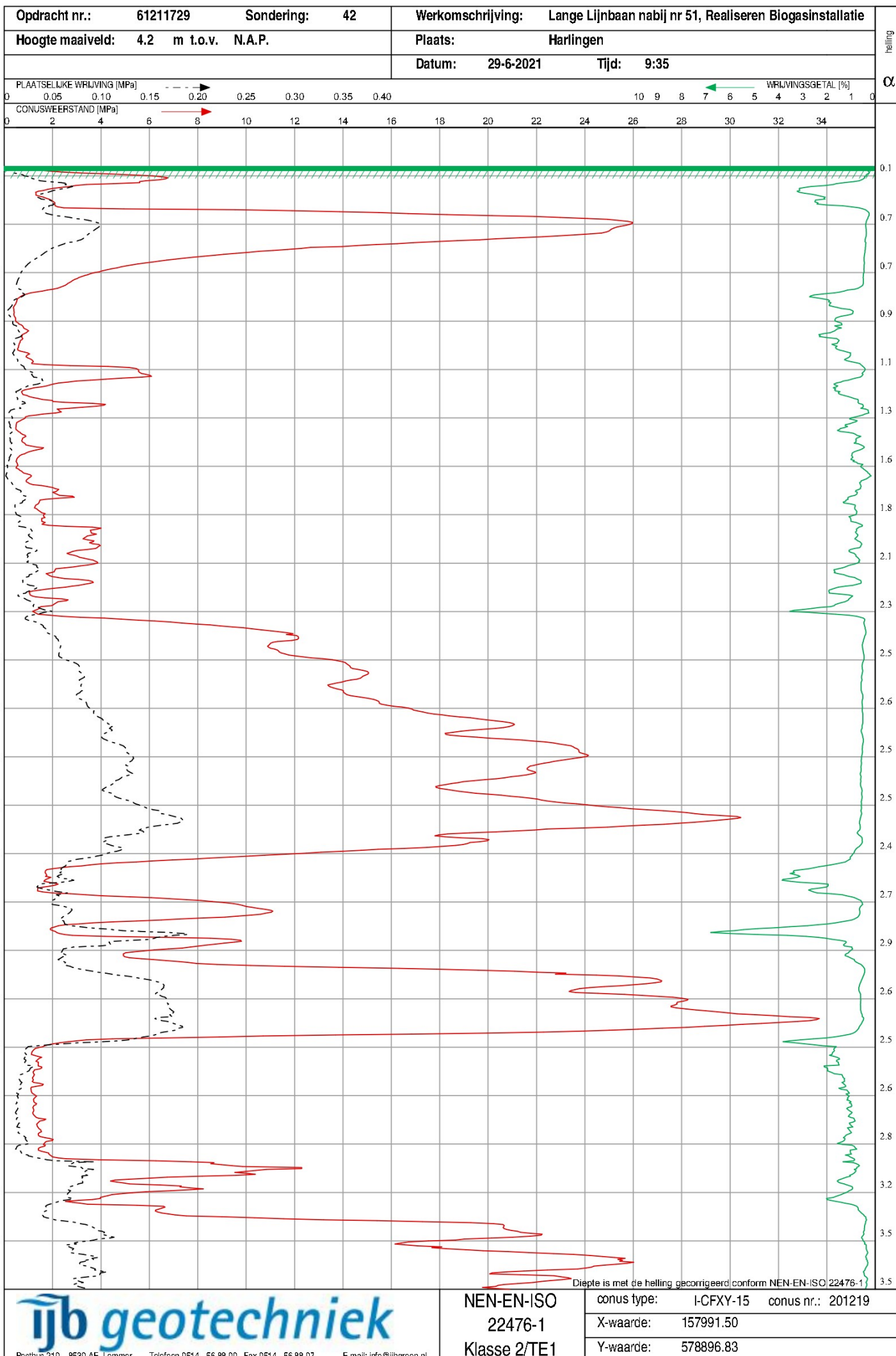


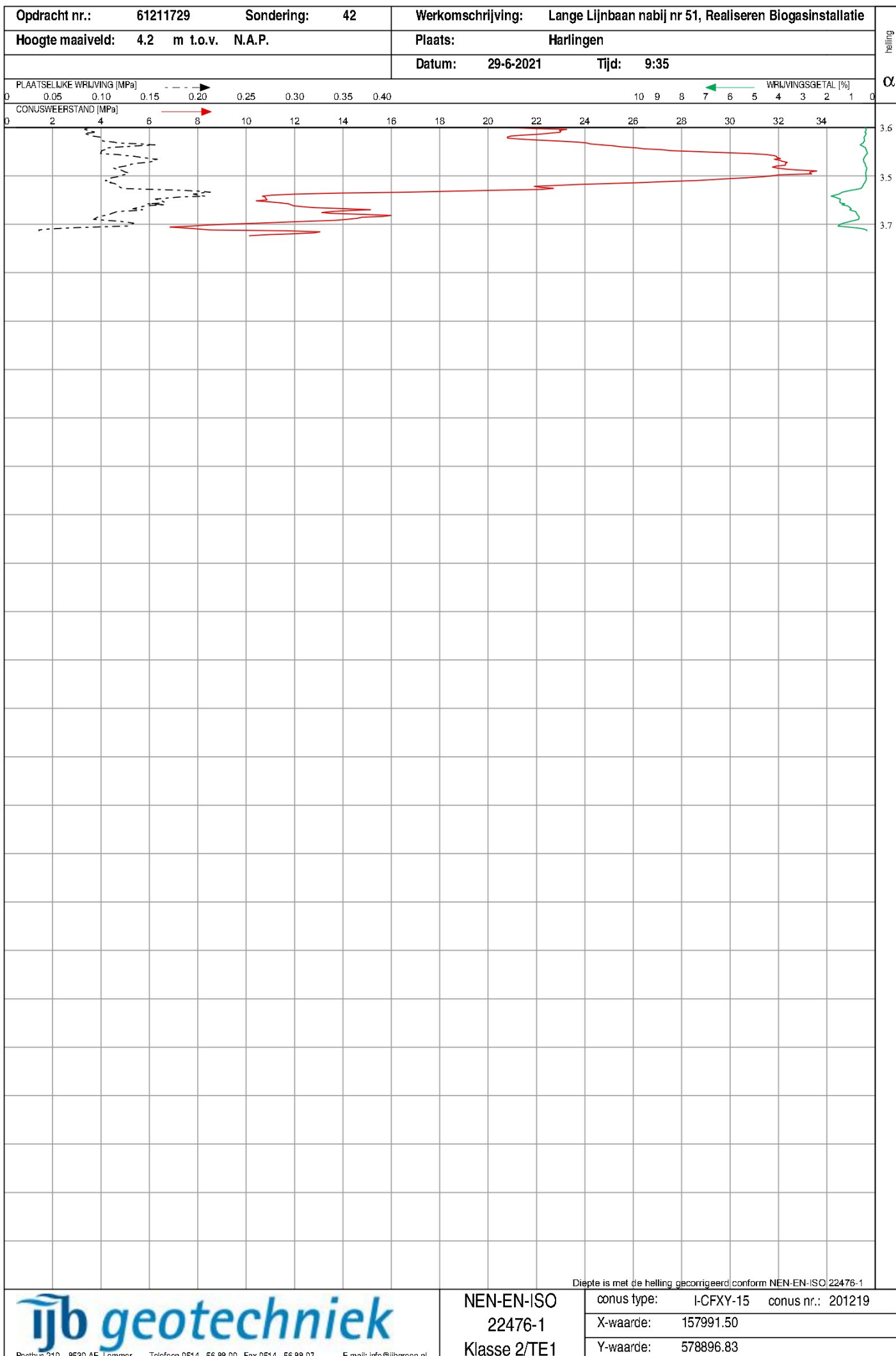
Opdracht nr.: 61211729	Sondering: 39	Werkomschrijving: Lange Lijnbaan nabij nr 51, Realiseren Biogasinstallatie	helling α
Hoogte maaiveld: 4.2 m t.o.v. N.A.P.		Plaats: Harlingen	
		Datum: 30-6-2021 Tijd: 10:59	

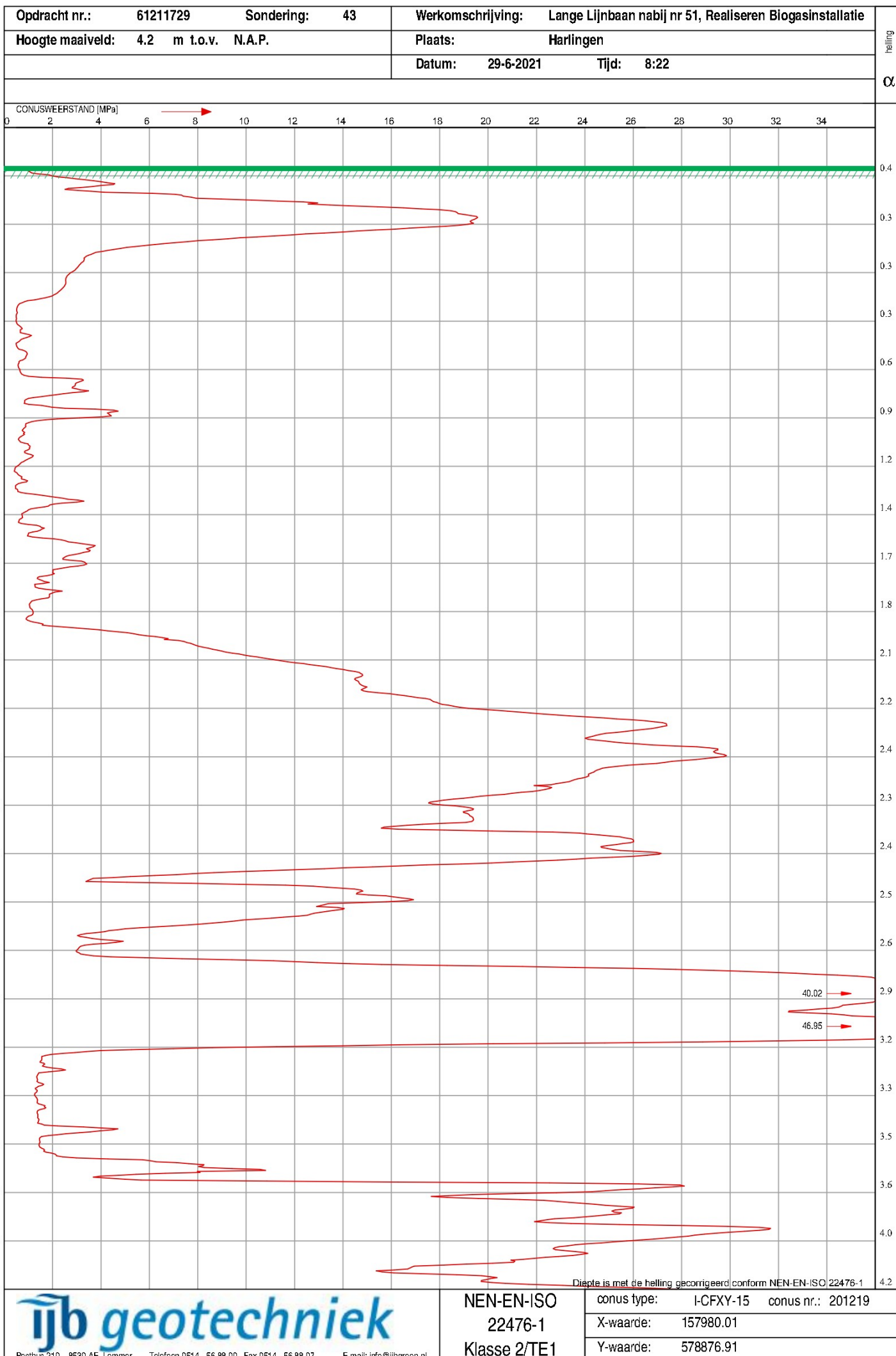




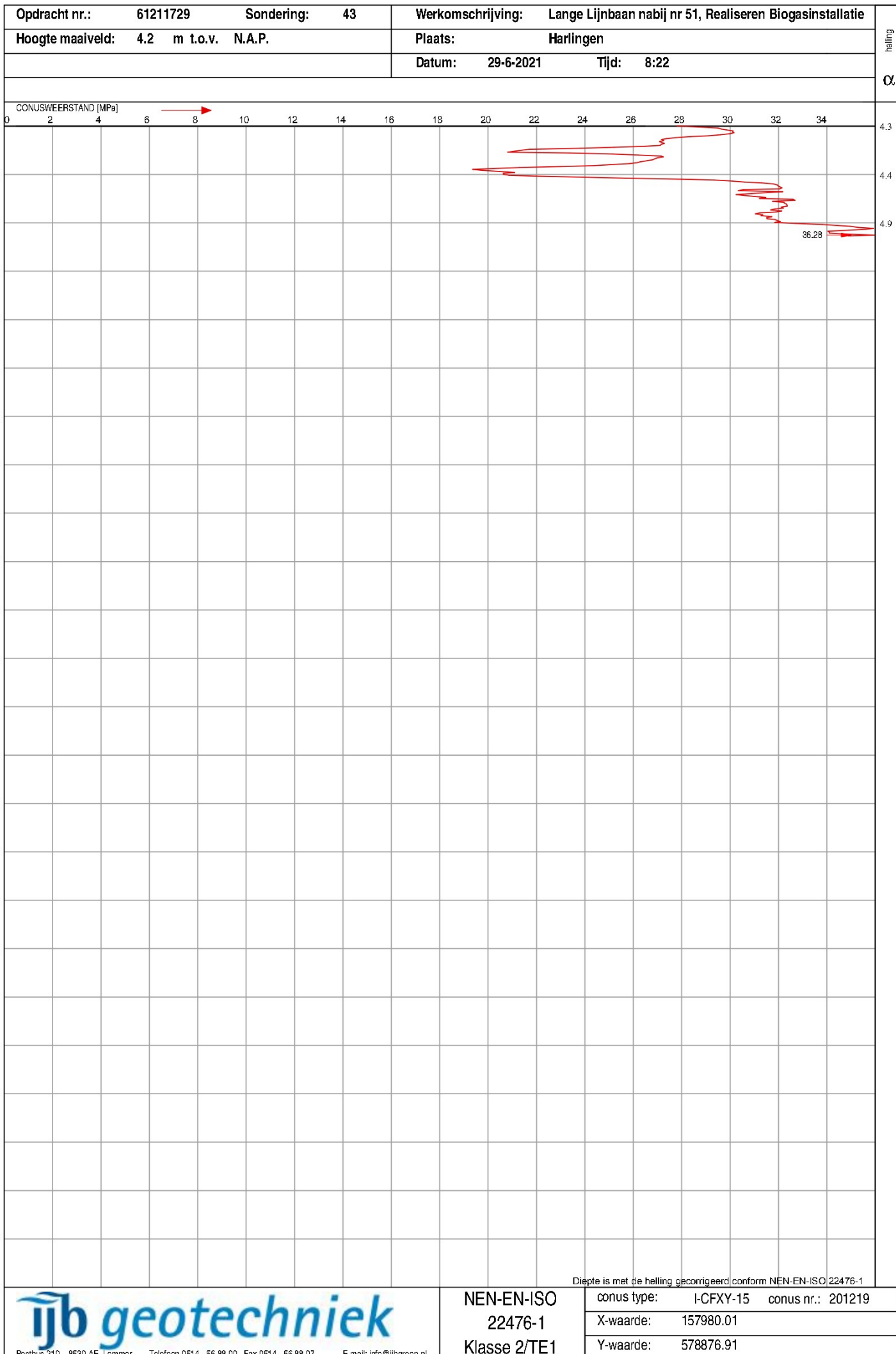


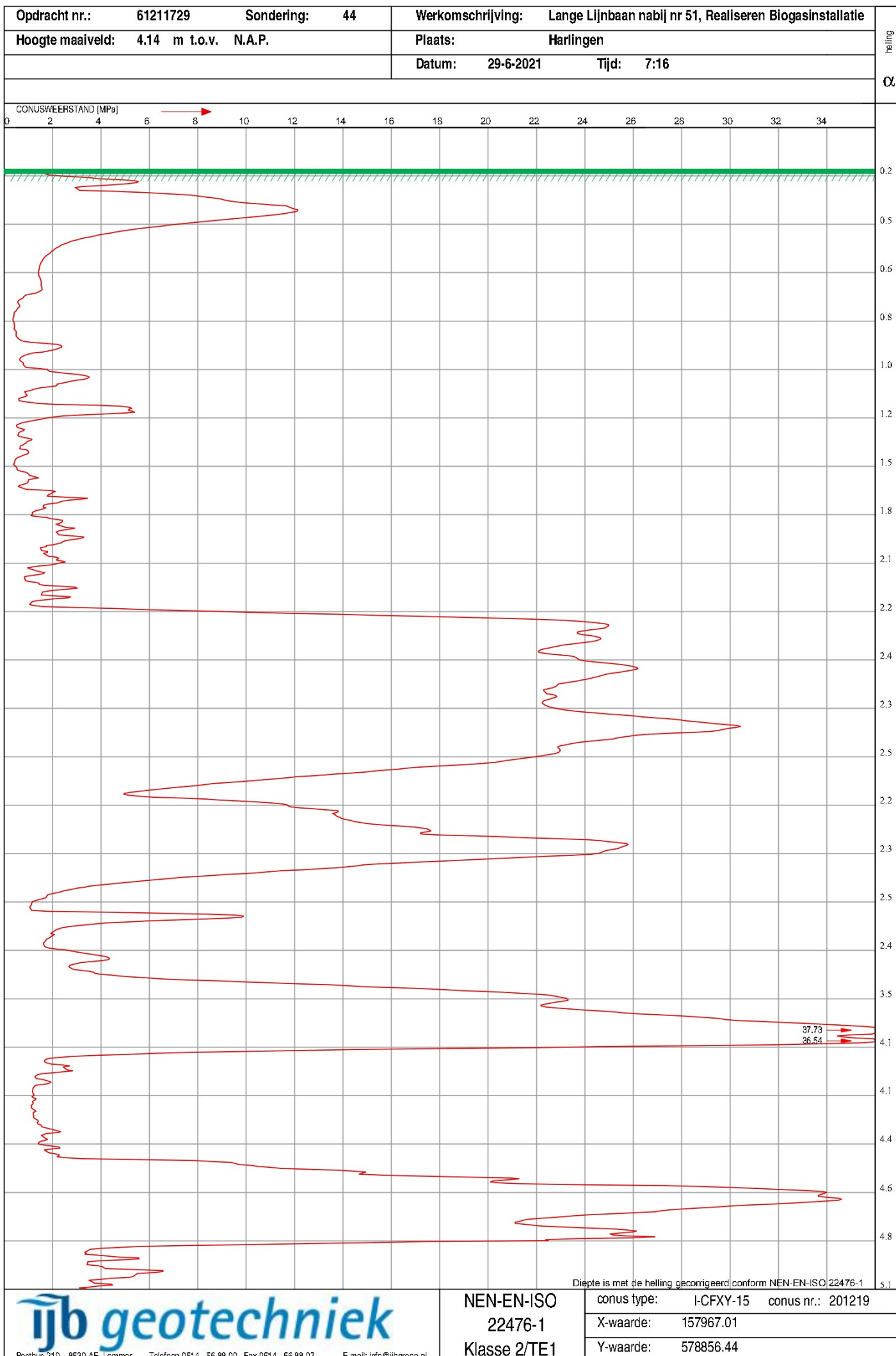


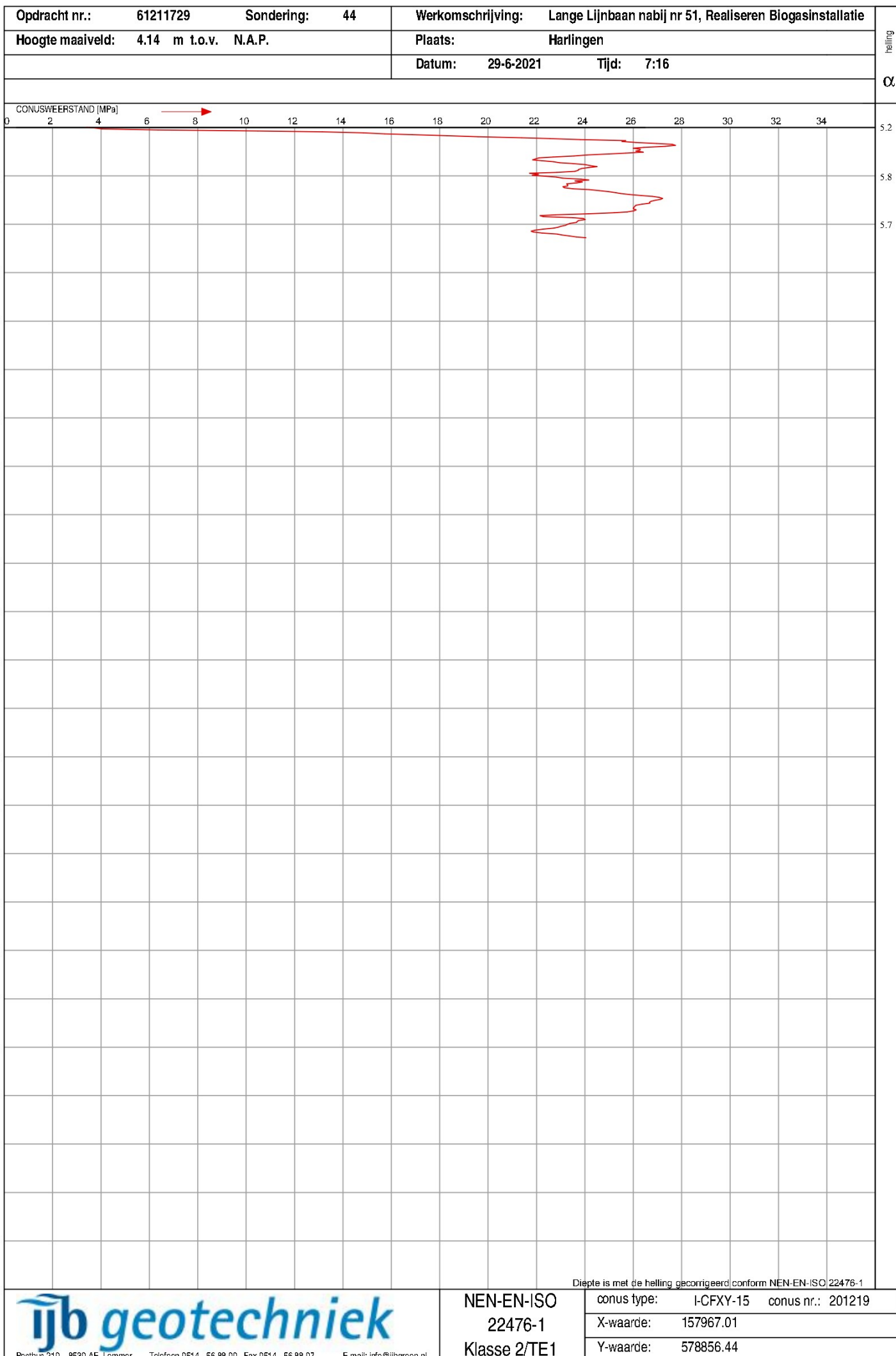


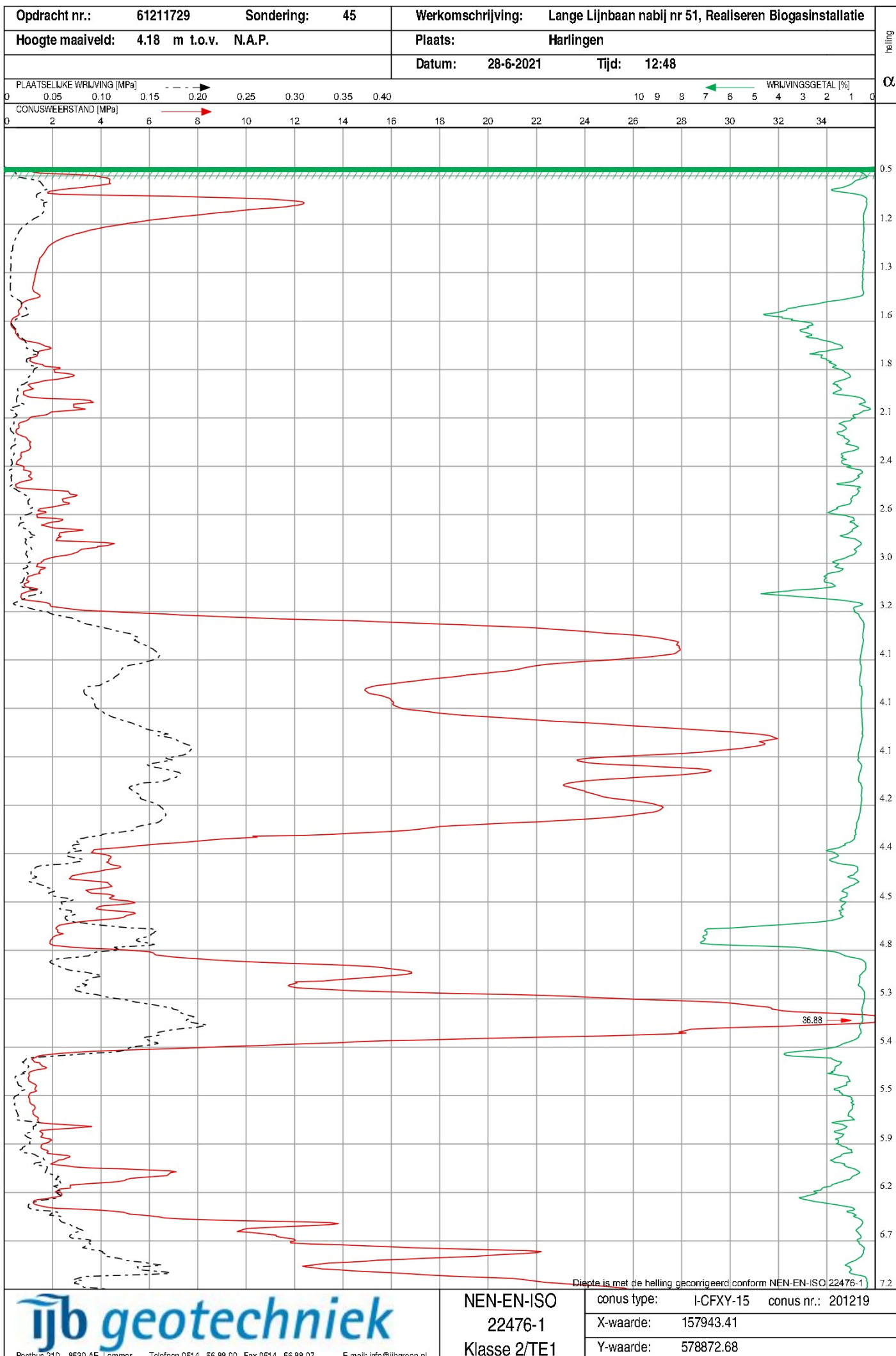


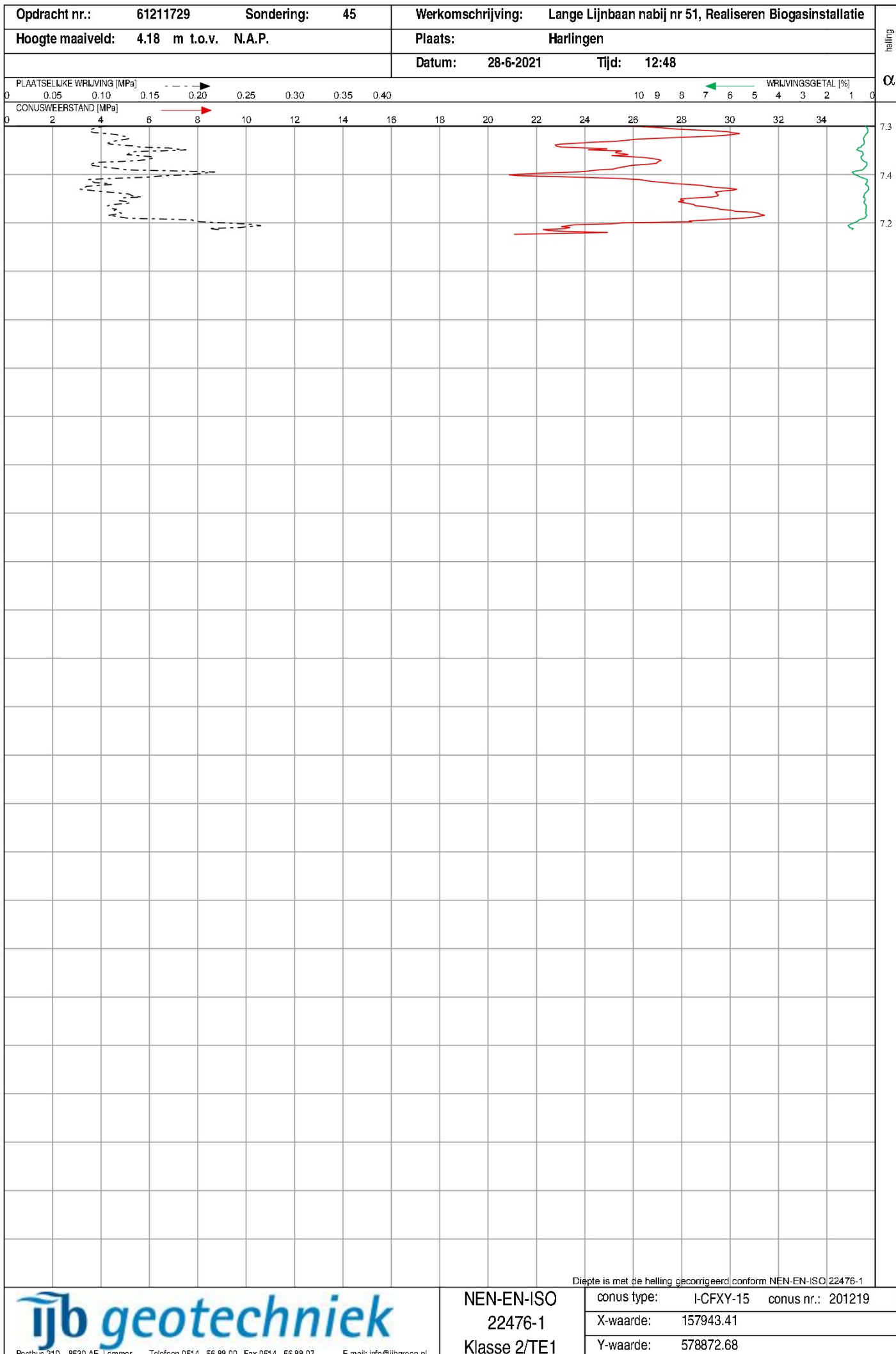
Diepte is met de helling gecorrigeerd conform NEN-EN-ISO 22476-1

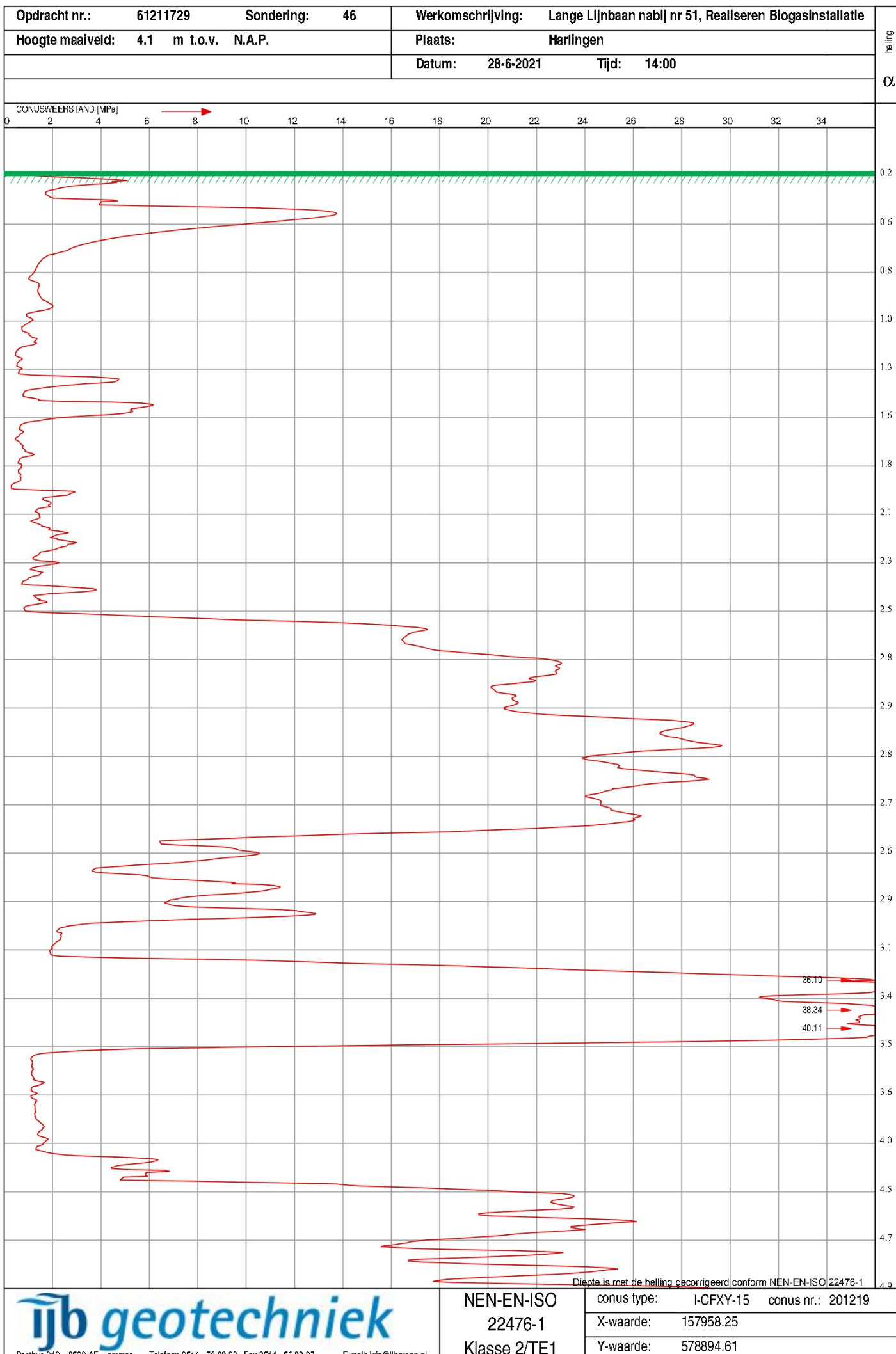


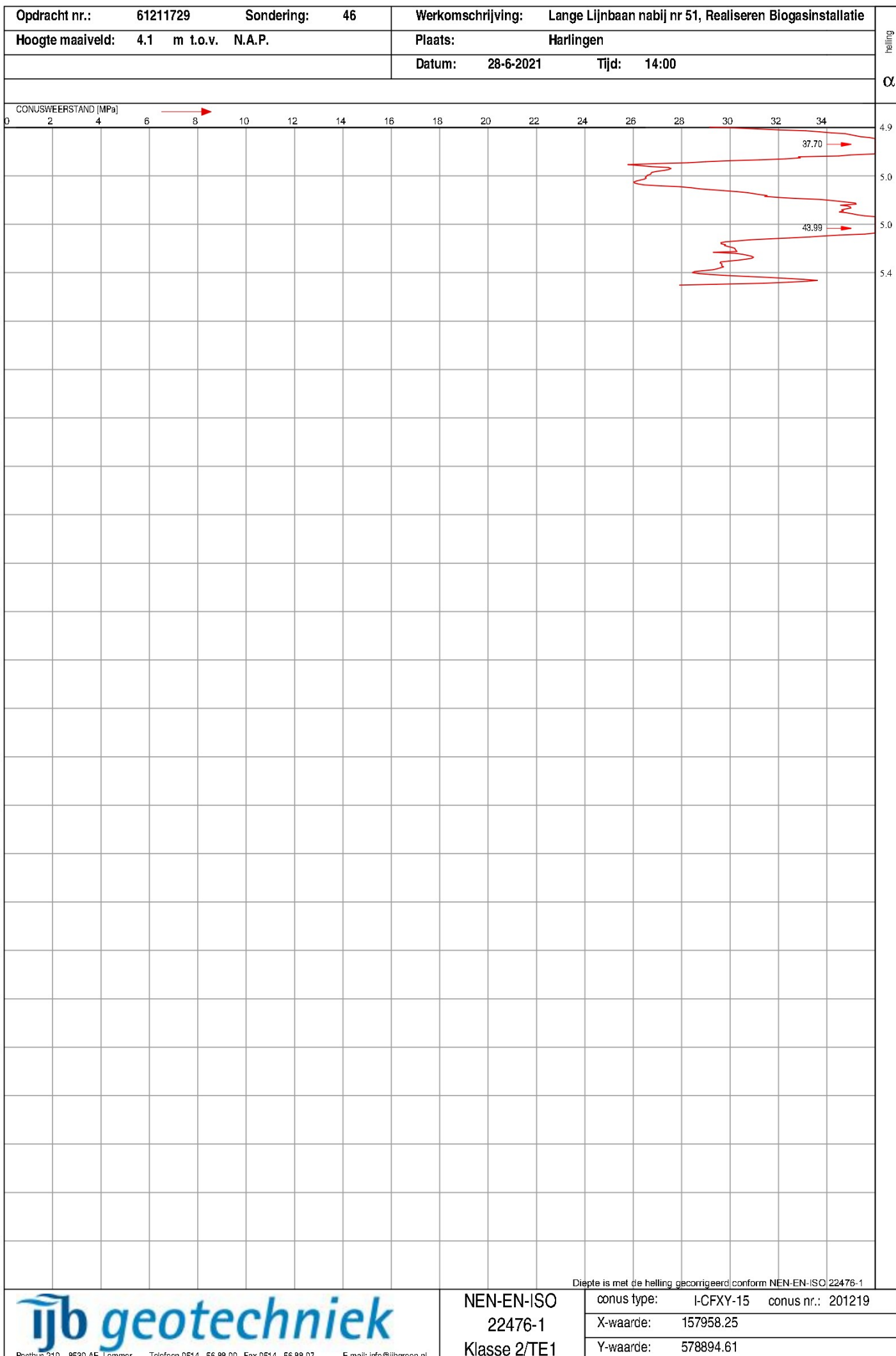


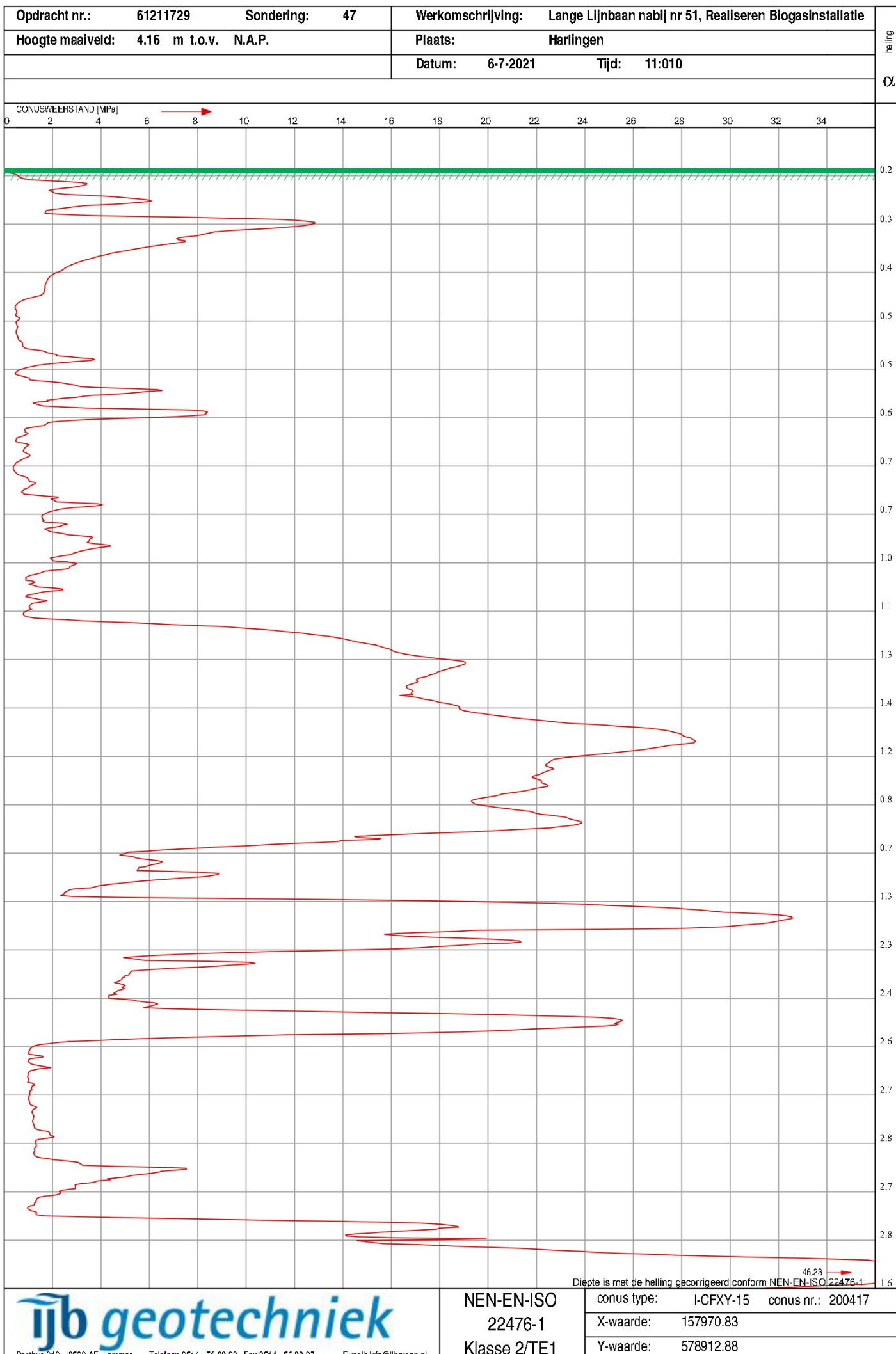


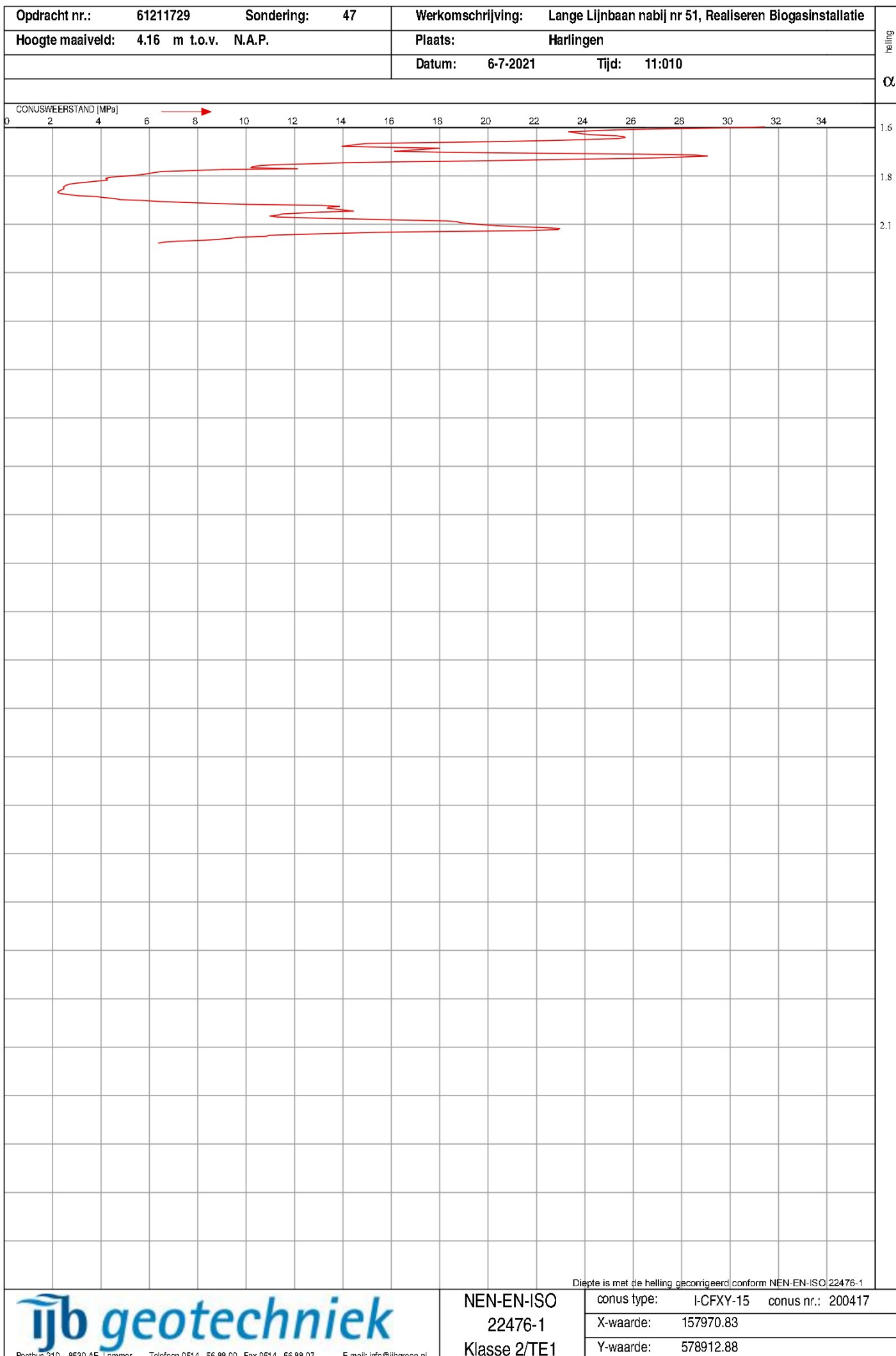


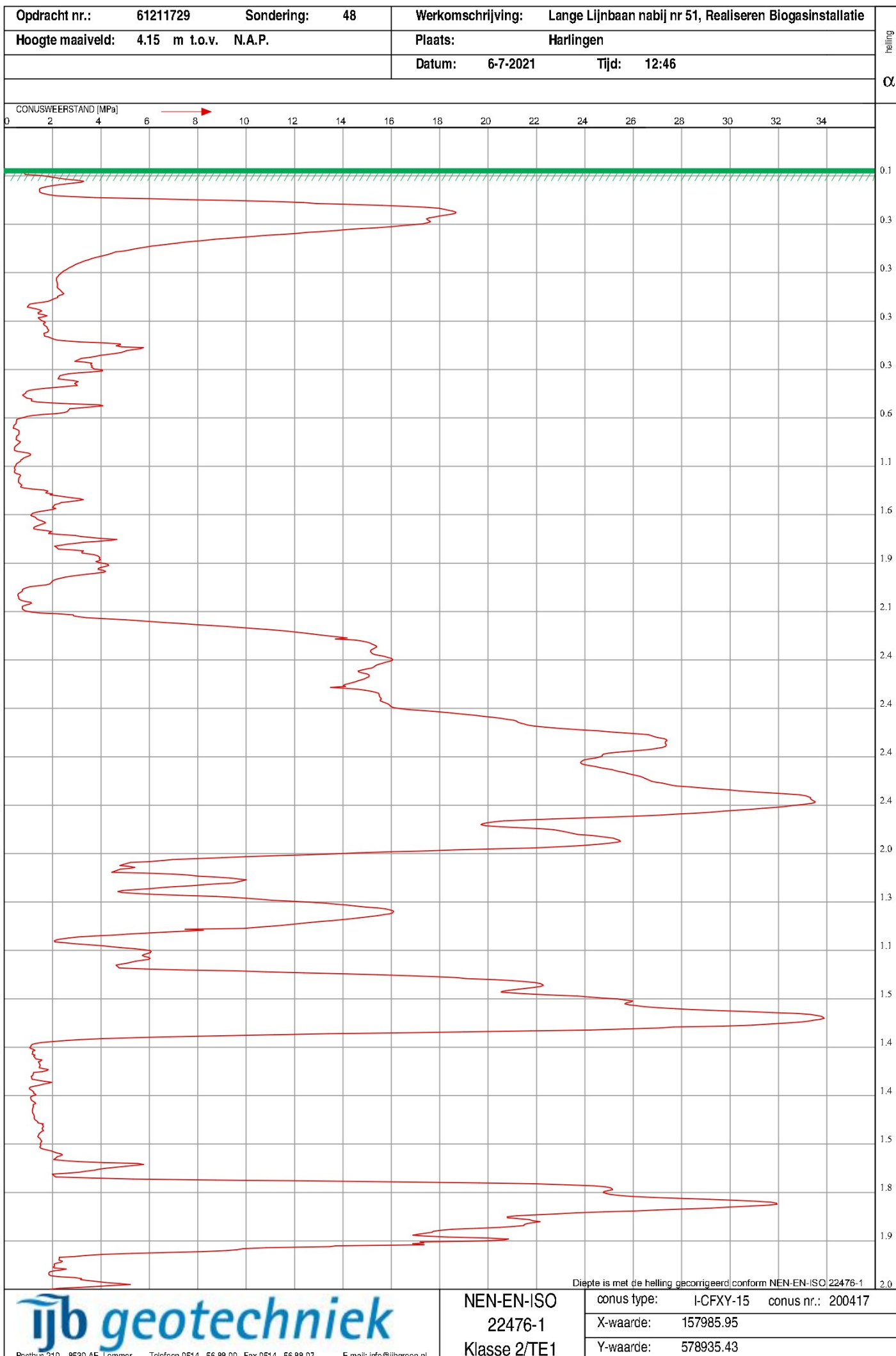


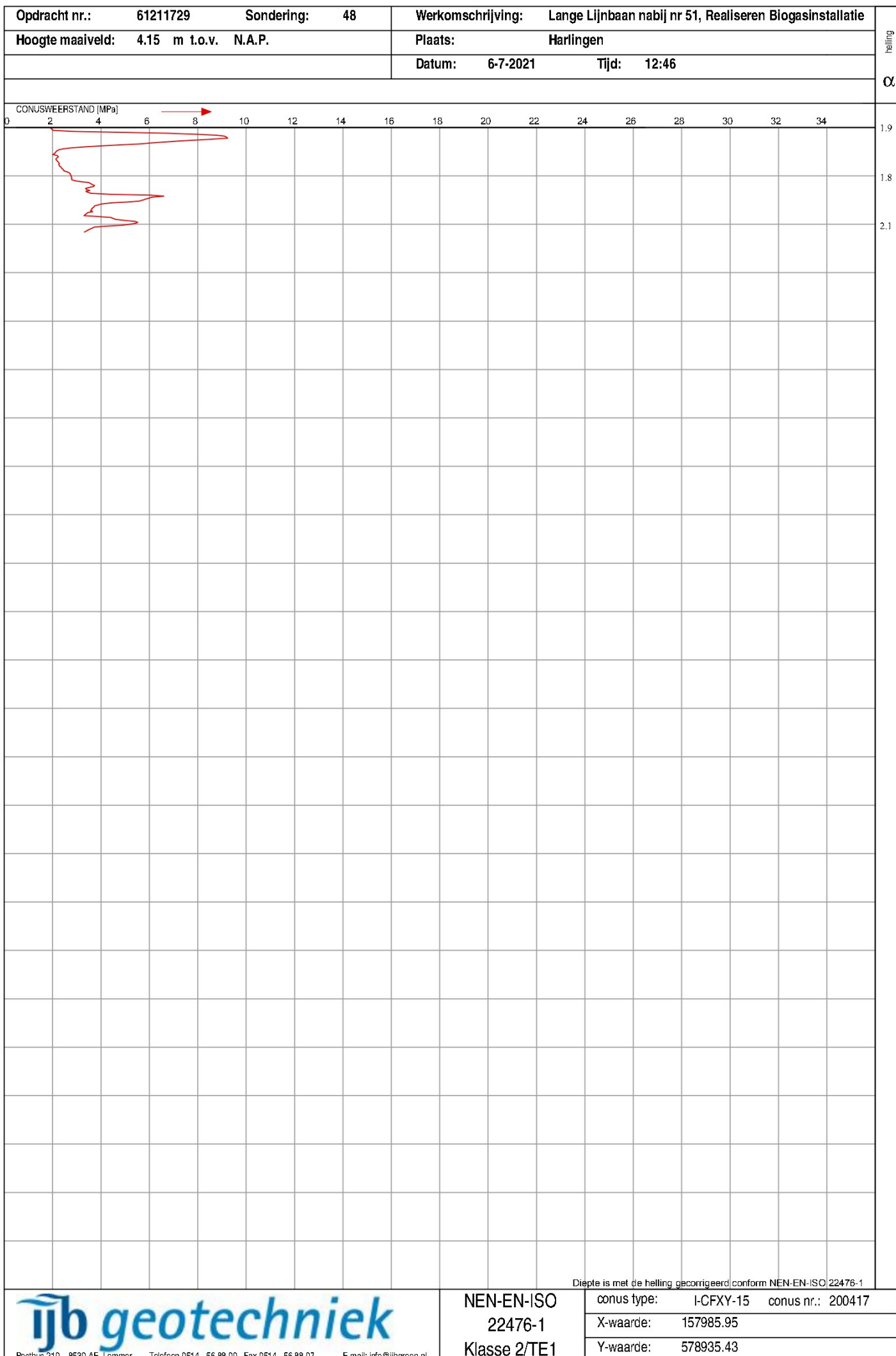


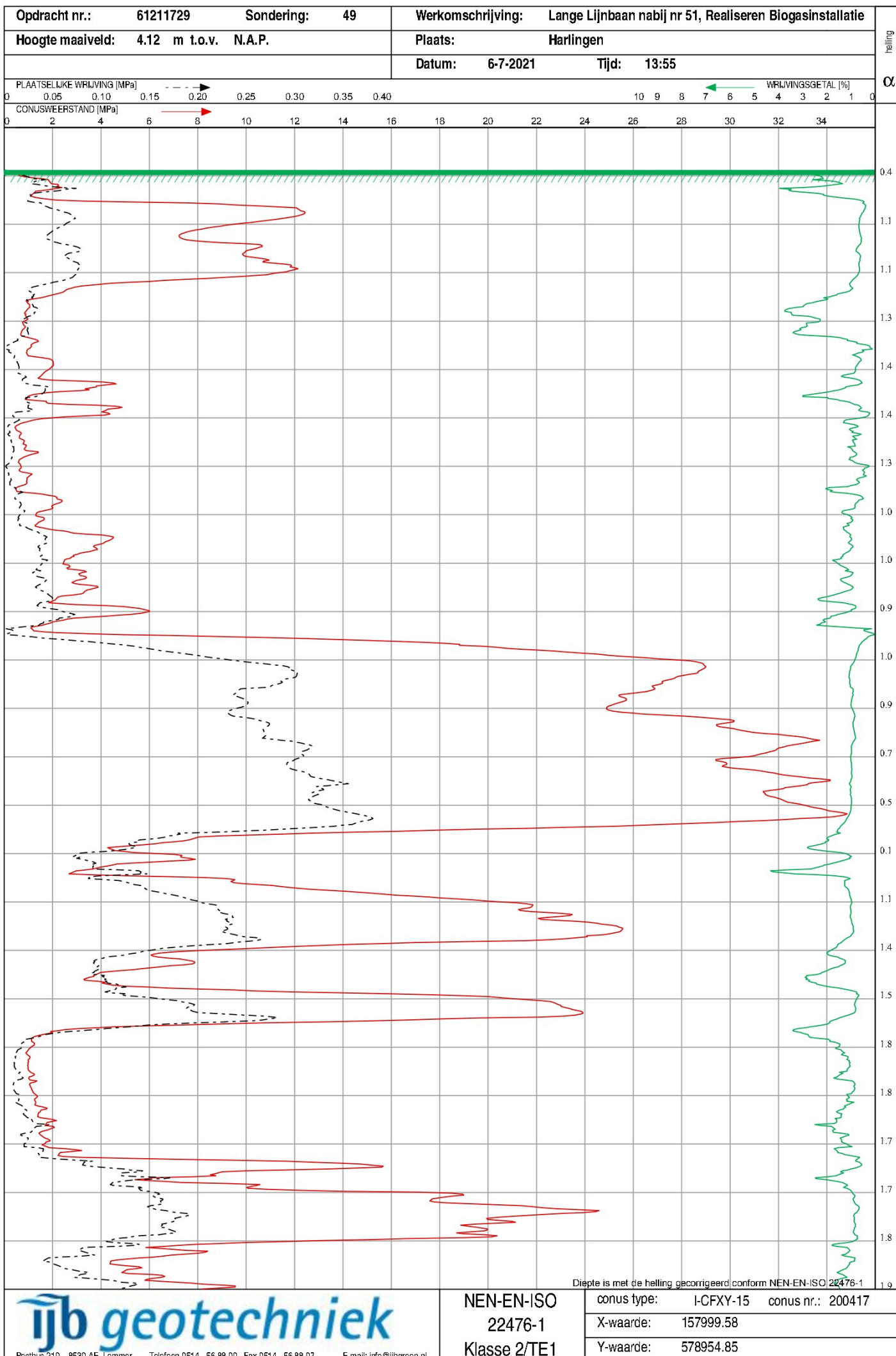


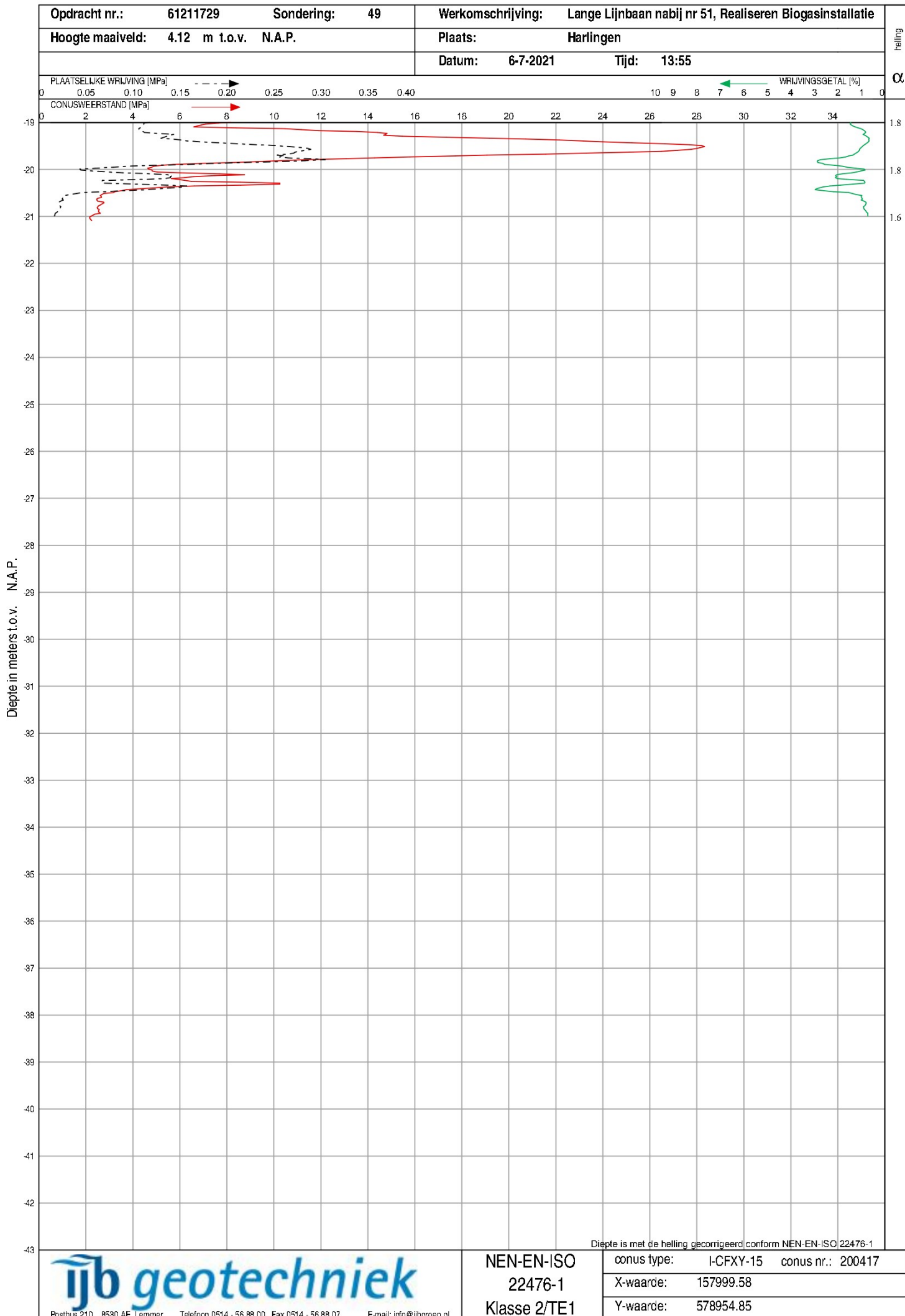


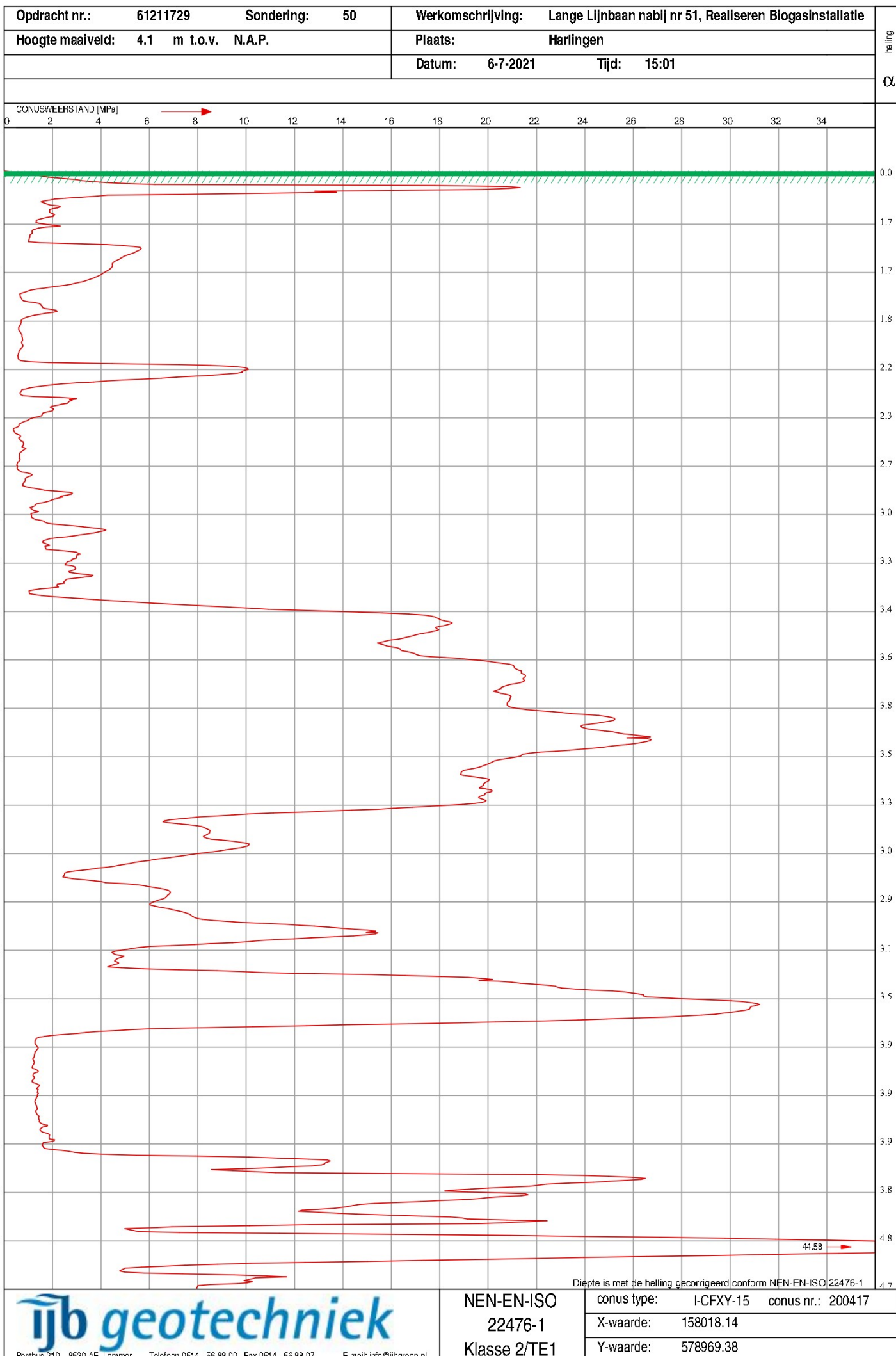


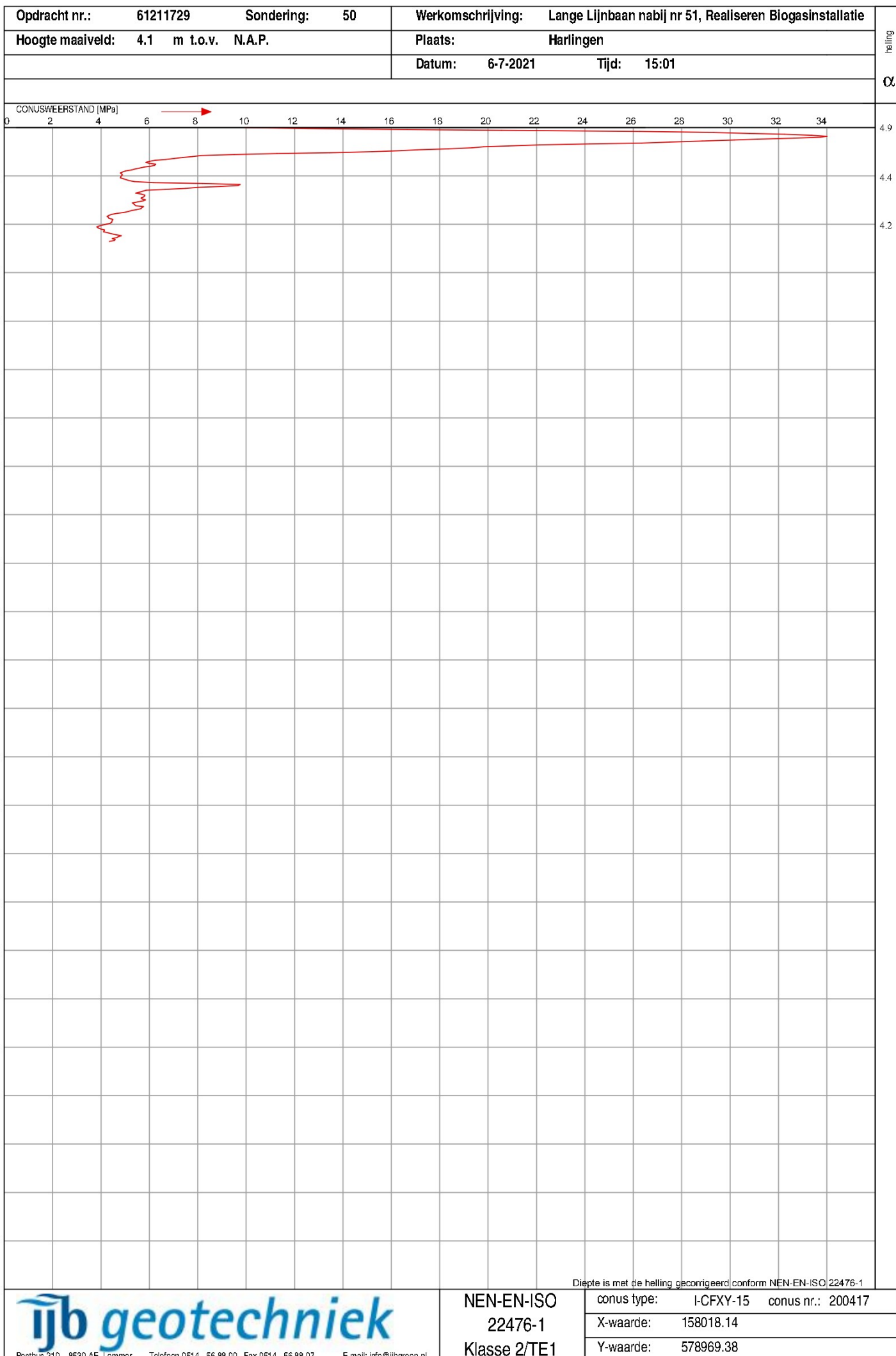


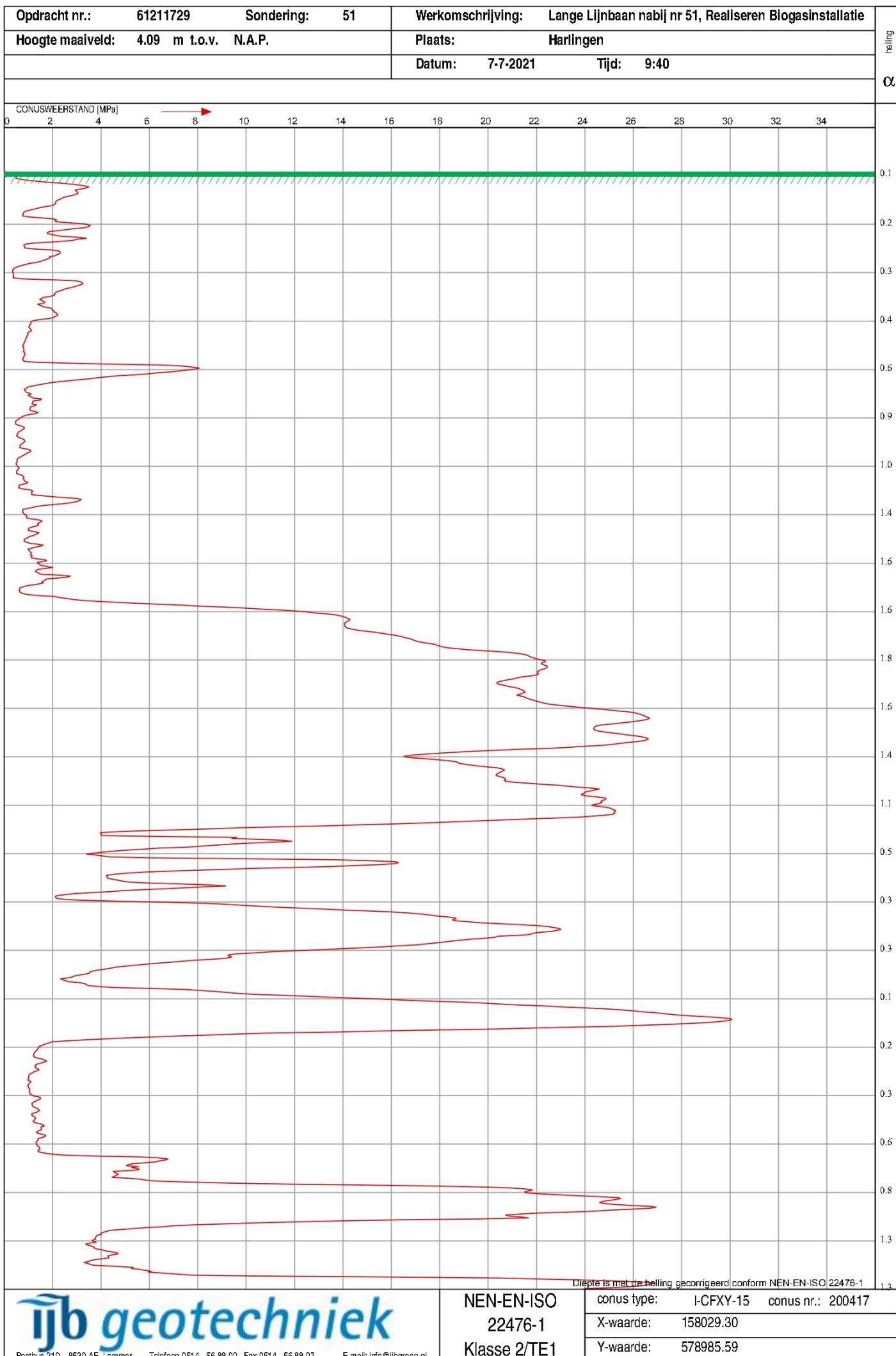


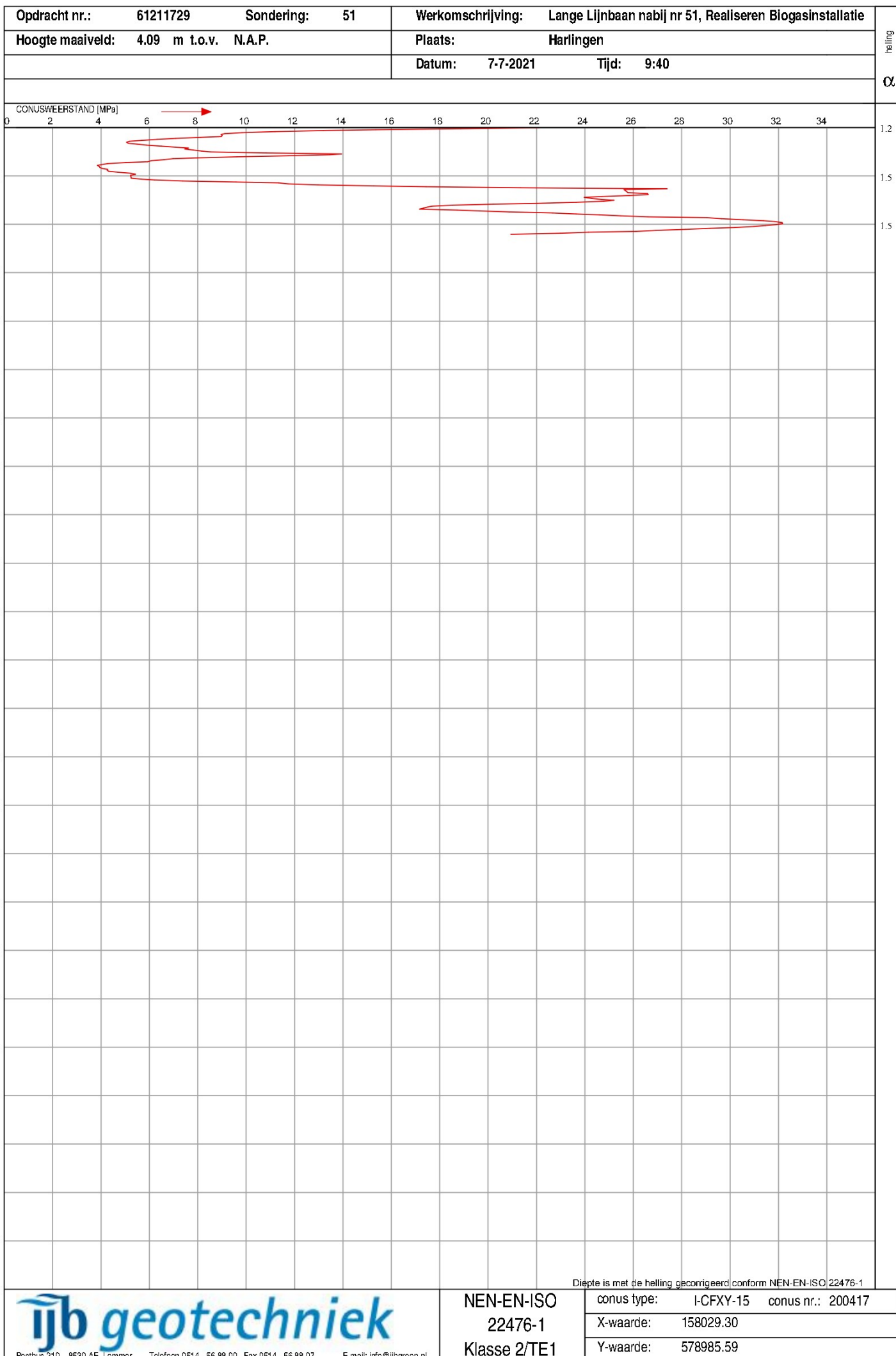


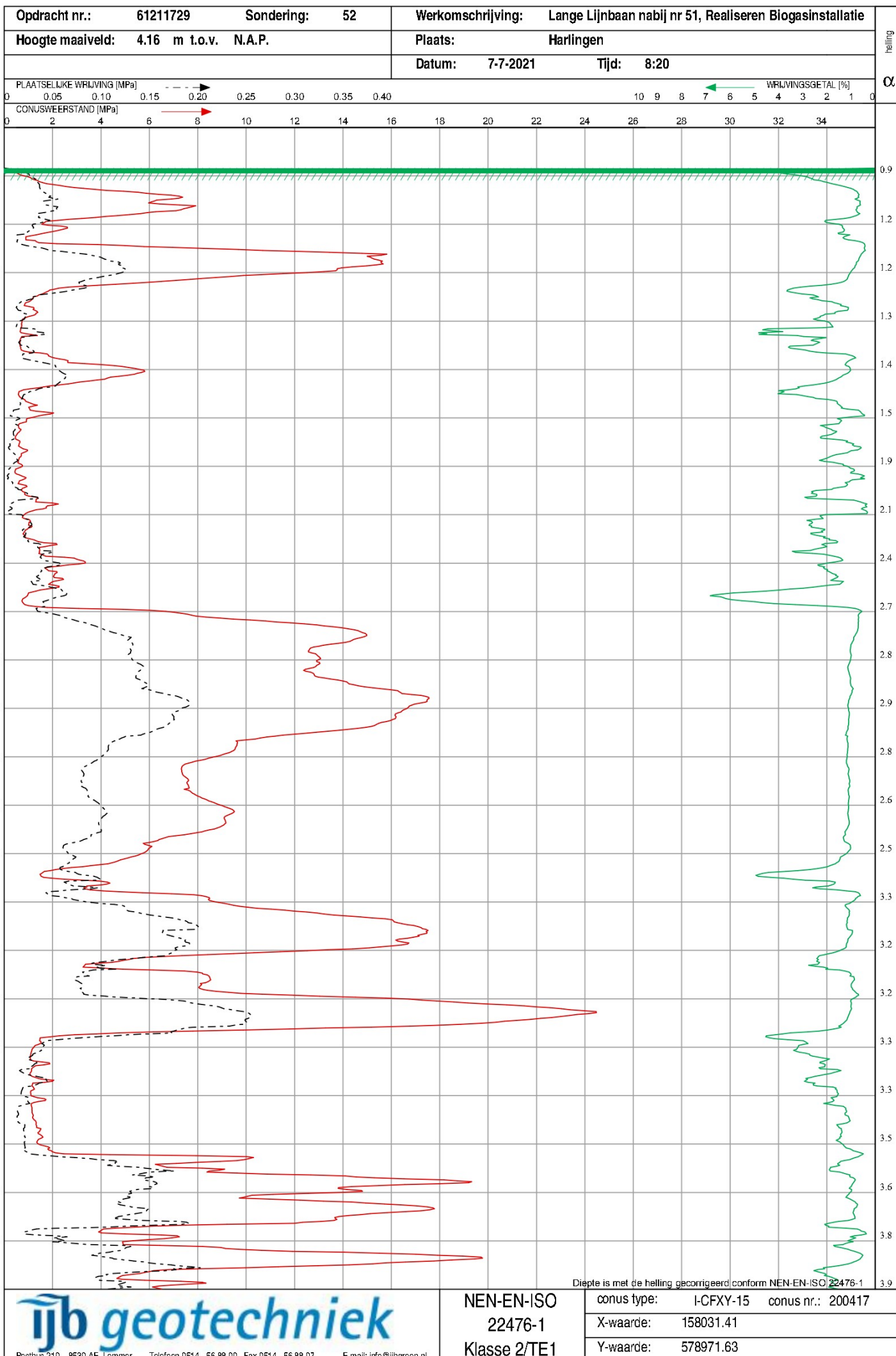


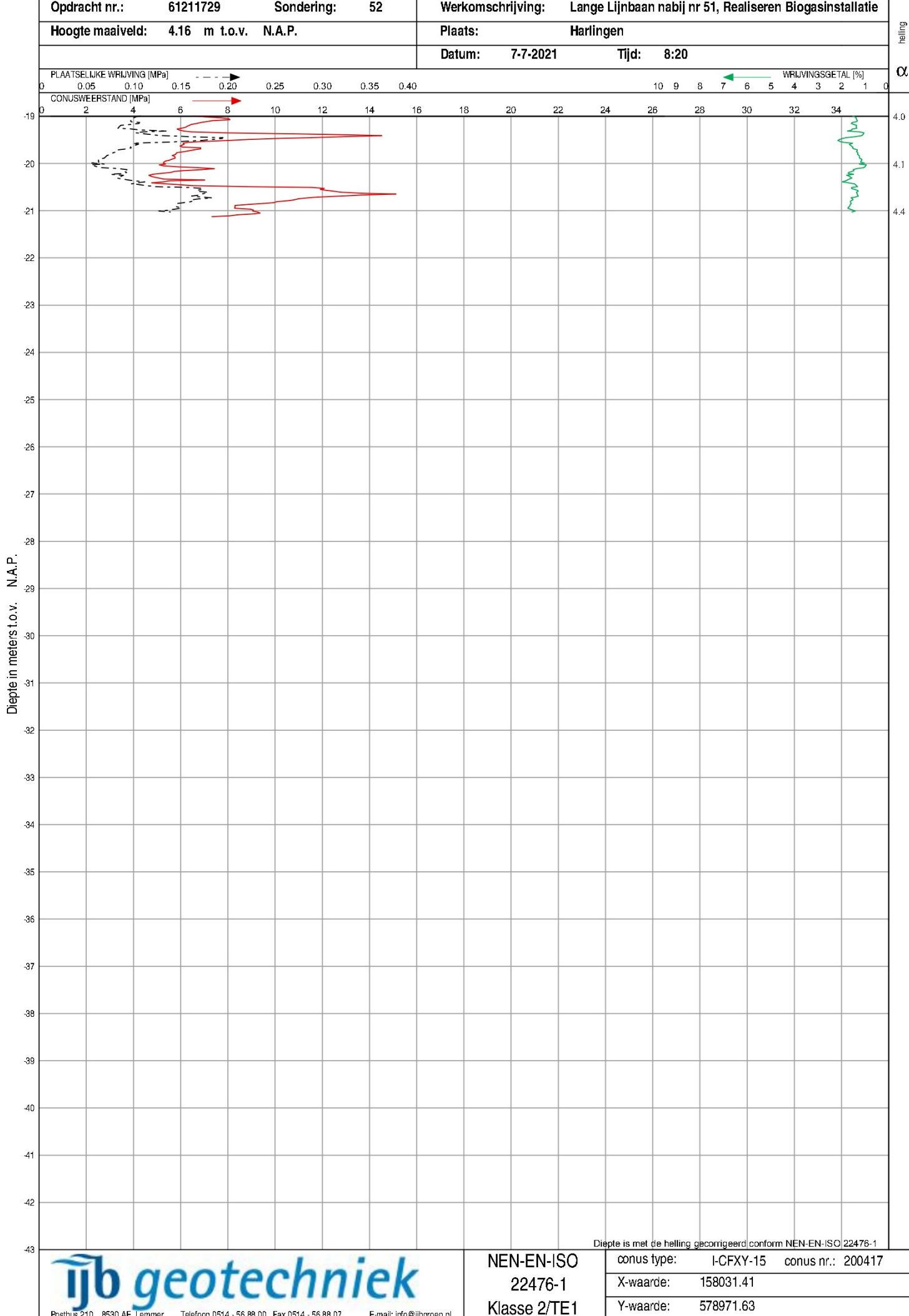


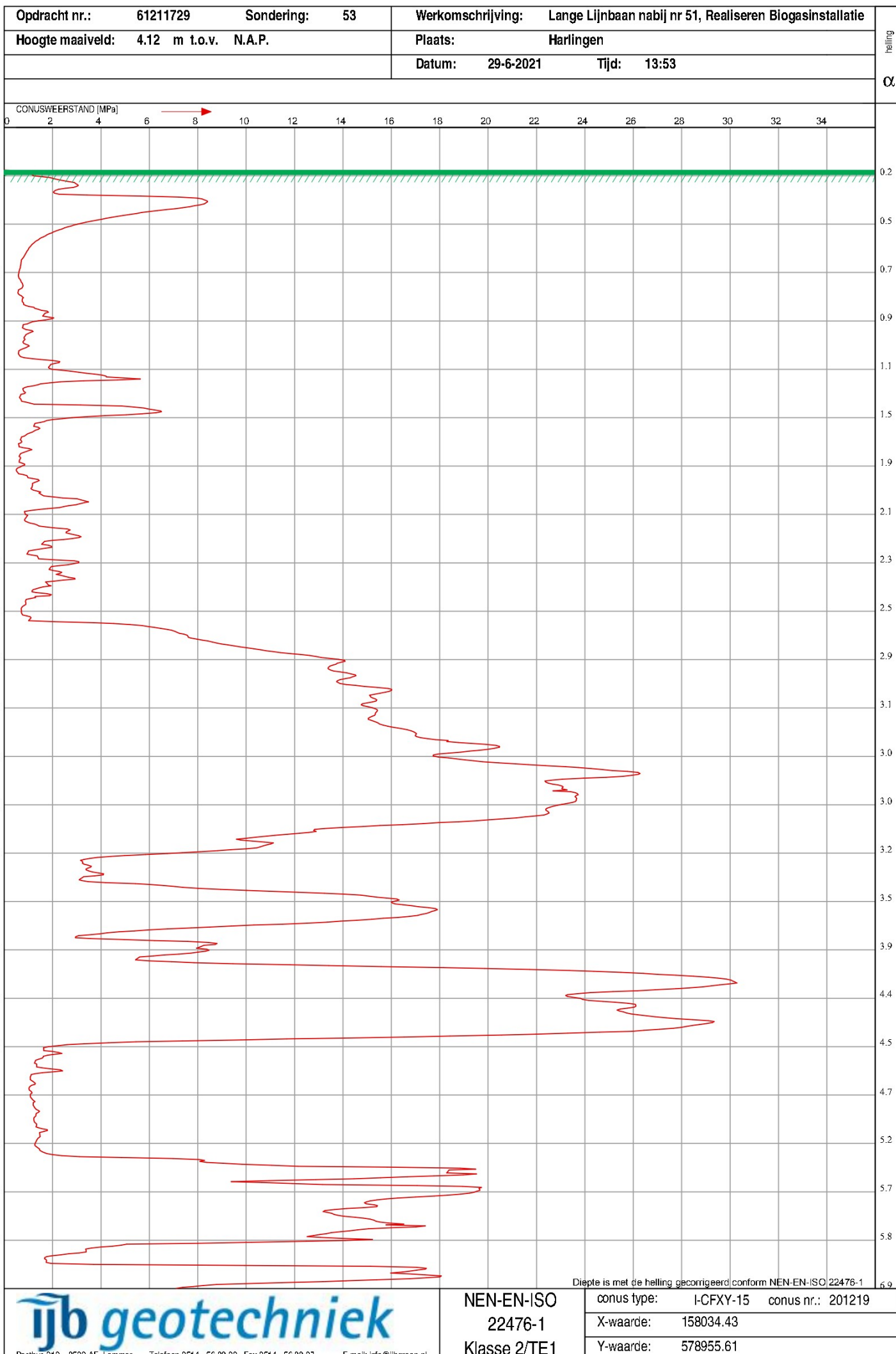


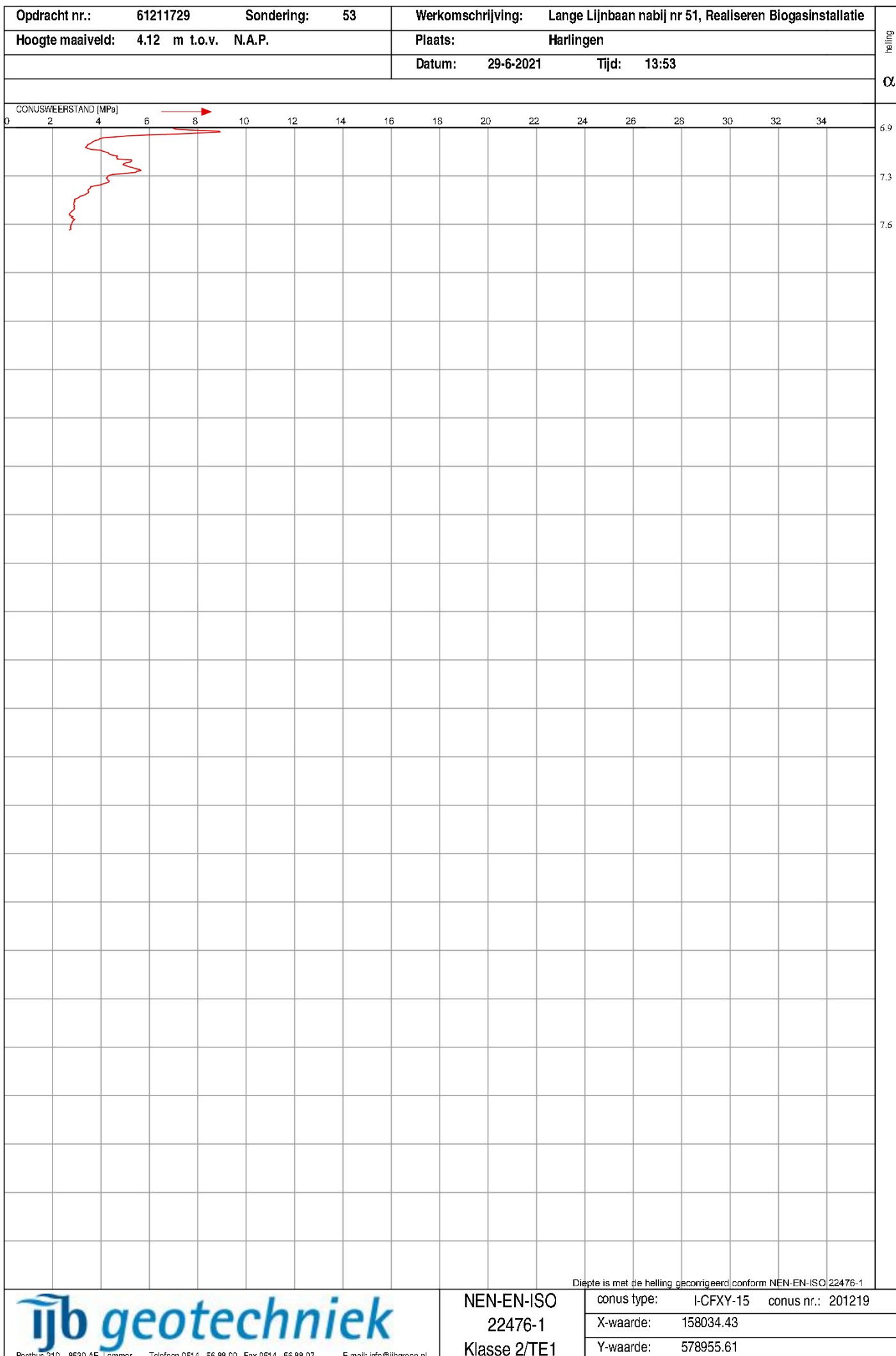


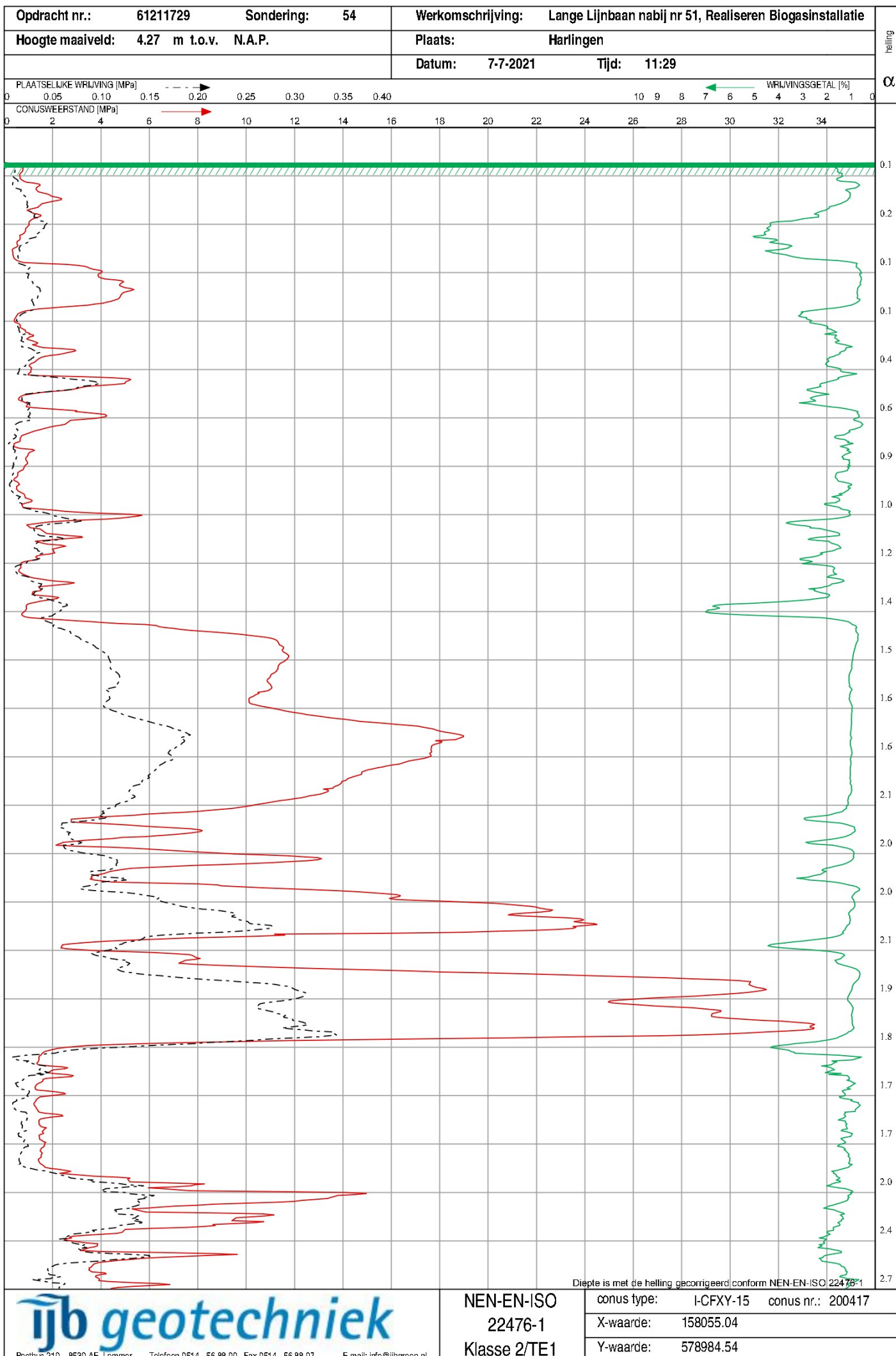


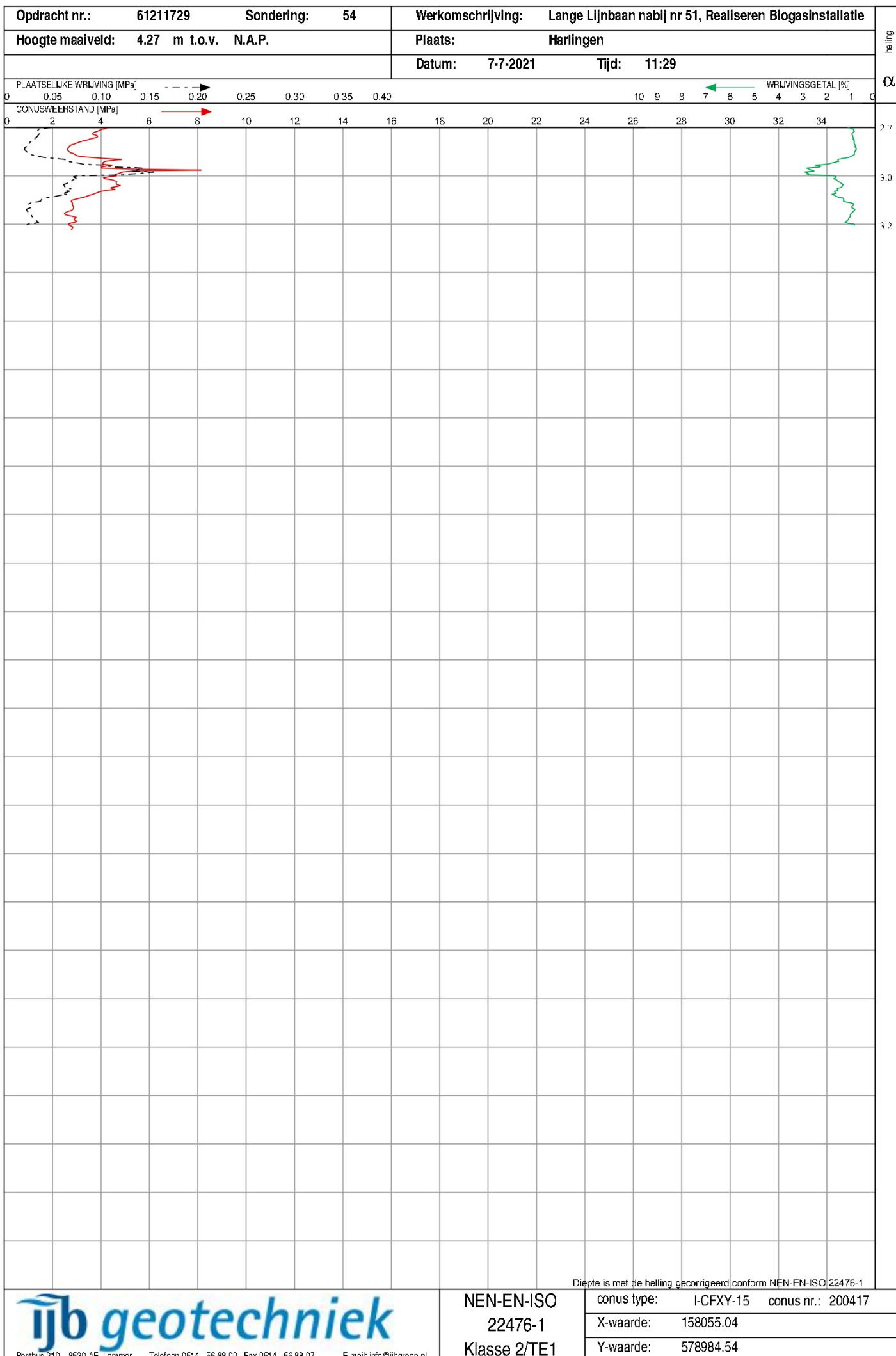


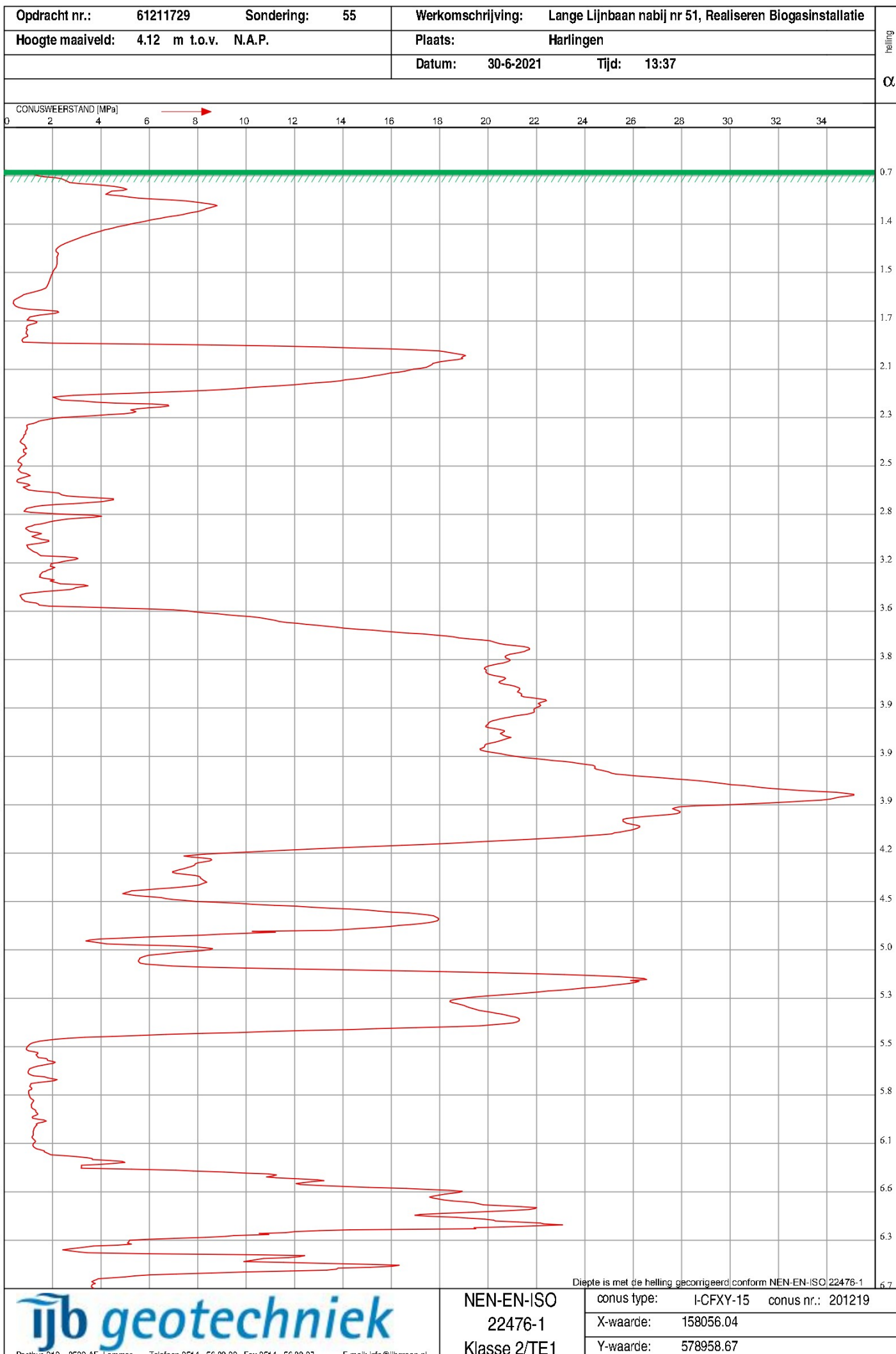


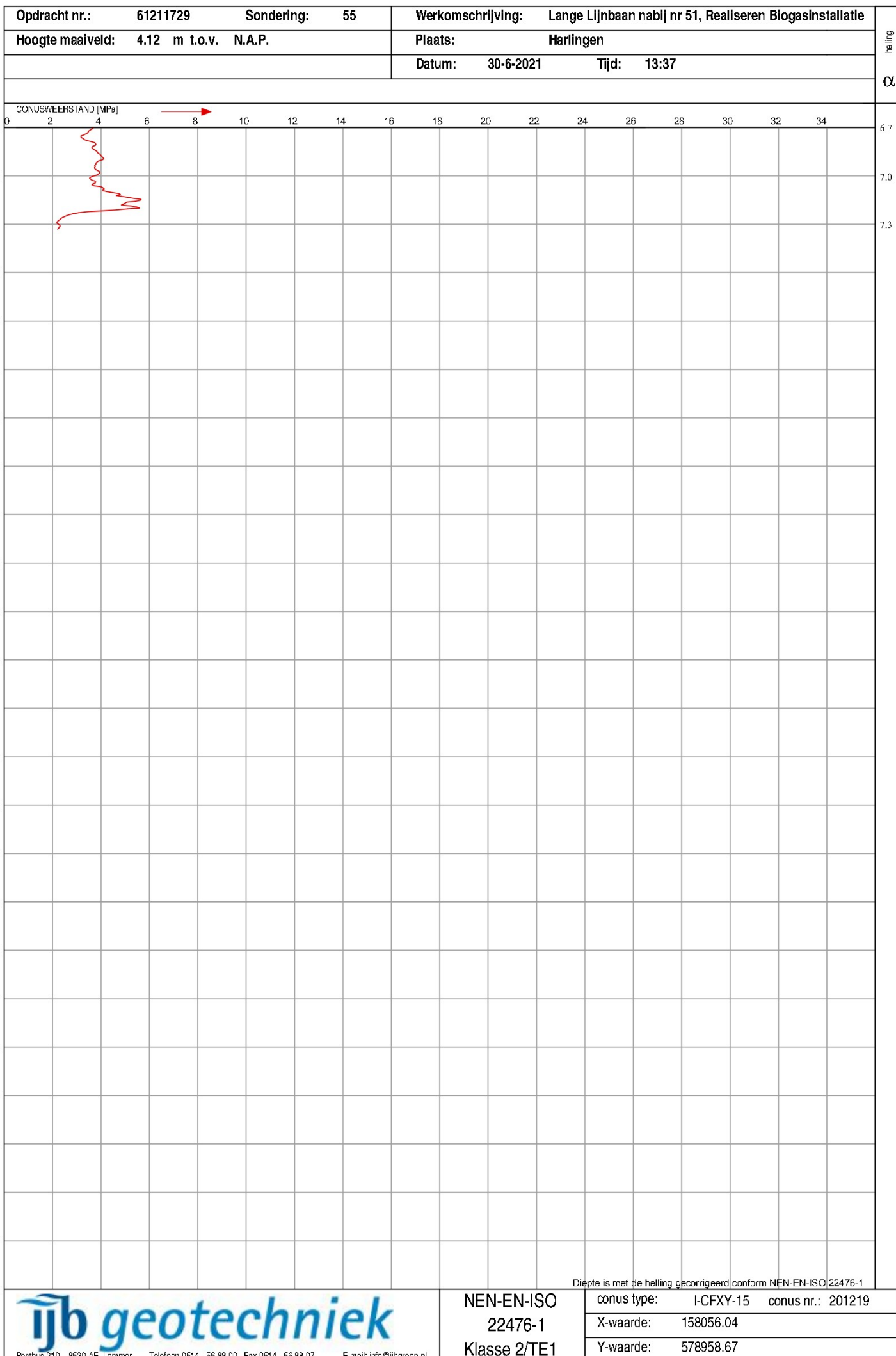


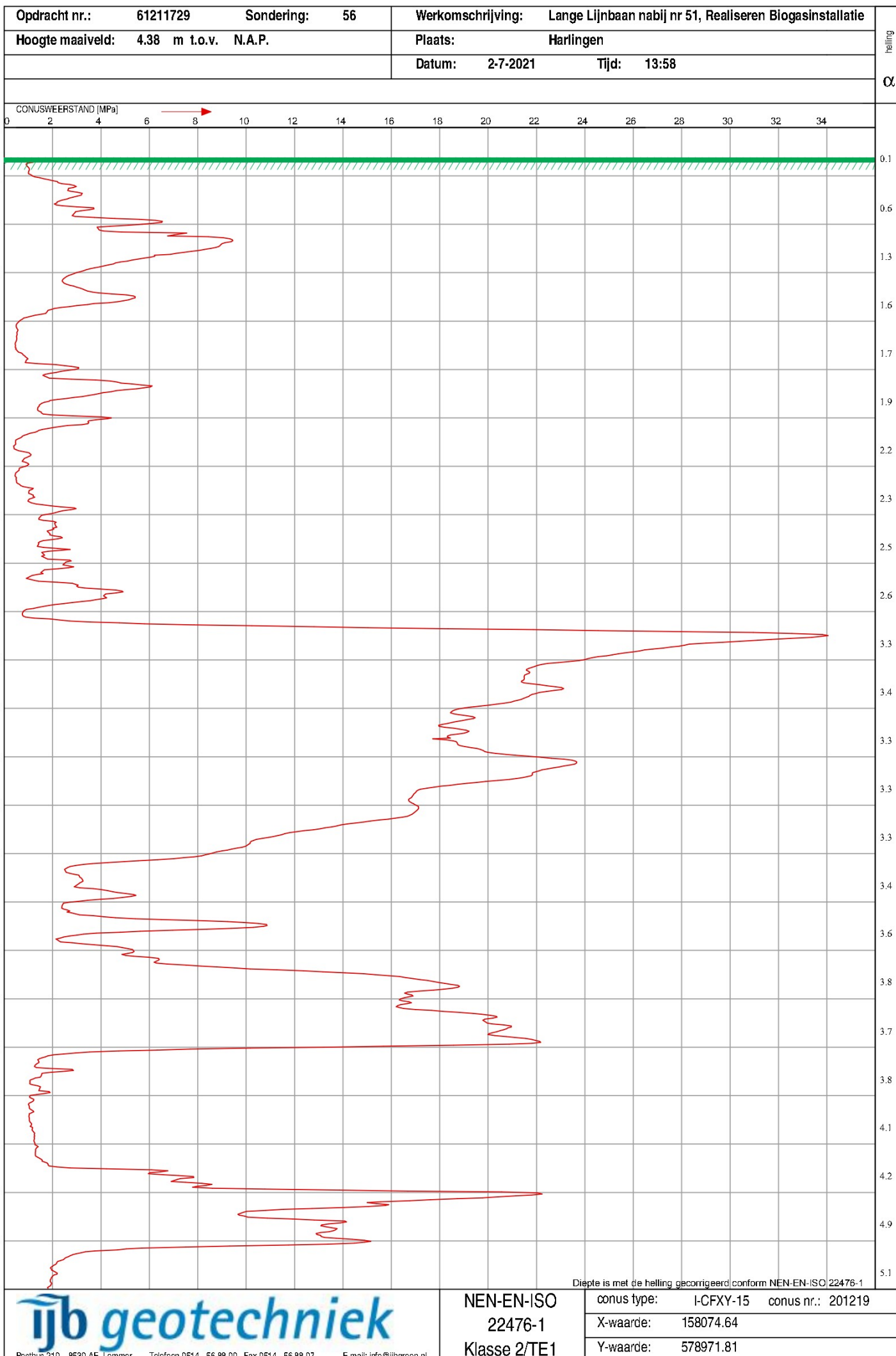


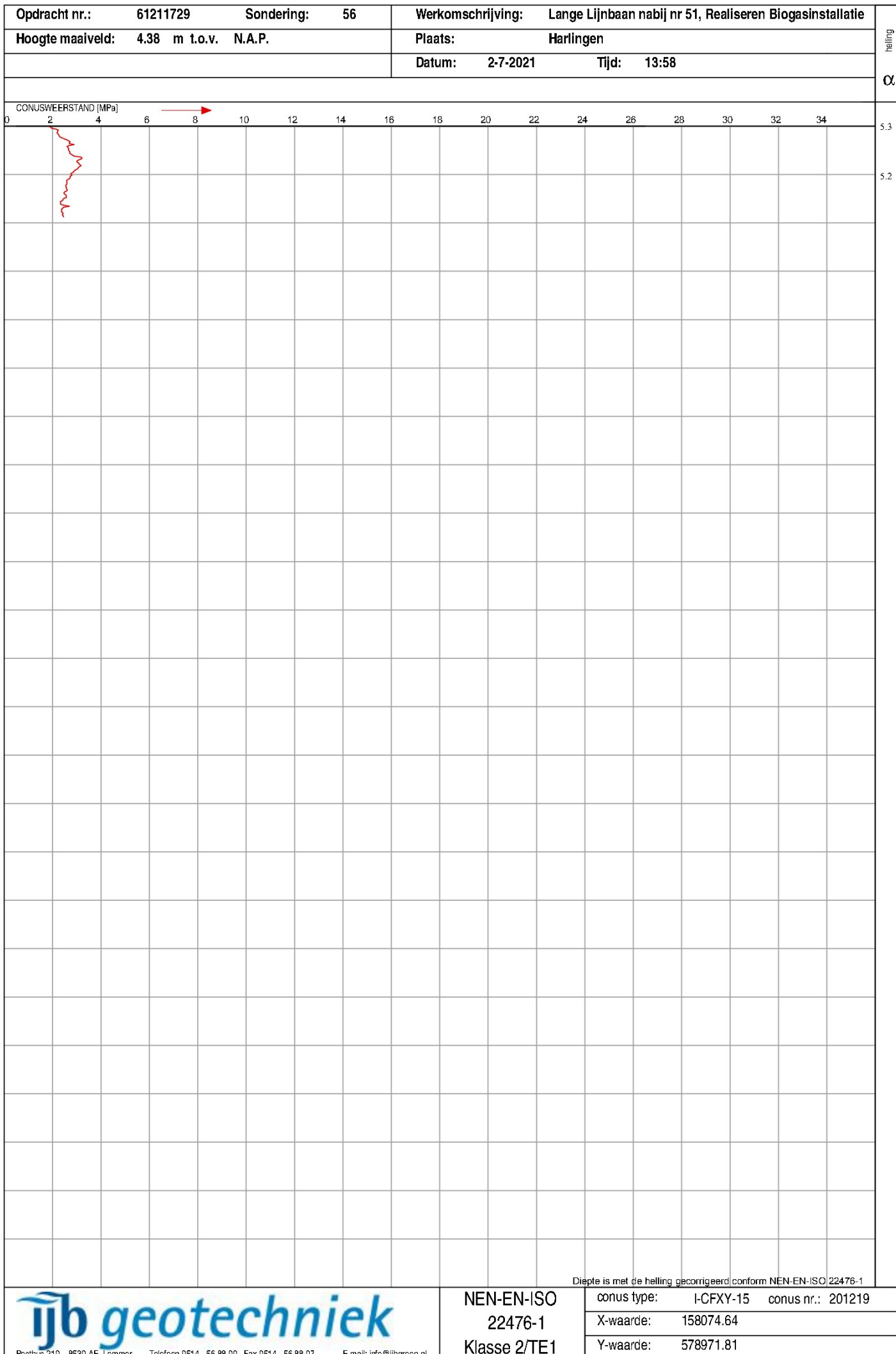


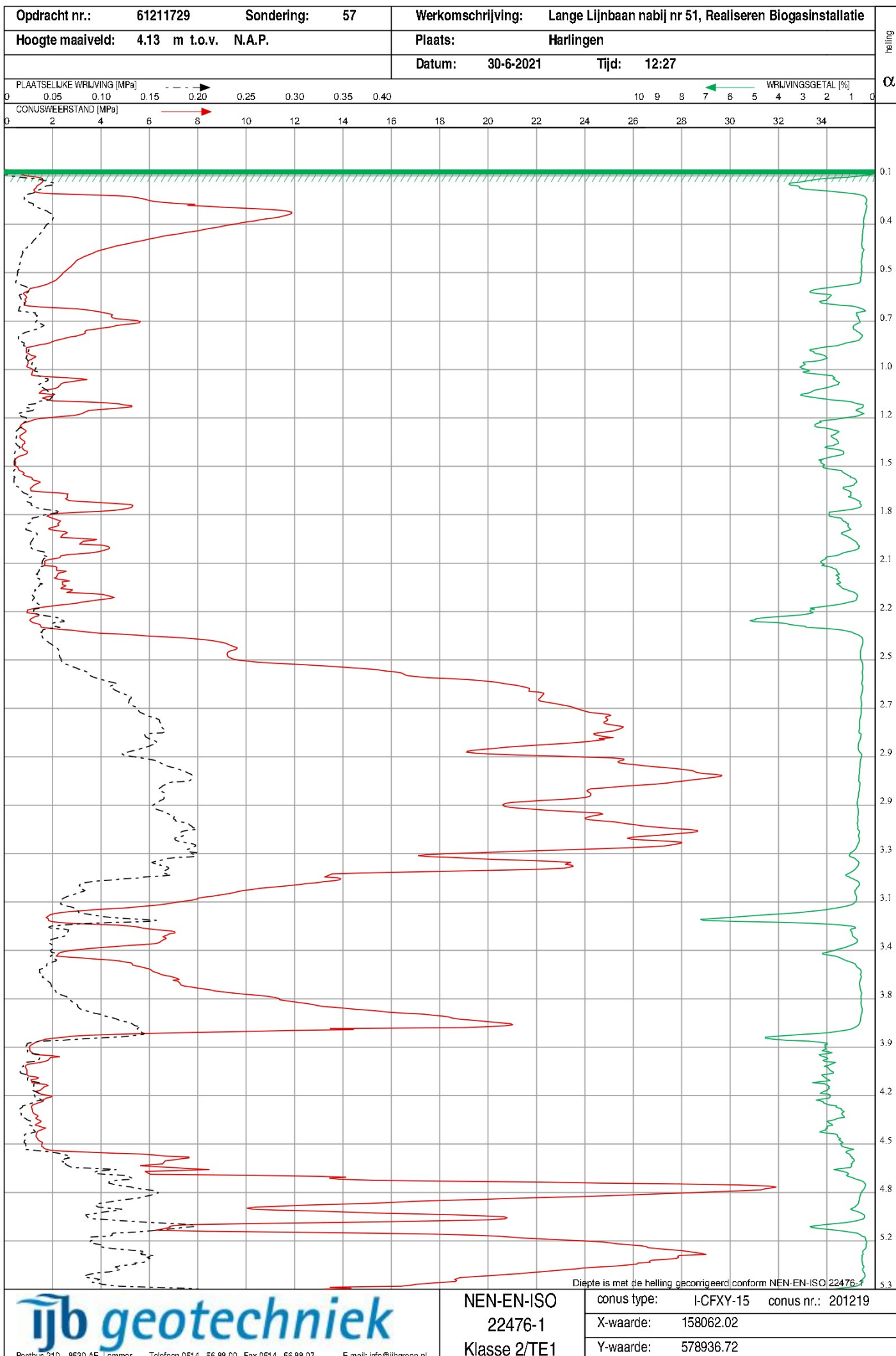


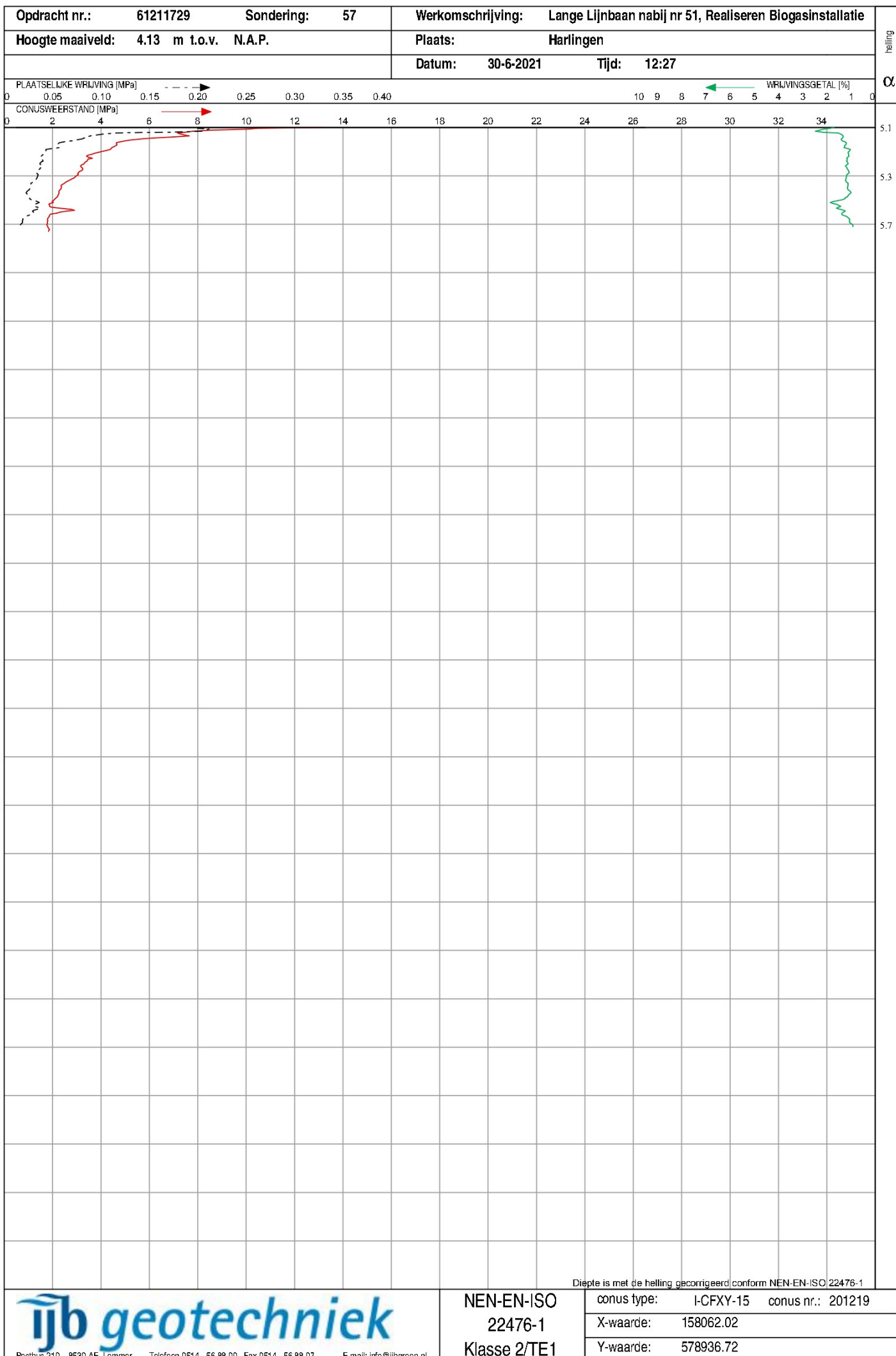












ijb

geotechniek

Postbus 210, 8530 AF Lemmer.

Telefoon 0514 - 56 88 00. Fax 0514 - 56 88 07

F-mail: info@liboroo.nl

NEN-EN-ISO

22476-1

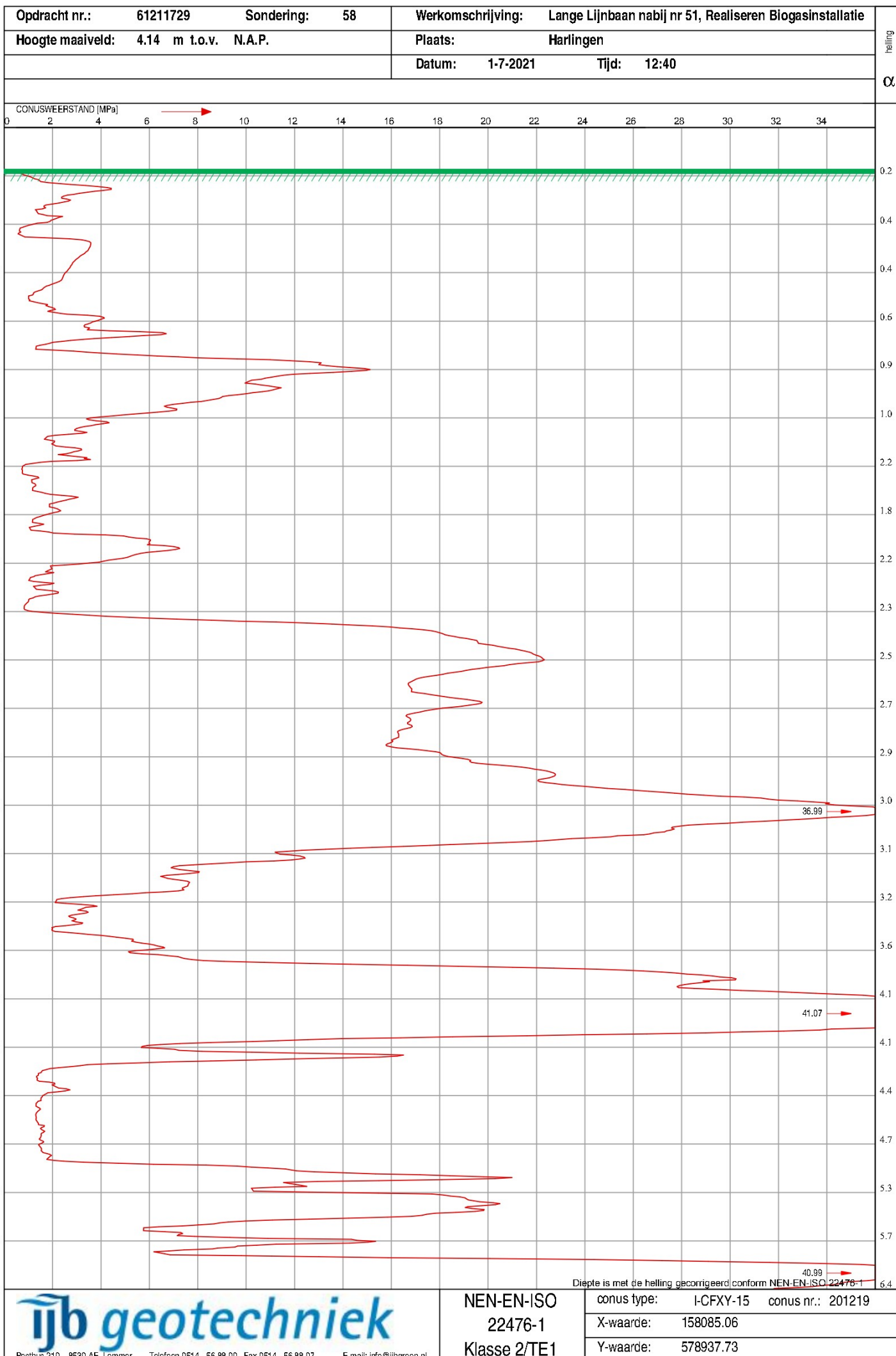
Klasse 2/TE1

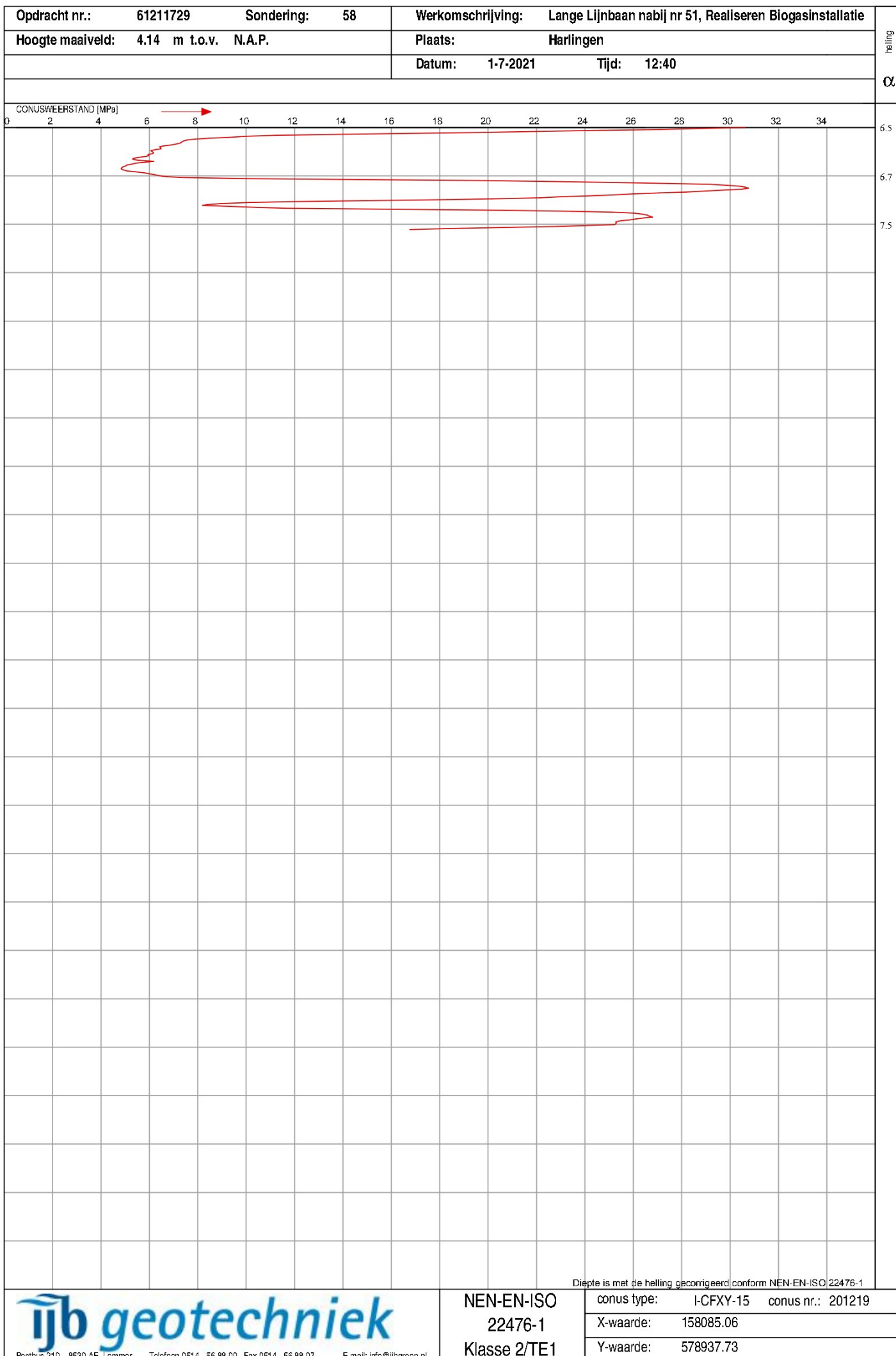
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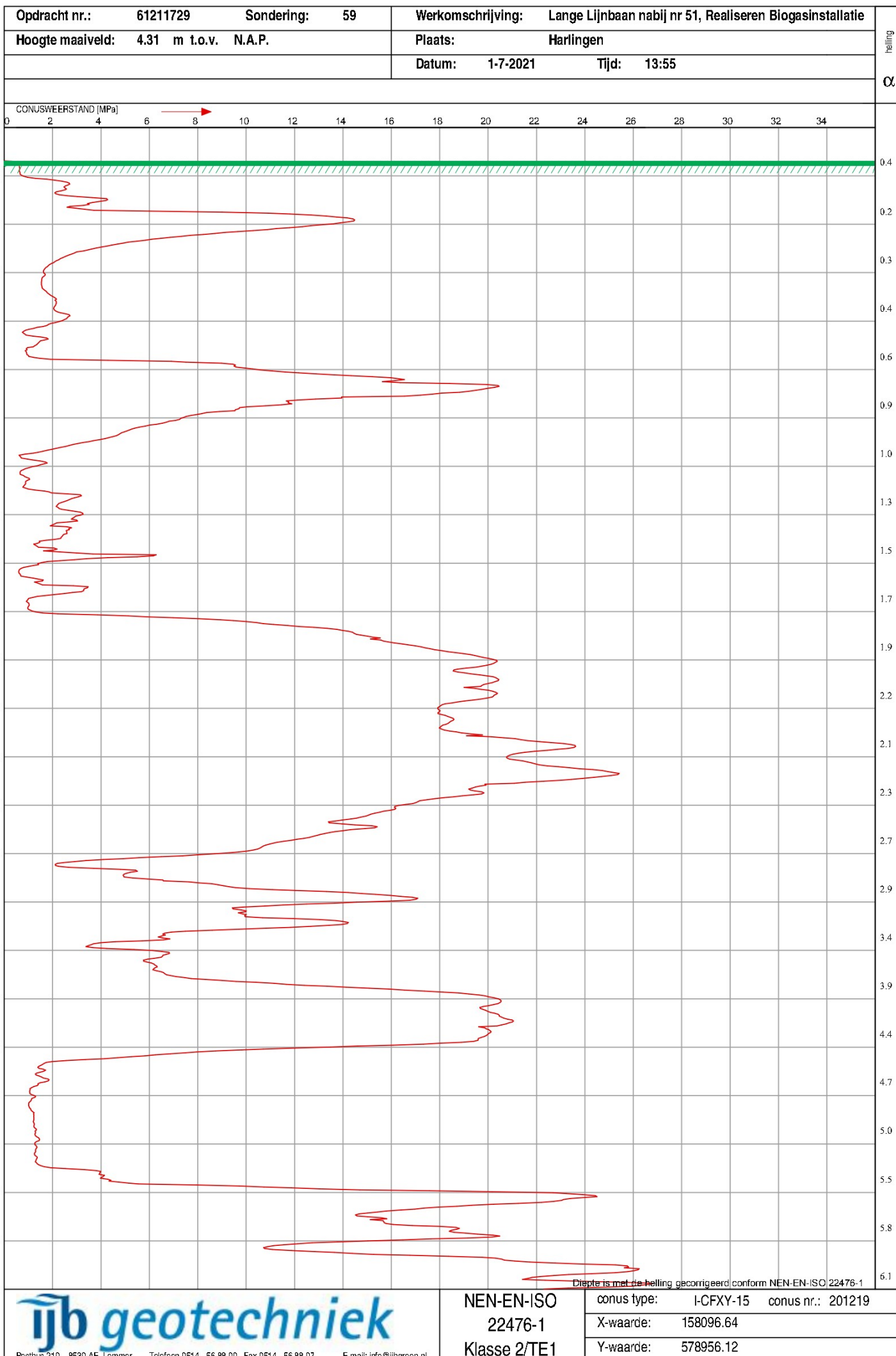
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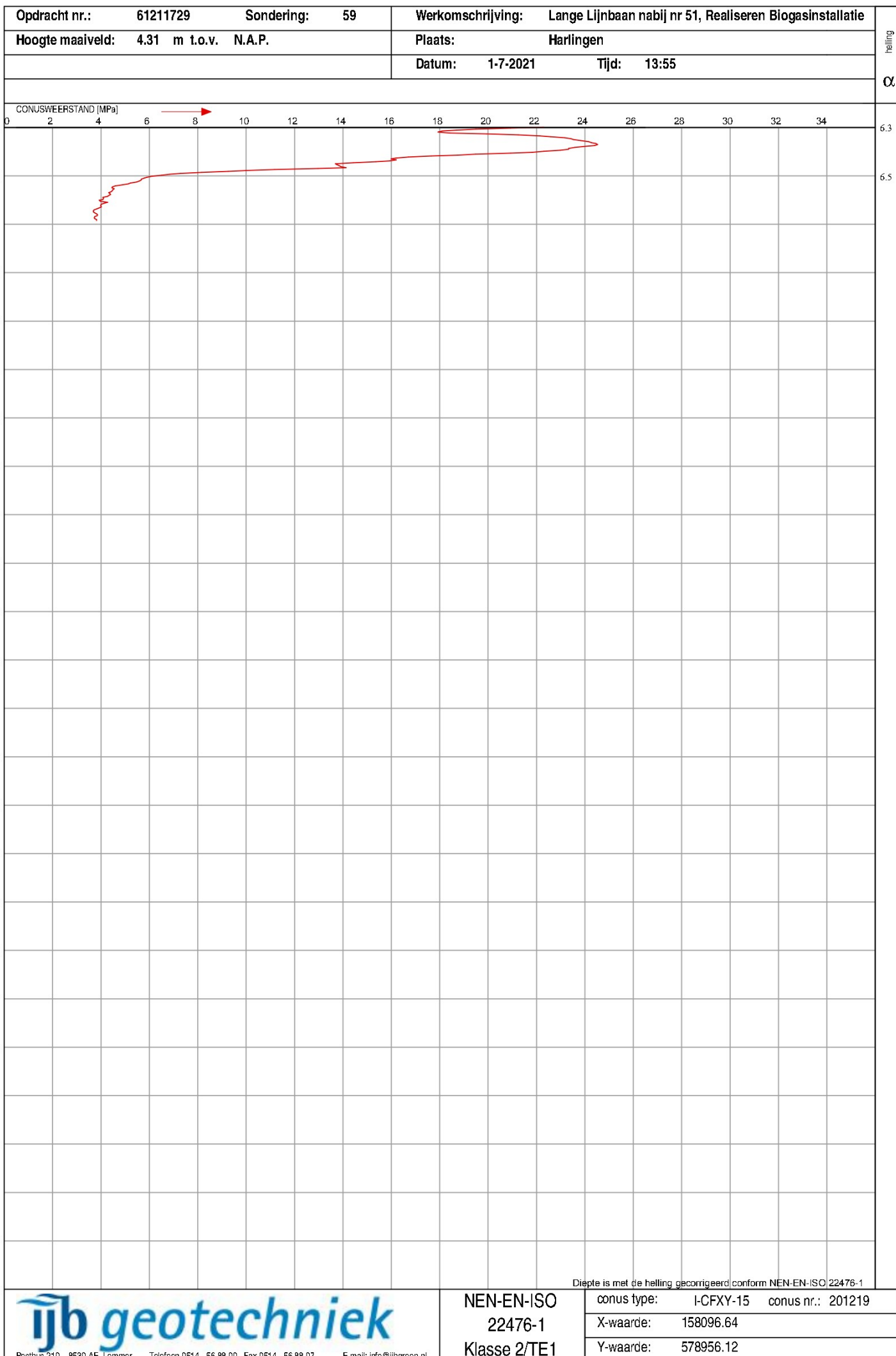
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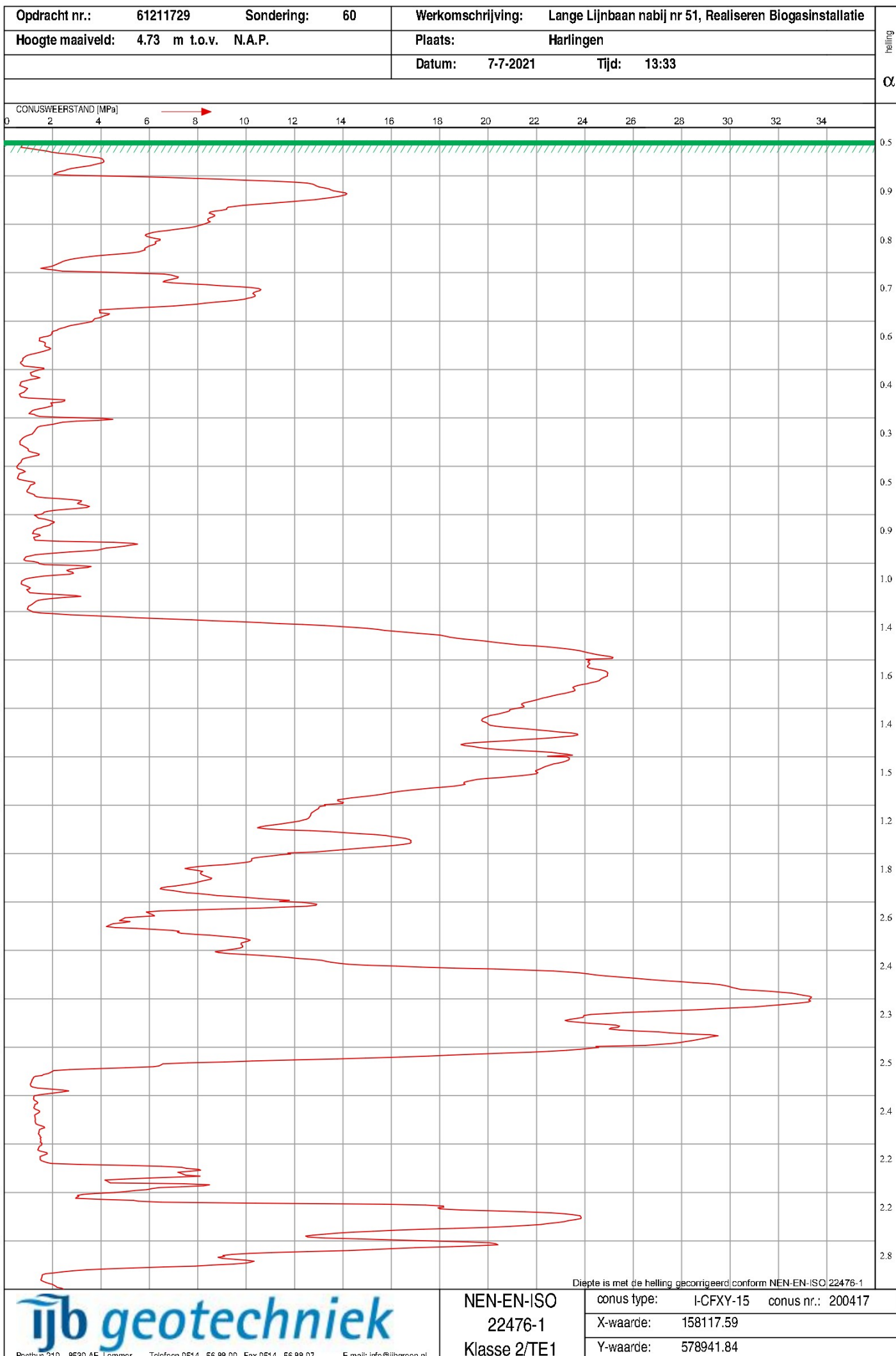
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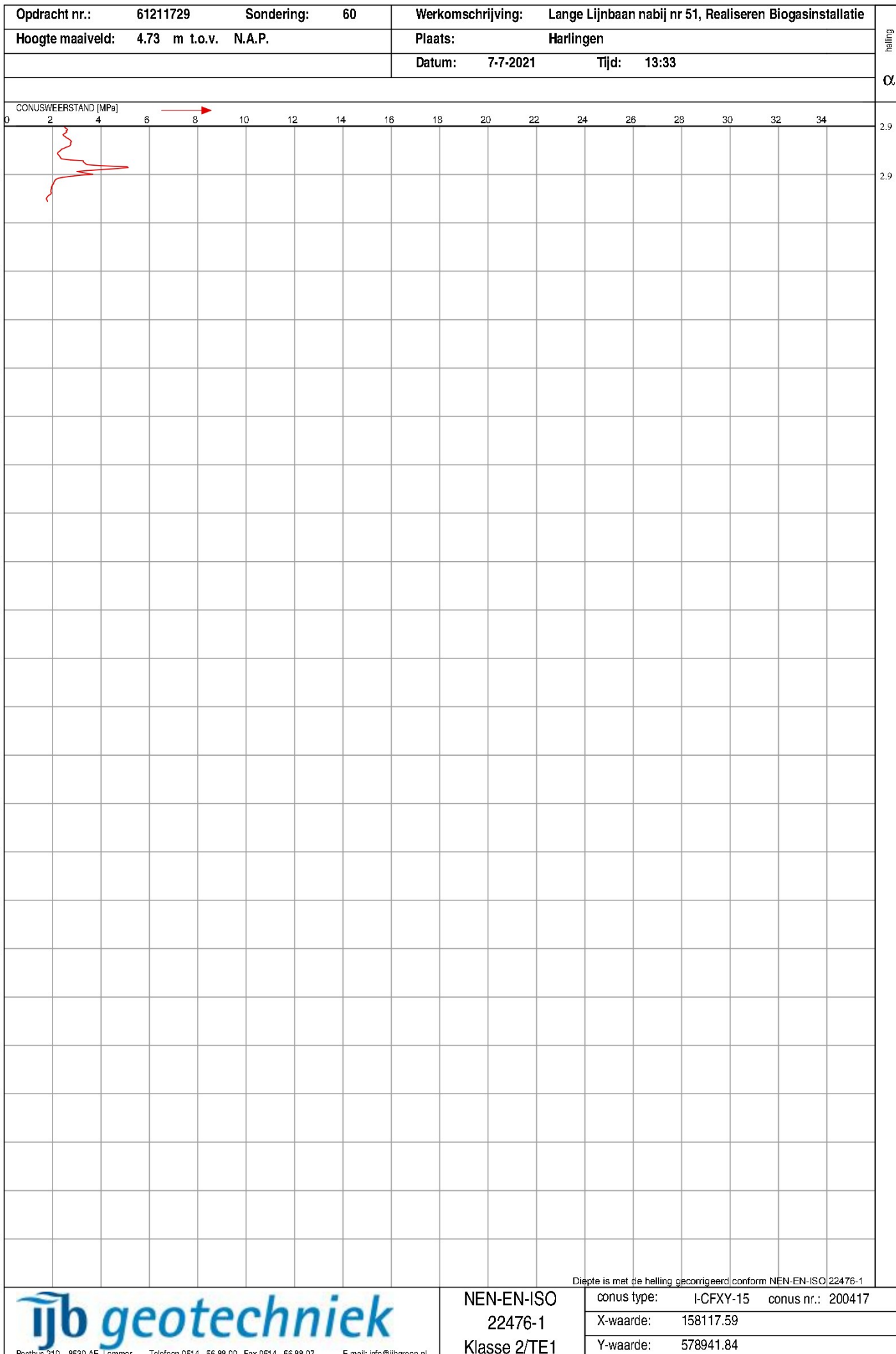


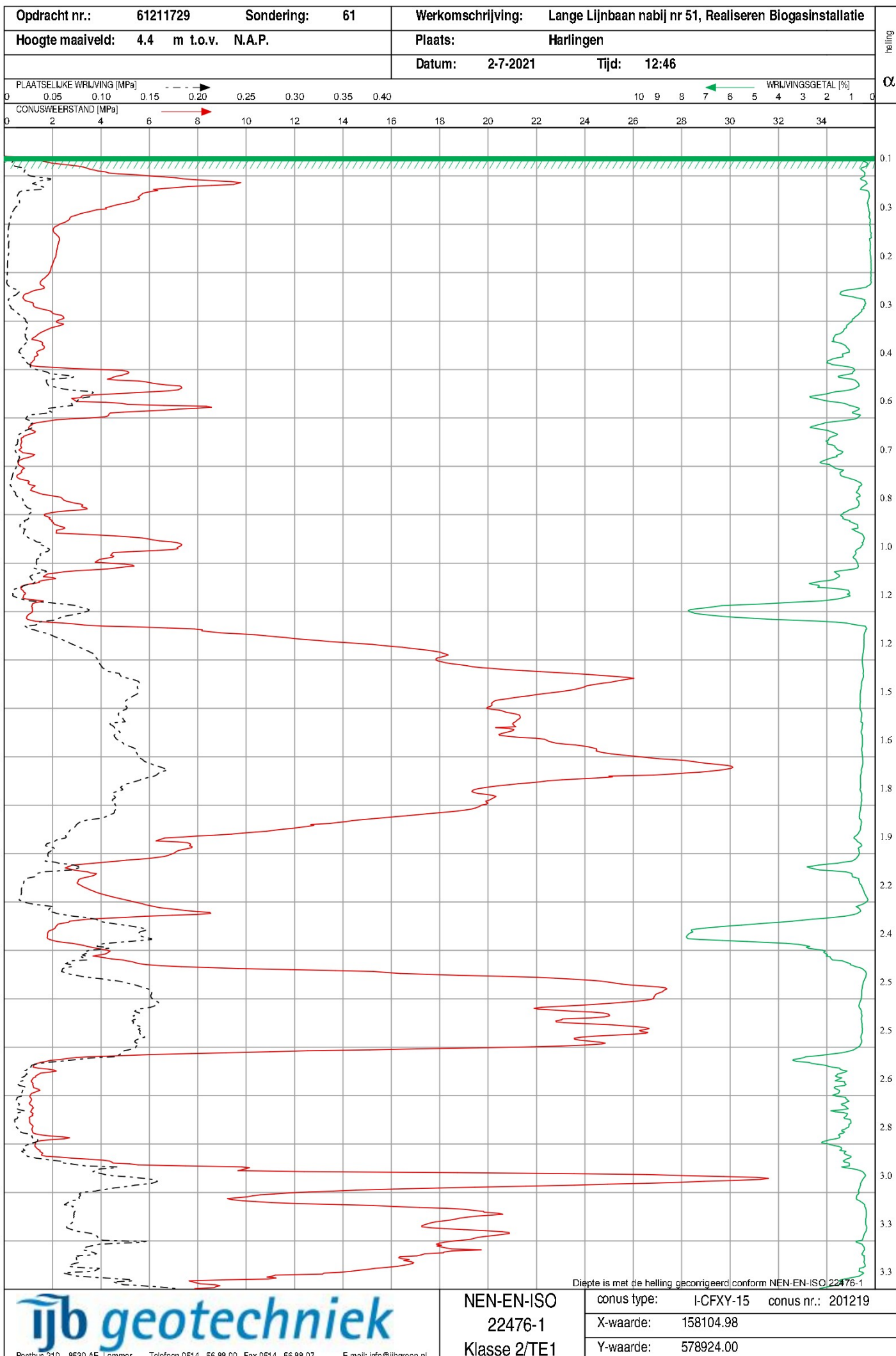


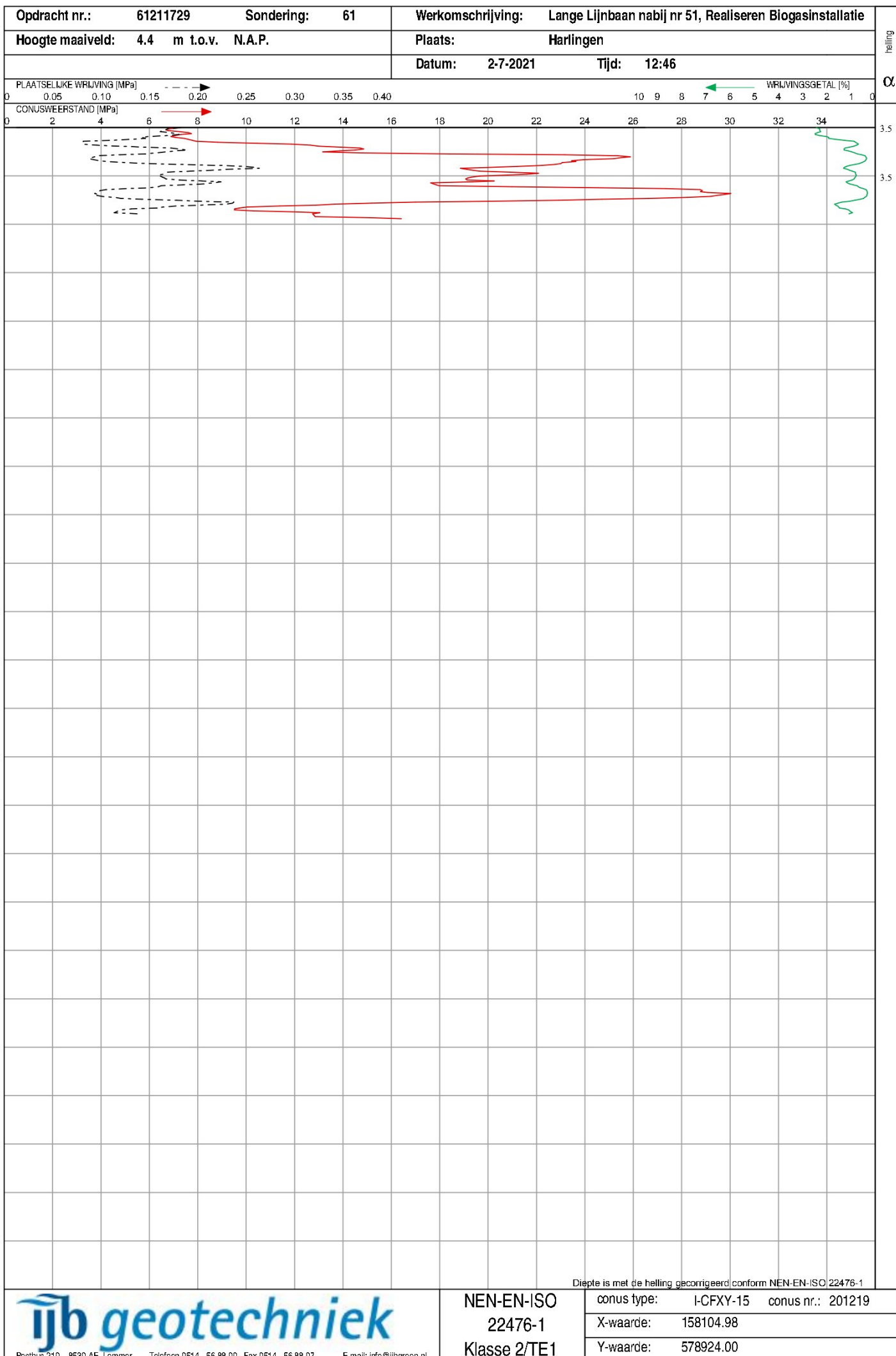












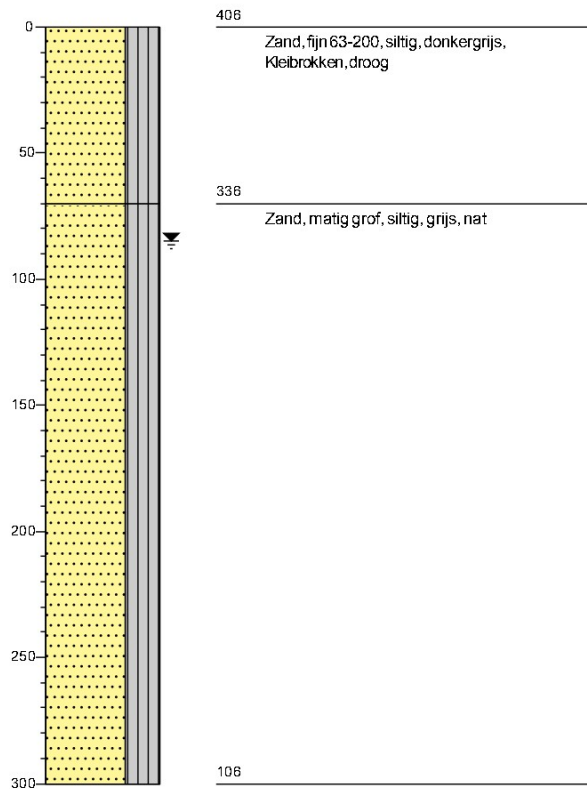
Bijlage:



Boring: A

Boormeester: Sondeerwagen 15
Datum: 28-6-2021
Hoogte maaiveld: 4,06 mtr. t.o.v. N.A.P.
Grondwaterstand [cm-mv]: 85

X: 157925,06
Y 578771,95



Projectcode: 61211729
Opdrachtgever: SFP Group an
Plaats: Harlingen
Naam: Biogasinstallatie
Getekend volgens NEN-ISO 14688

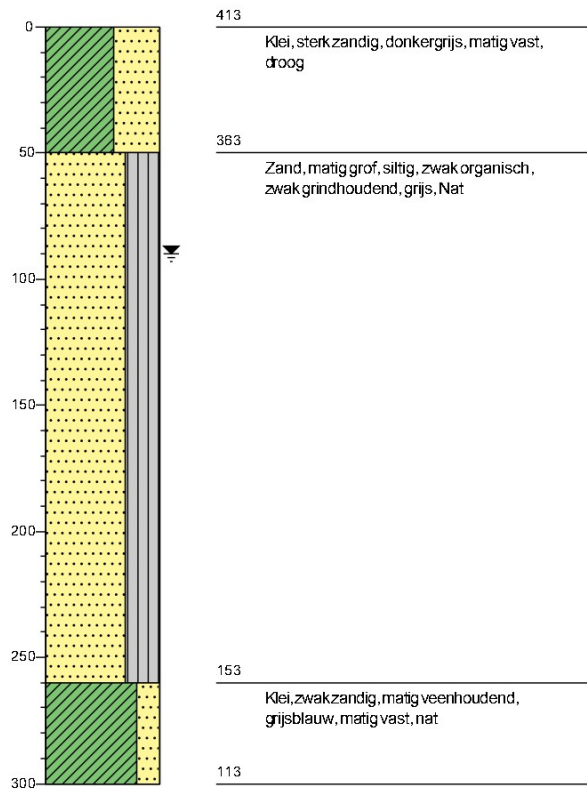
Bijlage:



Boring: B

Boormeester: Sondeerwagen 15
Datum: 30-6-2021
Hoogte maaiveld: 4,13 mtr. t.o.v. N.A.P.
Grondwaterstand [cm-mv]: 90

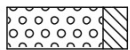
X: 158062,02
Y: 578936,72



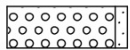
Projectcode: 61211729
Opdrachtgever: SFP Group an
Plaats: Harlingen
Naam: Biogasinstallatie
Getekend volgens NEN-ISO 14688

Legenda (conform NEN 5104)

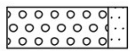
grind



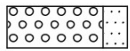
Grind, siltig



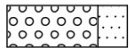
Grind, zwak zandig



Grind, matig zandig

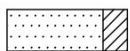


Grind, sterk zandig

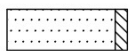


Grind, uiterst zandig

zand



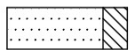
Zand, kleiig



Zand, zwak siltig



Zand, matig siltig

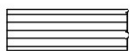


Zand, sterk siltig



Zand, uiterst siltig

veen



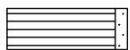
Veen, mineraalarm



Veen, zwak kleiig



Veen, sterk kleiig

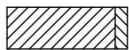


Veen, zwak zandig

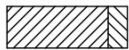


Veen, sterk zandig

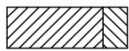
klei



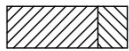
Klei, zwak siltig



Klei, matig siltig



Klei, sterk siltig



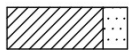
Klei, uiterst siltig



Klei, zwak zandig

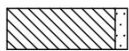


Klei, matig zandig



Klei, sterk zandig

leem



Leem, zwak zandig

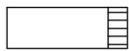


Leem, sterk zandig

overige toevoegingen



zwak humeus



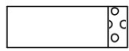
matig humeus



sterk humeus



zwak grindig



matig grindig



sterk grindig

geur

- geen geur
- ◐ zwakke geur
- ◑ matige geur
- ◒ sterke geur
- uiterste geur

olie

- geen olie-water reactie
- ◐ zwakke olie-water reactie
- ◑ matige olie-water reactie
- ◒ sterke olie-water reactie
- uiterste olie-water reactie

p.i.d.-waarde

- ⬢ >0
- ⬢ >1
- ⬢ >10
- ⬢ >100
- ⬢ >1000
- ⬢ >10000

monsters

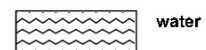
- ▬ geroerd monster
- ▬ ongeroerd monster

overig

- ▲ bijzonder bestanddeel
- ◀ Gemiddeld hoogste grondwaterstand
- ≡ grondwaterstand
- ◆ Gemiddeld laagste grondwaterstand



slib



water

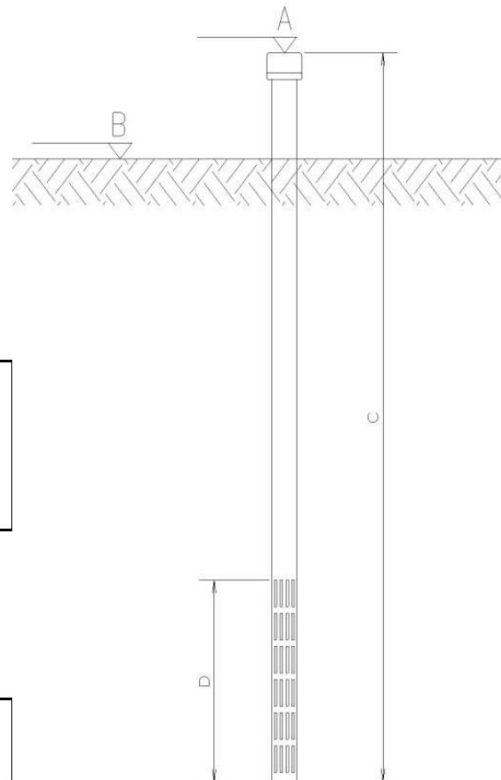
PEILBUISGEGEVENS

Werk	Harlingen, Lange Lijnbaan nabij nr 51
Opdrachtgever	SFP Group B.V.
Opdrachtnummer	61211729
Datum	04-07-21
Peilbuisnummer	A

Peilbuisgegevens

A = Bovenkant peilbuis	4.31	m t.o.v.	NAP
B = Hoogte maaiveld	4.06	m t.o.v.	NAP
C = Lengte peilbuis	3.00	m	
D = Lengte filter	1.00	m	

Bovenkant filter	2.31	m t.o.v.	NAP
Onderkant filter	1.31	m t.o.v.	NAP



Grondwaterstand

Meting	Grondwaterstand			
	Datum	m tov maaiveld	m tov NAP	m-bovenkant peilbuis
1	28-06-21	-0.80	3.26	1.05
2	29-06-21	-0.85	3.21	1.10
3		n.v.t.	n.v.t.	
4		n.v.t.	n.v.t.	

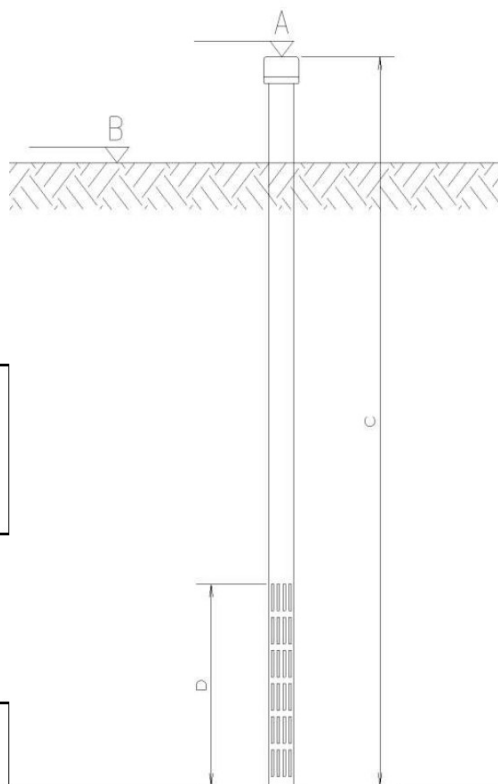
PEILBUISGEGEVENS

Werk	Harlingen, Lange Lijnbaan nabij nr 51
Opdrachtgever	SFP Group B.V.
Opdrachtnummer	61211729
Datum	04-07-21
Peilbuisnummer	B

Peilbuisgegevens

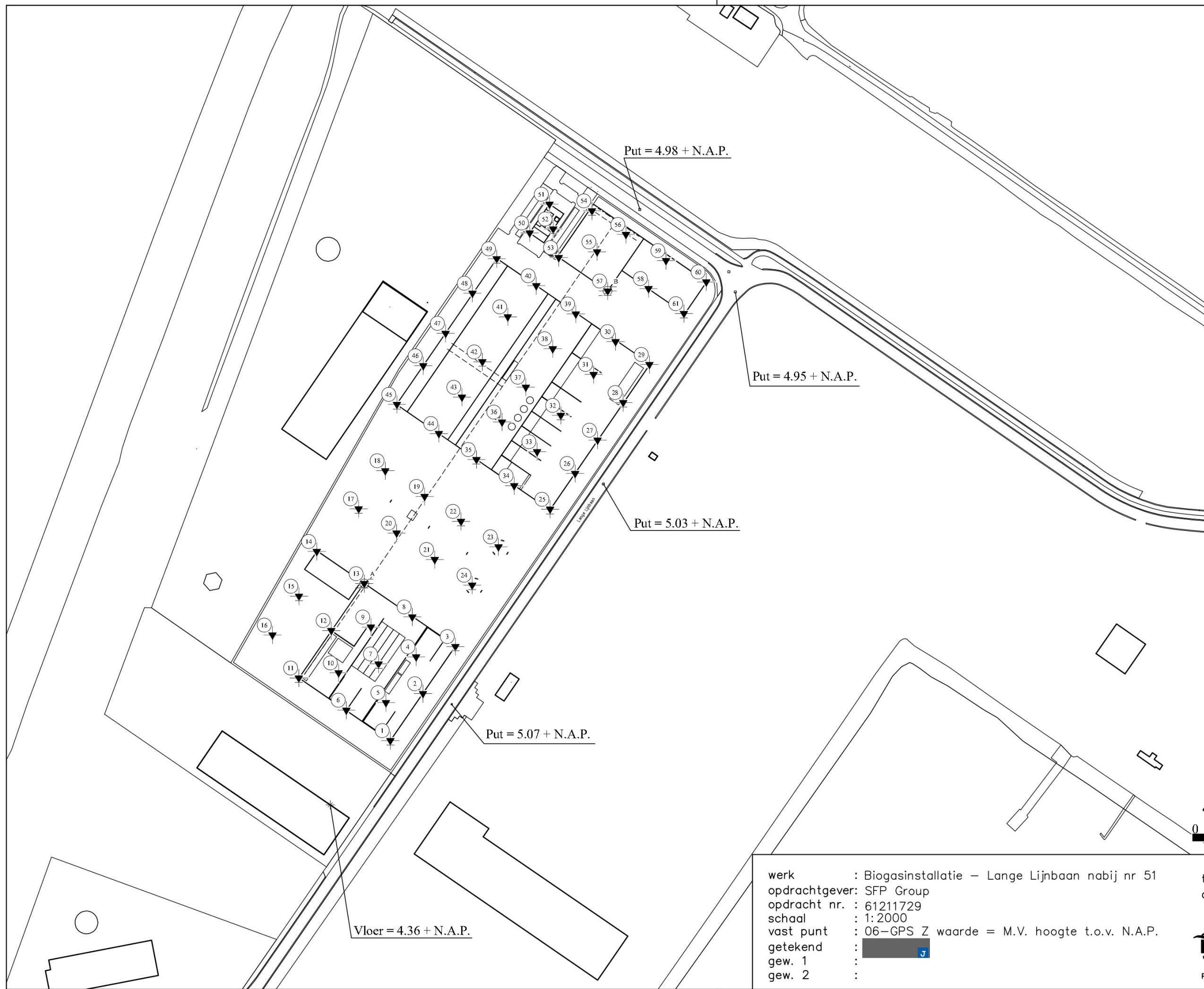
A = Bovenkant peilbuis	4.43	m t.o.v.	NAP
B = Hoogte maaiveld	4.13	m t.o.v.	NAP
C = Lengte peilbuis	3.00	m	
D = Lengte filter	1.00	m	

Bovenkant filter	2.43	m t.o.v.	NAP
Onderkant filter	1.43	m t.o.v.	NAP

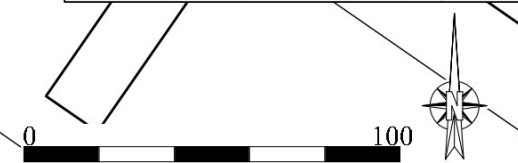


Grondwaterstand

Meting	Grondwaterstand			
	Datum	m tov maaiveld	m tov NAP	m-bovenkant peilbuis
1	30-09-21	-0.90	3.23	1.20
2		n.v.t.	n.v.t.	
3		n.v.t.	n.v.t.	
4		n.v.t.	n.v.t.	



Meetpunt	X-waarde	Y-waarde	Z-waarde
1	157939.71	578683.58	4.20
2	157958.08	578710.00	4.20
3	157976.30	578736.67	4.22
4	157954.24	578730.68	4.06
5	157937.22	578704.92	4.10
6	157914.94	578700.69	4.01
7	157933.09	578726.74	4.05
8	157952.04	578753.21	4.05
9	157928.79	578747.47	4.08
10	157910.56	578721.75	4.01
11	157888.44	578718.79	4.03
12	157906.49	578745.51	4.04
13	157925.06	578771.95	4.06
14	157898.32	578790.09	4.06
15	157888.27	578764.86	4.19
16	157873.30	578742.98	4.06
17	157921.98	578814.03	4.21
18	157936.86	578835.53	4.22
19	157959.02	578821.06	4.17
20	157943.25	578800.38	4.13
21	157964.71	578785.48	4.12
22	157979.53	578806.98	4.23
23	158000.57	578792.68	4.21
24	157985.78	578771.09	4.22
25	158029.67	578813.61	4.30
26	158043.75	578833.98	4.39
27	158056.37	578852.73	4.33
28	158070.81	578873.90	4.37
29	158085.55	578895.33	4.28
30	158066.51	578908.22	4.17
31	158053.63	578890.25	4.21
32	158036.22	578866.14	4.22
33	158023.34	578845.81	4.19
34	158009.42	578827.04	4.18
35	157988.23	578841.85	4.13
36	158002.73	578862.97	4.19
37	158016.10	578882.51	4.23
38	158031.10	578904.22	4.20
39	158044.52	578924.07	4.20
40	158021.85	578939.68	4.15
41	158005.85	578922.14	4.19
42	157991.50	578896.83	4.20
43	157980.01	578876.91	4.20
44	157967.01	578856.44	4.14
45	157943.41	578872.68	4.18
46	157958.25	578894.61	4.10
47	157970.83	578912.88	4.16
48	157985.95	578935.43	4.15
49	157999.58	578954.85	4.12
50	158018.14	578969.38	4.10
51	158029.30	578985.59	4.09
52	158031.41	578971.63	4.16
53	158034.43	578955.61	4.12
54	158053.23	578981.83	4.53
55	158056.04	578958.67	4.12
56	158072.32	578968.60	4.47
57	158062.02	578936.72	4.13
58	158085.06	578937.73	4.14
59	158094.88	578953.76	4.61
60	158117.59	578941.84	4.73
61	158104.98	578924.00	4.40




werk : Biogasinstallatie – Lange Lijnbaan nabij nr 51

opdrachtgever: SFP Group

opdracht nr. : 61211729

schaal : 1:2000

vast punt : 06–GPS Z waarde = M.V. hoogte t.o.v. N.A.P.


getekend : 

gew. 1 :

gew. 2 :


te : Harlingen

datum: 24–6–2021



geotechniek

POSTBUS 210 8530 AE LEMMER TEL. 0514–568800

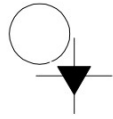


geotechniek

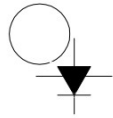
POSTBUS 210 8530 AE LEMMER TEL. 0514–568800

Legenda

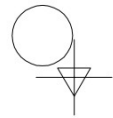
Sonderingen



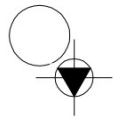
Sondering



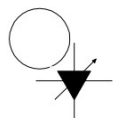
Sondering met plaatselijke kleefmeting



Niet uitgevoerde sondering



Sondering met boring



Sondering met waterspanningsmeting

Boringen



Boring



Niet uitgevoerde boring



Boring met peilbuis

Peilmerken



Put



Vast punt (dorpel, kruin weg, vloerpeil, etc)

Toelichting grondslagen

In dit document kunt u secties vinden die onleesbaar zijn gemaakt. Deze informatie is achterwege gelaten op basis van de Wet open overheid (Woo). De letter die hierbij is vermeld correspondeert met de bijbehorende grondslag in onderstaand overzicht.

J Art. 5.1 lid 2 sub e

Het belang van de openbaarmaking van deze informatie weegt niet op tegen het belang van de eerbiediging van de persoonlijke levenssfeer van betrokkenen