

Råstofkortlægning af sand - grus - sten ved Troldhede

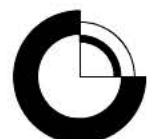
Fase 2 kortlægning udført for Ringkøbing Amt

Peter Roll Jakobsen

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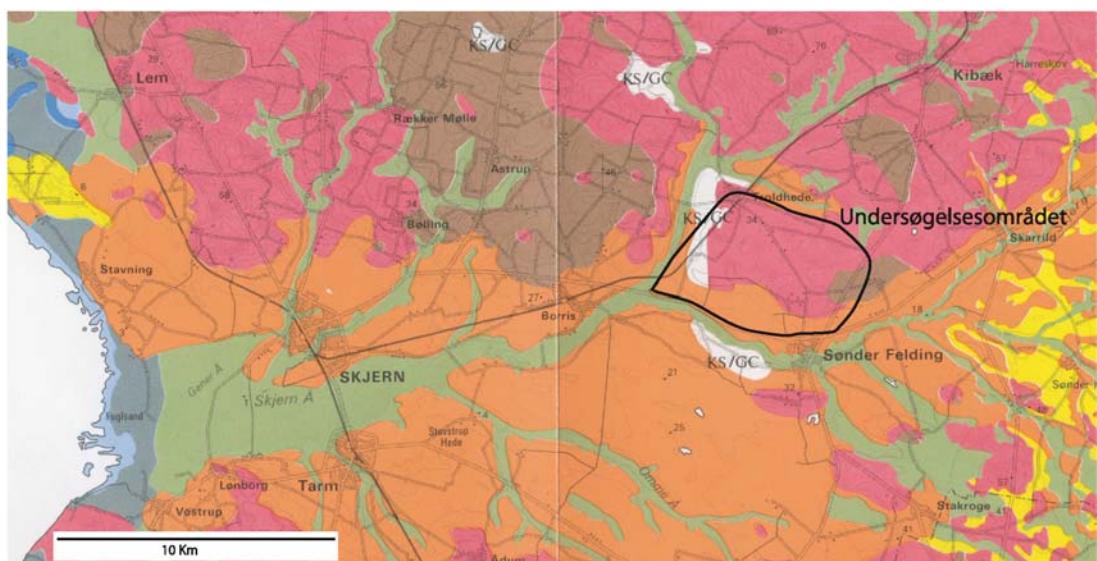
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Indledning

Ringkøbing Amt har anmodet Danmark og Grønlands Undersøgelse om at foretage en råstofgeologisk undersøgelse efter sand og grus i området mellem Troldhede, Borris og Sdr. Felding (fig. 1).

Opgaven omfatter

- udpegnings af potentielle råstofområder på baggrund af tidligere udført georadarundersøgelse
- at få foretaget borer i området
- at få udført sedimentanalyser til kvalitetsbestemmelse af råstoffet
- at sammenstille data med henblik på at vurdere forekomster og kvalitet af sand og grus.



Figur 1. Udsnit af geologisk kort (Salinas, 1989), hvor undersøgelsesområdet er markeret. Orange: Ekstramarginale smeltevandsaflejringer, rød: smeltevandssand og -grus, brun: moræneler, grønt: postglaciale ferskvandsaflejringer, gul: flyvesand, gråblå: Marskaflejringer lyseblå: havaflejringer, KS/GC: miocænt glimmersand og brunkul.

Den geologiske ramme

Undersøgelsesområdet ligger uden for Weichsel istidens Hovedopholdslinie. Undersøgelsesområdet ligger dels på Skovbjerg bakkeø og dels på hedesletten syd for.

Bjergarterne som man påträffer i bakkeøen er af Saale alder eller ældre. Det geologiske kort som er vist på figur 1 er et tolket kort i denne region (ud fra boringsoplysninger og generel viden), idet området ikke er systematisk karteret. Den præcise fordeling af DS, ML og MS på bakkeøen i undersøgelsesområdet kan således ikke aflæses på dette kort.

Hedesletten er opbygget som en flodslette foran isen der stod ved Hovedopholdslinen for ca. 25.000 år siden. Sand og grus forekomsterne fra Saale i bakkeøen er således ca.

100.000 år ældre end forekomsterne på hedesletten, og kan meget vel adskille sig litologisk såvel som kvalitetsmæsigt fra hedesletteforekomsterne. Normalt vil de groveste materialer findes på den del af hedesletten som er nærmest isfronten, men når smeltevandsfoderne eroderer i siderne af bakkeøerne kan der herfra tilføres grovere materiale (grus og sten) selv i de distale dele af hedesletten.

I kanten af bakkeøen og på hedesletten har der tidligere været gravet brunkul, og de mio-cæne aflejringer findes således relativt overfladenært i dette område.

Metoder

Boringer

Boringerne er udført 21 til 23 oktober 2002. Borearbejdet er udført af Glibstrub A/S med en 8 tommer snegl. Der er udført i alt 34 boringer der varierer i dybde mellem 4 og 6 m (Bilag 1). Boringerne er beskrevet i felten efter Larsen et al. (1988) og de er indberettet til borearkivet på GEUS. Lokalisering af boringerne er foretaget med GPS.

Prøvebehandling

GEUS har foretaget analyser på 96 prøver fra boringer i området syd for Trolhede.

Ved modtagelsen af prøverne er de blevet registreret med følgende 5 kategorier:

- dato
- lokalitet
- fortløbende laboratorienummer
- rekvisit
- analysekrav

Analysemetoder

Sigteanalyse

Totalprøven er tørret og sigtet gennem en sigtesøje fra 32 mm ned til 0,063 mm med $\frac{1}{2}$ phi intervaller, hvilket svarer til 16 sigter. Metoden er tillempet i forhold til DS 405.9 idet der er indføjet flere sigter end der beskrives i denne standard.

I bilag 1 er vist kornkurven for sedimentprøverne. Kornkurven viser fordeling af grus, sand, silt og ler i prøverne, idet samtlige prøver opfylder DS 405.9's krav til sedimentprøvestørrelser på mindst 100 gr.

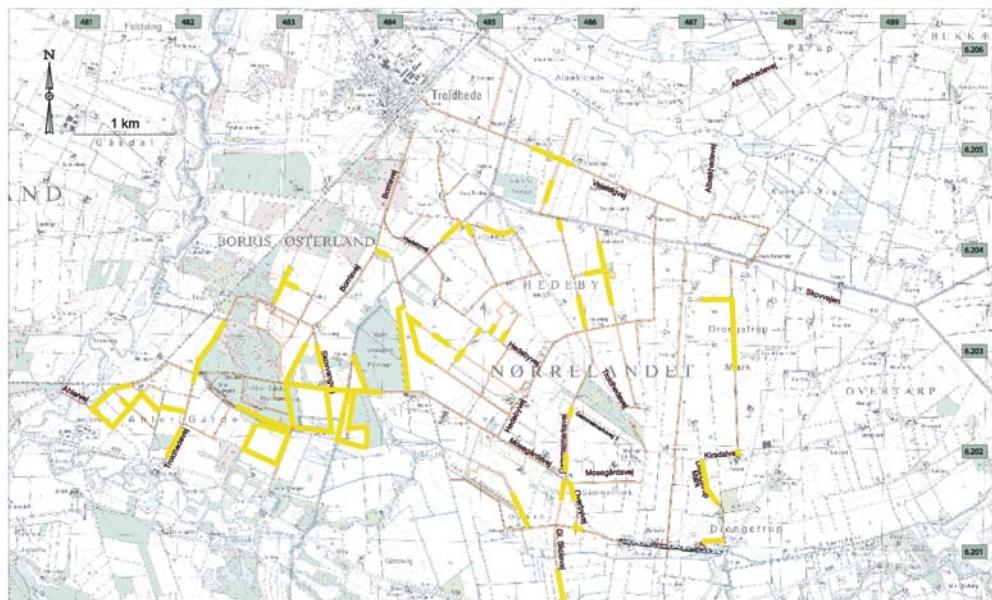
Sandækvivalent

Analyserne er foretaget ved anvendelse af DS 405.10

Udpegning af potentielle områder

I området mellem Troldhede, Borris og Sdr. Felding er der udført georadarundersøgelser af Dansk Geoservice. Området er dækket med 74 georadar linier, og liniene er kørt med 50 mHz antenner. Liniernes beliggenhed er vist i figur 2.

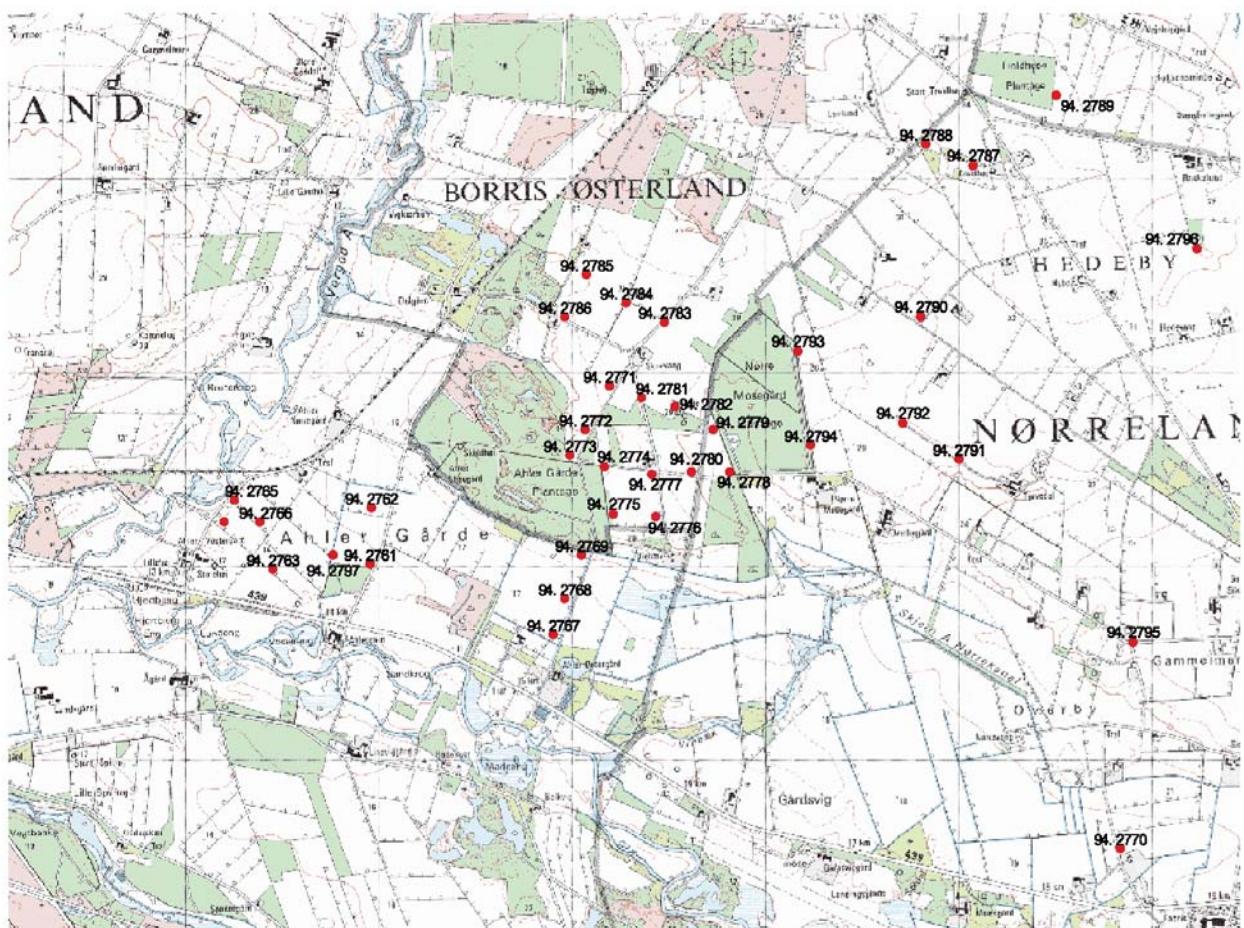
På baggrund af georadarprofilerne er dele af liniene udpeget som potentielle forekomster af sand og grus (Frank Andreasen pers. com.)(Fig. 2). De udpegede liniestrækninger viser at dele af hedesletteaflejrerne, Borris Østerland og store dele af Nørrelandet ser lovende ud. Borris Østerland området har dog flere lovende georadarlinier end Nørrelandet.



Figur 2. De orange linier viser hvor der er udført georadarundersøgelser. De gule markeringer langs linierne viser hvor georadaren har stor penetration og indikationer på sand og grus.

Boringernes placering

Boringernes placering (Fig. 3) er foretaget ud fra georadartolkningerne, hvor de fleste er placeret i de mest lovende områder. Et par enkelte er placeret, hvor georadaren ikke havde nogen stor indtrængning, for at undersøge om der skulle være et tyndt lerholdigt dække over sand og grus.



Figur 3. Boringernes placering i undersøgelsesområdet. Borerapporter er i Bilag 1.

Data

Under borearbejdet er der udtaget prøver til analyse for kornstørrelse (Bilag 2) og SE-værdi (Bilag 3). De gennemsnitlige kornstørrelsесværdier og gennemsnitlige SE-værdier gældende for de enkelte borer er samlet i Tabel 1.

Tabel 1; Gennemsnitlig kornstørrelse for de enkelte borer

| Hedeslette | | | | | | |
|-------------------------|----------|----------|----------|----------|----------|----------|
| Borearkiv nr. | 94. 2761 | 94. 2762 | 94. 2797 | 94. 2763 | 94. 2764 | 94. 2765 |
| Ler og silt | 2 | 6 | 3 | 2 | 3 | 4 |
| Fin sand | 8 | 19 | 11 | 4 | 17 | 14 |
| Mellem sand | 44 | 61 | 67 | 38 | 47 | 46 |
| Grov sand | 32 | 9 | 13 | 35 | 21 | 23 |
| Grus | 14 | 5 | 5 | 21 | 11 | 13 |
| SE-værdi | 59 | 46 | 51 | 59 | 34 | 32 |
| Borearkiv nr. | 94. 2766 | 94. 2767 | 94. 2768 | 94. 2769 | 94. 2770 | |
| Ler og silt | 4 | 2 | 10 | 4 | 1 | |
| Fin sand | 18 | 6 | 8 | 15 | 4 | |
| Mellem sand | 46 | 55 | 54 | 52 | 43 | |
| Grov sand | 24 | 29 | 20 | 27 | 35 | |
| Grus | 8 | 8 | 8 | 2 | 17 | |
| SE-værdi | 43 | 53 | 41 | 39 | 82 | |
| Borris Østerland | | | | | | |
| Borearkiv nr. | 94. 2771 | 94. 2772 | 94. 2773 | 94. 2774 | 94. 2775 | 94. 2776 |
| Ler og silt | 1 | 4 | 2 | 1 | 4 | 1 |
| Fin sand | 11 | 11 | 15 | 14 | 17 | 21 |
| Mellem sand | 70 | 57 | 60 | 63 | 50 | 56 |
| Grov sand | 14 | 22 | 11 | 11 | 12 | 8 |
| Grus | 3 | 6 | 12 | 11 | 18 | 14 |
| SE-værdi | 86 | 70 | 73 | 81 | 70 | 77 |
| Borearkiv nr. | 94. 2777 | 94. 2778 | 94. 2779 | 94. 2780 | 94. 2781 | 94. 2782 |
| Ler og silt | 1 | 1 | 3 | 3 | 1 | 1 |
| Fin sand | 8 | 3 | 19 | 35 | 11 | 8 |
| Mellem sand | 62 | 50 | 54 | 52 | 70 | 62 |
| Grov sand | 23 | 40 | 18 | 10 | 12 | 15 |
| Grus | 6 | 6 | 7 | 0 | 6 | 14 |
| SE-værdi | 85 | 79 | 35 | 73 | 87 | 78 |
| Borearkiv nr. | 94. 2783 | 94. 2784 | 94. 2785 | 94. 2786 | | |
| Ler og silt | 9 | 5 | 1 | 4 | | |
| Fin sand | 22 | 18 | 7 | 29 | | |
| Mellem sand | 57 | 54 | 62 | 59 | | |
| Grov sand | 8 | 20 | 20 | 8 | | |
| Grus | 5 | 3 | 10 | 0 | | |
| SE-værdi | 26 | 43 | 57 | 53 | | |
| Nørrelandet | | | | | | |
| Borearkiv nr. | 94. 2787 | 94. 2788 | 94. 2789 | 94. 2790 | 94. 2791 | 94. 2792 |
| Ler og silt | 2 | 7 | 1 | 2 | 3 | 9 |
| Fin sand | 11 | 30 | 9 | 12 | 18 | 27 |
| Mellem sand | 60 | 54 | 72 | 55 | 61 | 52 |
| Grov sand | 17 | 8 | 15 | 9 | 17 | 9 |
| Grus | 10 | 0 | 3 | 22 | 0 | 3 |
| SE-værdi | 61 | 50 | 77 | 40 | 34 | 25 |
| Borearkiv nr. | 94. 2793 | 94. 2794 | 94. 2795 | 94. 2796 | | |
| Ler og silt | 2 | 1 | 1 | 3 | | |
| Fin sand | 20 | 30 | 6 | 5 | | |
| Mellem sand | 62 | 60 | 53 | 37 | | |
| Grov sand | 13 | 7 | 18 | 40 | | |
| Grus | 6 | 2 | 21 | 15 | | |
| SE-værdi | 72 | 40 | 55 | 51 | | |

Kornstørrelser

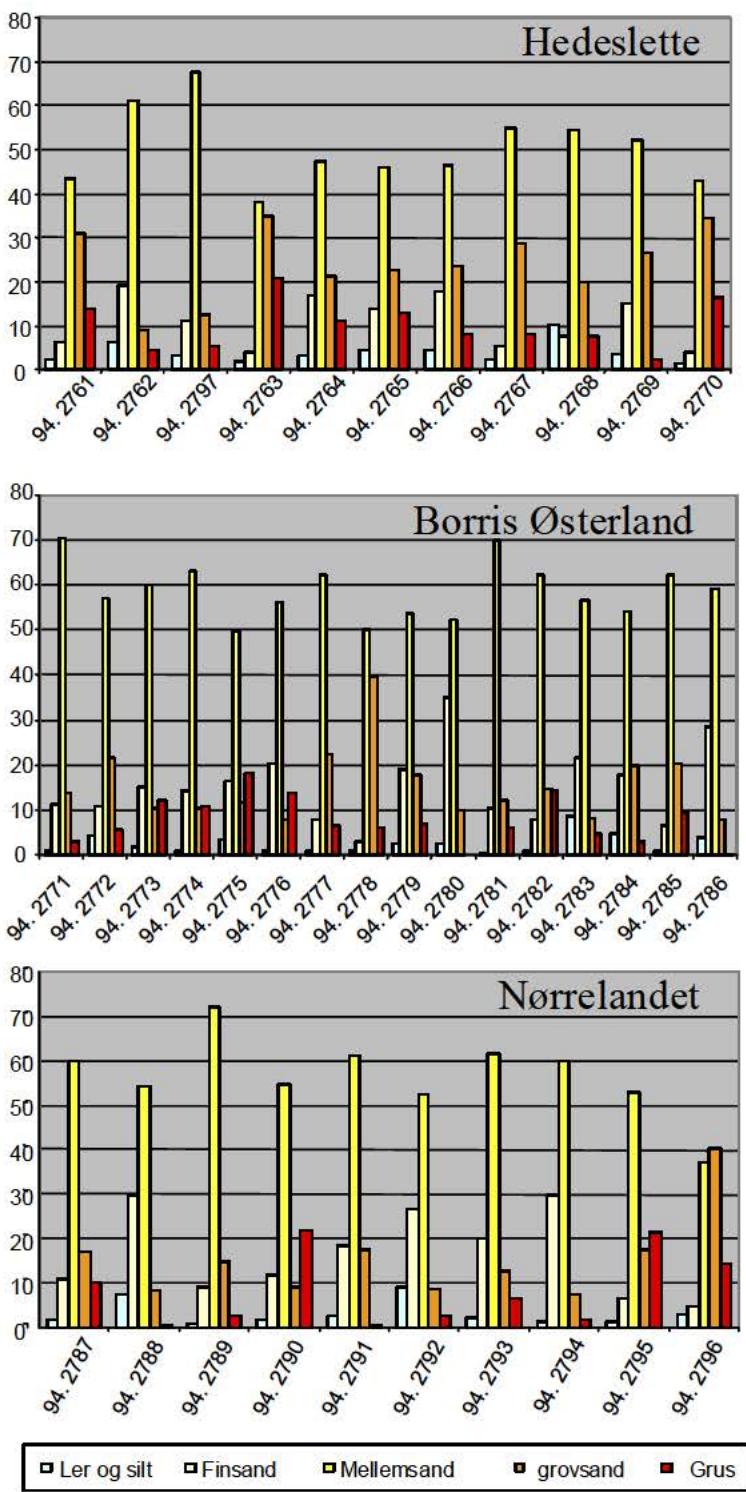
Det undersøgte område kan opdeles i tre områder: Hedesletteaflejingerne, Borris Østerland og Nørrelandet. Differentieringen mellem Borris Østerland og Nørrehede er fortaget på baggrund af georadarundersøgelsen og kornstørrelsесfordelinger, idet Nørrehede delområdet generelt har lidt grovere sedimenter.

En gennemsnitlig kornstørrelsесfordeling for hver boring er vist i figur 4 og i tabel 1, og samtlige analyser er vedlagt i Bilag 2.

På hedesletten dominerer mellemkornet sand i alle borer. Det højeste grusindhold findes i området ved Ahler Gårde (boringer 94.2761, 94.2763, 94.2764 og 94.2765) og lige nord for Sdr. Felding (boring 94.2770), hvor grusindholdet ligger mellem 11 og 21 %.

I Borris Østerland området dominerer mellemkornet sand i alle borer. Grusindholdet varierer fra 0 til 18 %, hvor borerne 94.2775, 94.2776 og 94.2782 har det største grusindhold. Borerne 94.2777, 94.2778 og 794.2779 har relativt meget grovsand (18 til 40 %).

I Nørrelandet området er det ligeledes indholdet af mellemkornet sand der dominerer, med undtagelse af boring 94.2796, hvor sedimentet er gruset, grovkornet sand. I borerne 94.2790 og 94.2795 er grusindholdet i de øverste 6 m ca. 22%, hvilket er de højeste grusprocenter der er registreret.



Figur 4. Søjlediagram der viser den gennemsnitlige kornstørrelsesfordelingen for hver boring.

SE-værdi

Der er udført sandækvivalent analyser på alle prøver (Bilag 3) og gennemsnitsværdien for de enkelte borer er angivet i Tabel 1. SE-grænseværdien for bundsikringsgrus er ≥ 30 ifølge Dansk Ingenørforenings Norm for sand-, grus- og stenmaterialer (DIF, 1977). Næsten alle borer har i gennemsnitsværdier større end 30. Kun boring 94.2783 i Borris Østerland og boring 94.2792 i Nørrelandet har værdier under 30.

Konklusioner

Sand og grusforekomsterne er overfladenære i det undersøgte område. I de områder, hvor georadaren har en god penetration, er der ingen overjord (bortset fra muld). I de områder, hvor der er ringe eller ingen penetration, er der i en boring (94.2792) konstateret svagt leret morænesand over smeltevandssand. Det må forventes at der er overjord i de dele af undersøgelsesområdet, hvor georadaren ingen penetration har. Der er ikke fastslået nogen tykkelse på smeltevandsaflejrerne, men alle borer er udført til 6 m, bortset fra 94.2767 94.2768 og 94.2770 på hedesletten og 94.2778 og 94.2779 på bakkeøen der er udført til 4 m p.g.a. at grundvandsstanden var tæt på overfladen.

Rent geologisk adskiller Hedesletteaflejrerne (Weichsel) sig fra bakkeø smeltevandsaflejrerne (Saale) ved at være meget yngre. I den vestlige del af Ahler Gårde området, i trekanten mellem Vorgod Å og Skjern Å, har der tidligere været indvinding af sand og grus. I de tilstødende områder ved Ahler Gårde er der i georadarprofilerne en god penetration, og der er også borer med forholdsvis høje grusprocenter. I borerne 94.2761, 94.2763, 94.2764 og 94.2765 ligger grusindholdet på 11 til 21 %. Ved Ahler Østergård består smeltevandsaflejrerne overvejende af mellemkornet sand og grundvandsstanden var 1,5 til 2 m u.t. Ved Sdr. Felding er der i boring 94.2770 17 % grus i smeltevandsaflejrerne, men grundvandsstanden var her 1,6 m u.t. Sandækvalanten er høj i hedesletteaflejrerne, med undtagelse af dele af boring 94.2764 ved Ahler Gårde, hvor dele af borgen har værdier <30. I den øverste del af borgen er der også to tynde lerlag. Det er dog lidt usikkert om borgen er sat i et tidligere graveområde, således at der er tale om omgravet materiale.

Sand og grusforekomsterne i bakkeøterrænet kan geografisk og ud fra georadarundersøgelserne opdeles i to delområder, Borris Østerland og Nørrelanet.

Georadarprofilerne i Borris Østerland har generelt en god penetration, men forekomsterne består overvejende af mellemkornet sand. I enkelte borer (94.2773, 94.2774, 94.2775, 94.2776 og 94.2782) ligger grusprocenten fra 11 til 18 %. Det relativt høje grusindhold findes således i den sydlige del af Borris Østerland området. SE-værdierne er i alle borerne > 30.

Nørreland området har større områder hvor georadaren har dårlig eller ingen penetration. Der er udført to borer hvor georadaren ikke havde nogen penetration, og i den ene boring (94.2792) er der i de øverste to meter påtruffet morænesand. De fleste borer har et relativt lavt grusindhold og består overvejende af mellemkornet sand, men i borerne 94.2787, 94.2790, 94.2795 og 94.2796 ligger grusprocenten på 10 til 22 %. Boring 94.2796 er udført lige ved siden af en nedlagt grusgrav, og der er således gode indikationer på at der er grove materialer her. SE-værdierne er > 30, bortset fra boring 94.2792, hvor de øverste 2 m er morænesand.

Boretætheden på Nørrelandet er lidt mindre end i de øvrige delområder. Det kan anbefales at lave opfølgende undersøgelser i områderne omkring borerne 94.2787, 94.2790, 94.2795 og 94.2796, med supplerende georadarundersøgelser og borer.

Referencer

Dansk Standard DS 405.9. Kornstørrelsesfordeling bestemt ved sigteanalyse. Dansk Standardiseringsråd, Kbh. 1978.

Dansk Standard DS 405.10. Sandækvivalent. Dansk Standardiseringsråd, Kbh. 1978.

DIF, 1977: Dansk Ingenørforenings Norm For sand- grus- og stenmaterialer, 2. udgave November 1977. Dansk Standard DS 401. Normstyrrelsens Publikationer NP-130-N.

Larsen, G., Frederiksen, J., Villumsen, A., Fredericia, J., Gravesen, P., Foged, N., Knudsen, B. og Baumann, J., 1988: Vejledning i Ingenørgeologisk prøvebeskrivelse. Dansk Geoteknisk Forening Bulletin 1.

Salinas, I., 1989: Jordartskort over Danmark 1:200.000. Ed: Pedersen, S.A.S. Danmarks Geologiske Undersøgelse.

Bilag

Bilag 1

BORERAPPORT**DGU arkivnr : 94. 2761**

Borested : Ahler Gårde, Borris
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 14 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43601
BB-journr :
BB-børn nr :

Prøver
- modtaget : 21/10 2002 antal : 10
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bør
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 481966, 6202002

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 5.6 meter u.t. | Pejledato 21/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
| | | | | | |

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)**

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2762

Borested : Ahler Gård, Borris
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 5 meter

Terrænkote : 16 meter o. DNN

Brøndborer: Glibstrup as
MOB-nr : 43602
BB-journr :
BB-bornr :

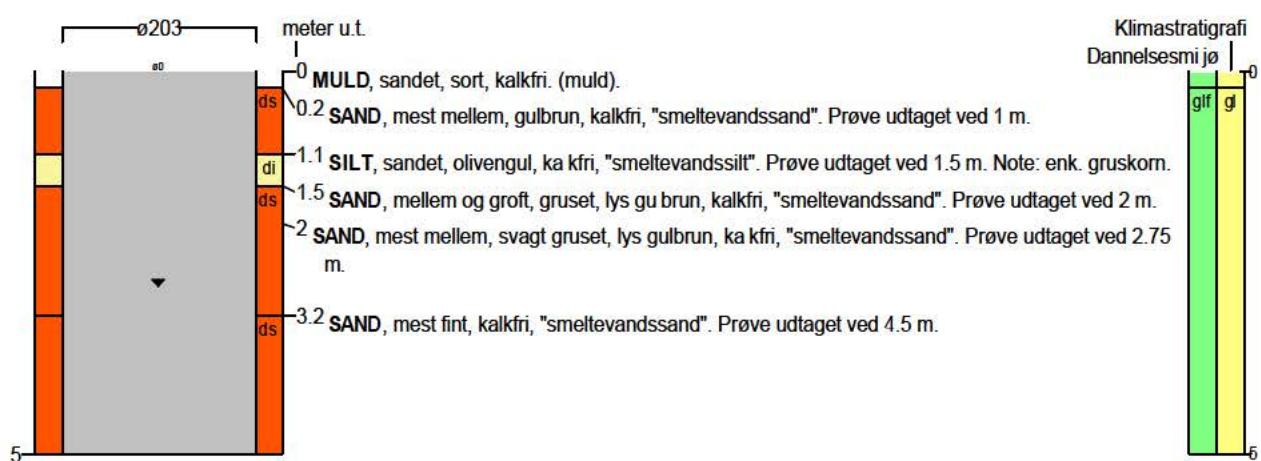
Prøver
- modtaget : 21/10 2002 antal : 5
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 481974, 6202295

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand | Pejledato | Ydelse | Sænkning | Pumpetid |
|--------------------|----------------|------------|--------|----------|----------|
| | 2.8 meter u.t. | 21/10 2002 | | | |



Aflejningsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
 0.2 - 5 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94.2763

Borested : Ahler Gårde, Borris
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 7 meter

Terrænkote : 13 meter o. DNN

Brøndborer: Glibstrup as

MOB-nr : 43603

BB-journr

BB-bornr

Prøver

- modtaget : 21/10 2002 antal : 9

- beskrevet : 21/10 2002 af : PRJ

- antal gemit : 0

Formål : Råstofboring

Anvendelse : Sløfet/oppivet bor

Boremetode : Snealeboring

Kortblad : 1114 |||N

UTM-zone : 32

UTM-koord. : 481462, 6201977

Datum : ED50

Koordinatkilde : GFUS

Koordinatmetode : GPS



Aflejningsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

| | | | |
|-----|---|-----|---------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 1.9 | glaciofluvial - glacial |
| 1.9 | - | 2 | glaciolakustrin - glacial |
| 2 | - | 7 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2764

Borested : Arnborgvej, Ahler Gårde
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 6 meter

Terrænkote : 13 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43604
BB-journr :
BB-bornr :

Prøver
- modtaget : 21/10 2002 antal : 9
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 481213, 6202221

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 5.5 meter u.t. | Pejledato 21/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
| | | | | | |



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2765

Borested : Arnborgvej, Ahler Gårde
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 6 meter

Terrænkote : 12.5 meter o. DNN

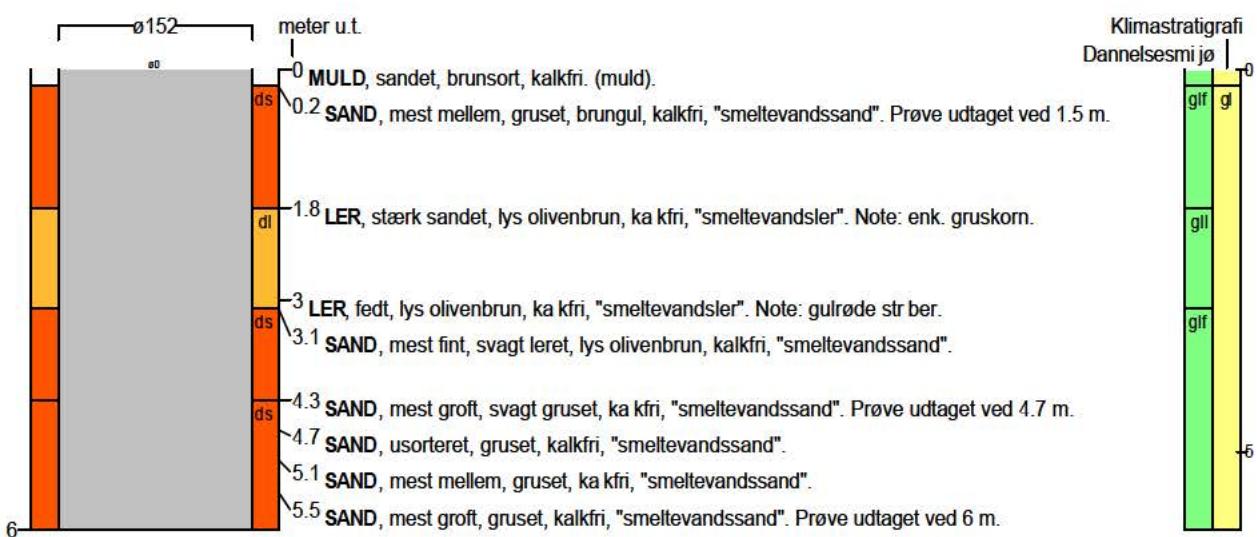
Brøndborer : Glibstrup as
MOB-nr : 43607
BB-journr :
BB-bornr :

Prøver
- modtaget : 21/10 2002 antal : 3
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 481261, 6202332

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

- | | | | |
|-----|---|-----|---------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 1.8 | glaciofluvial - glacial |
| 1.8 | - | 3.1 | glaciolakustrin - glacial |
| 3.1 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2766

Borested : Ahler Gårde, Borris
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 6 meter

Terrænkote : 13 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43608
BB-journr :
BB-bornr :

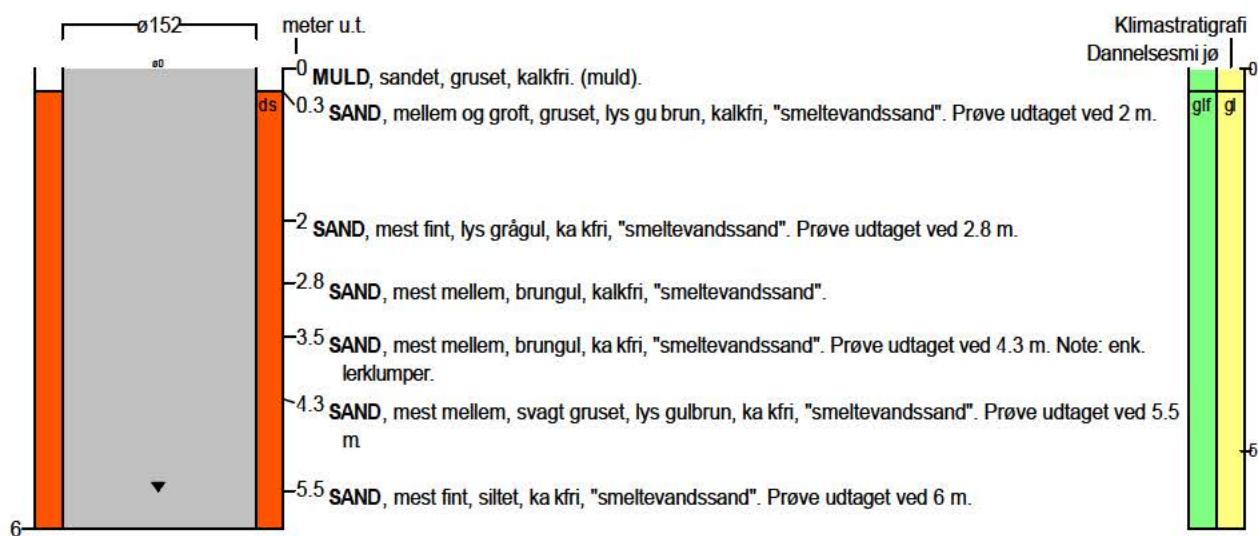
Prøver
- modtaget : 21/10 2002 antal : 5
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 481398, 6202218

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 5.5 meter u.t. | Pejledato 21/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
| | | | | | |



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.3 terrigen - postglacial
0.3 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2767

Borested : Arnborgvej, Ahler Gårde
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 4 meter

Terrænkote : 17 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43609
BB-journr :
BB-bornr :

Prøver
- modtaget : 21/10 2002 antal : 4
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring

Kortblad : 1114 IINV

Datum : ED50

Anvendelse : Sløjfet/opgivet bor

UTM-zone : 32

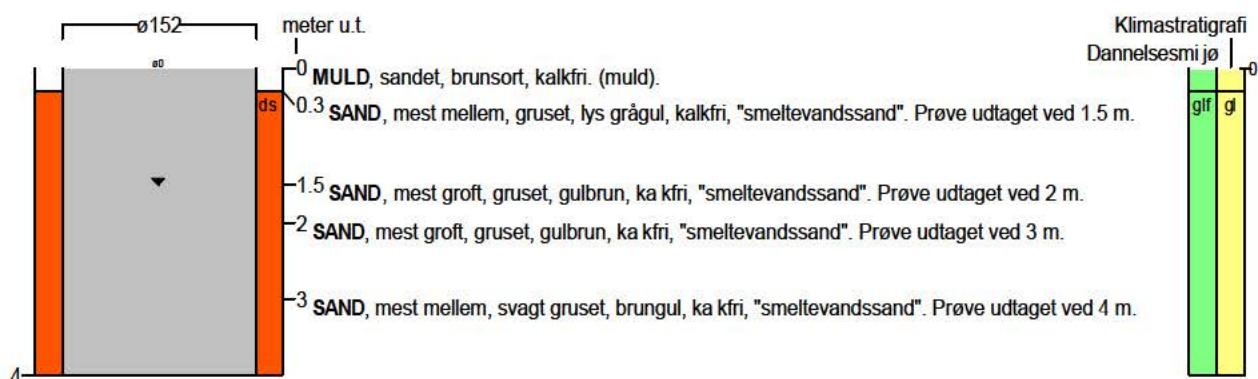
Koordinatkilde : GEUS

Boremetode : Snegleboring

UTM-koord. : 482914, 6201635

Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 1.5 meter u.t. | Pejledato 21/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
| | | | | | |



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.3 terrigen - postglacial
0.3 - 4 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2768

Borested : Arnborgvej, Ahler Gårde
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 4 meter

Terrænkote : 16 meter o. DNN

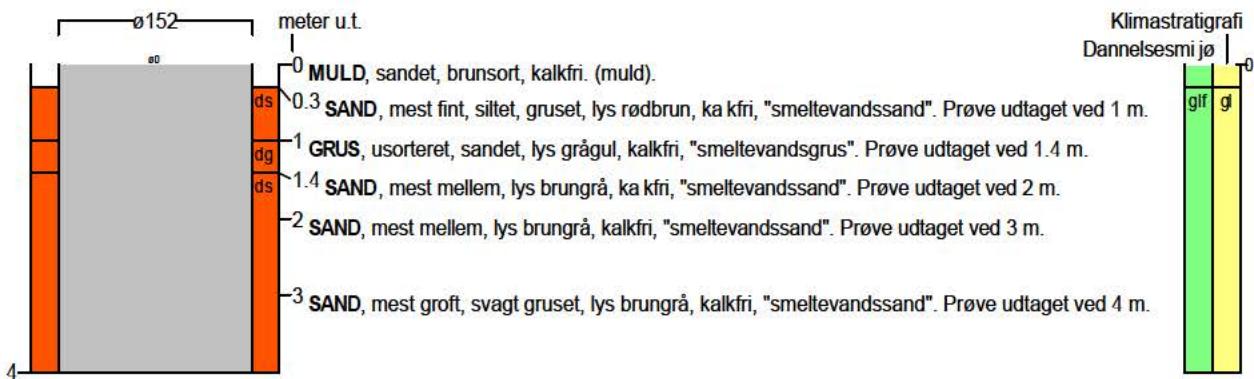
Brøndborer : Glibstrup as
MOB-nr : 43610
BB-journr :
BB-bornr :

Prøver
- modtaget : 21/10 2002 antal : 5
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 482971, 6201823

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.3 terrigen - postglacial
0.3 - 4 glaciofluvial - glacial

BORERAPPORT**DGU arkivnr : 94. 2769**

Borested : Arnborgvej, Ahler Gårde
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 20 meter o. DNN

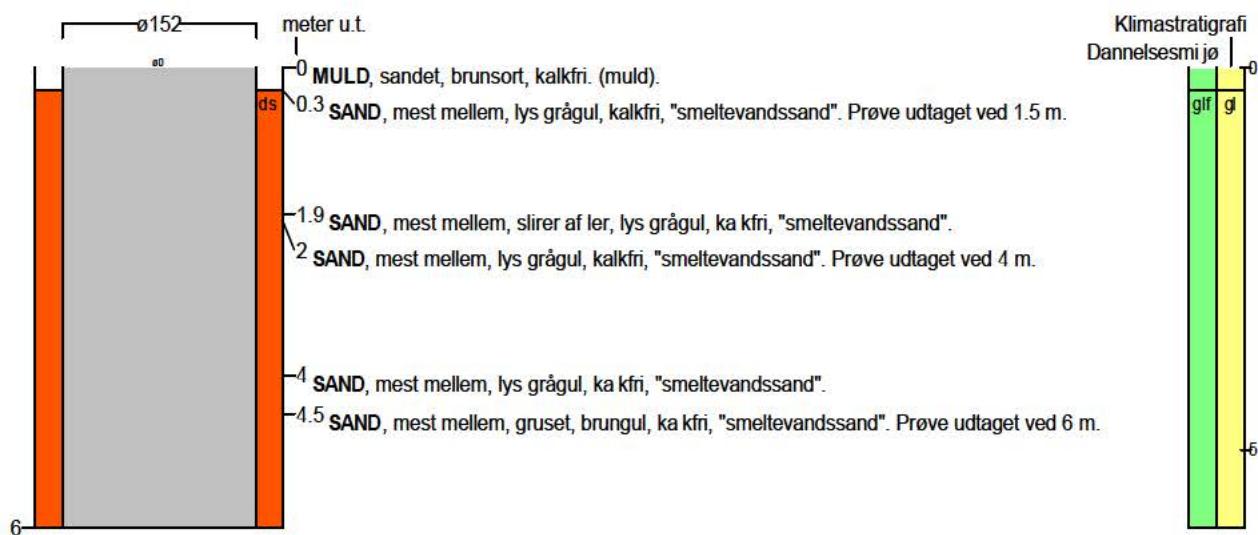
Brøndborer : Glibstrup as
MOB-nr : 43611
BB-journr :
BB-bornr :

Prøver
 - modtaget : 21/10 2002 antal : 3
 - beskrevet : 21/10 2002 af : PRJ
 - antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483061, 6202049

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)**

meter u.t.

0 - 0.3 terrigen - postglacial
 0.3 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2770

Borested : Gl. Skolevej
7280 Sønder-Felding

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 21/10 2002

Boringsdybde : 5 meter

Terrænkote : 18 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43612
BB-journr :
BB-bornr :

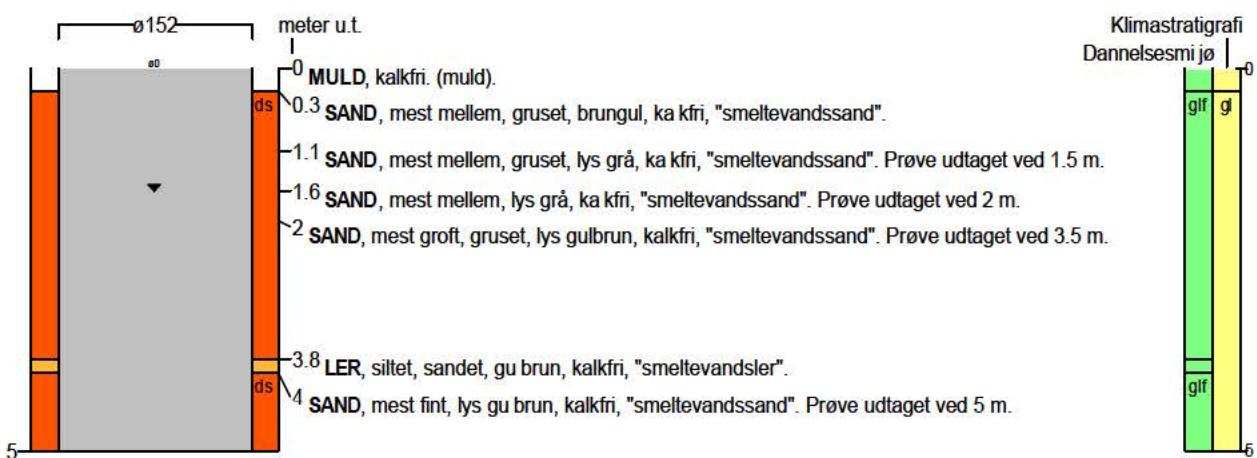
Prøver
- modtaget : 21/10 2002 antal : 4
- beskrevet : 21/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 485848, 6200531

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 1.6 meter u.t. | Pejledato 21/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
| | | | | | |



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

- 0 - 0.3 terrigen - postglacial
- 0.3 - 3.8 glaciofluvial - glacial
- 3.8 - 4 glaciolakustrin - glacial
- 4 - 5 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2771

Borested : Borrisvej, Gaasdalhede
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

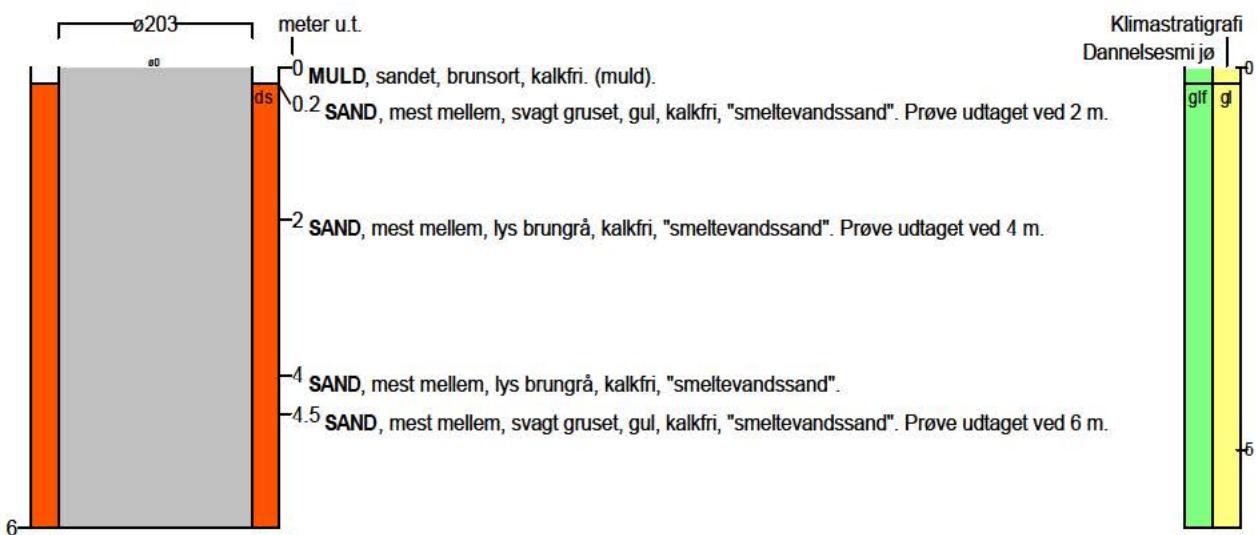
Brøndborer : Glibstrup as
MOB-nr : 43613
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 3
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483202, 6202923

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT**DGU arkivnr : 94. 2772**

Borested : Borrisvej, Gaasdalhede
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 26 meter o. DNN

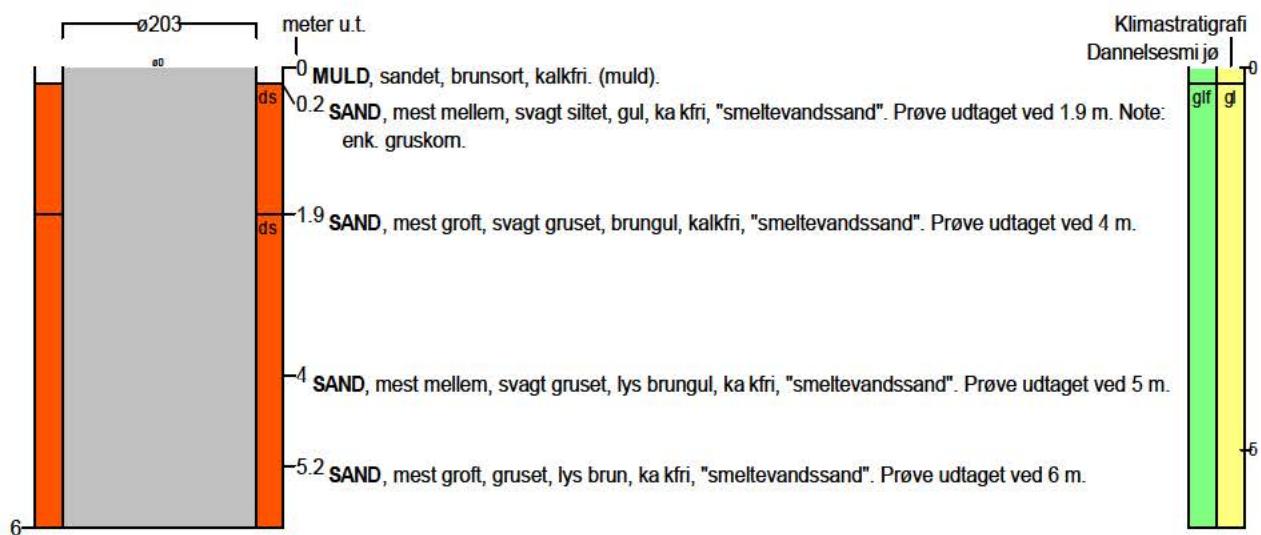
Brøndborer : Glibstrup as
MOB-nr : 43614
BB-journr :
BB-bornr :

Prøver
 - modtaget : 22/10 2002 antal : 4
 - beskrevet : 22/10 2002 af : PRJ
 - antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483081, 6202698

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)**

meter u.t.

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2773

Borested : Borrisvej, Gaasdalhede
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 26 meter o. DNN

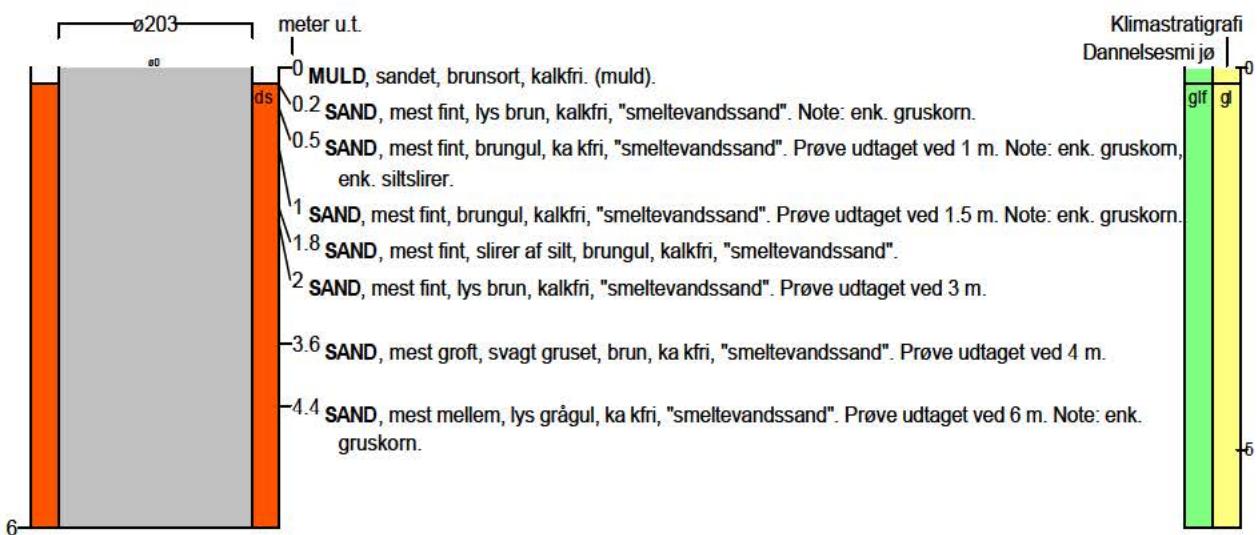
Brøndborer : Glibstrup as
MOB-nr : 43615
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 5
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483001, 6202562

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2774

Borested : Skovvangsvej, Gaasdalhede
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

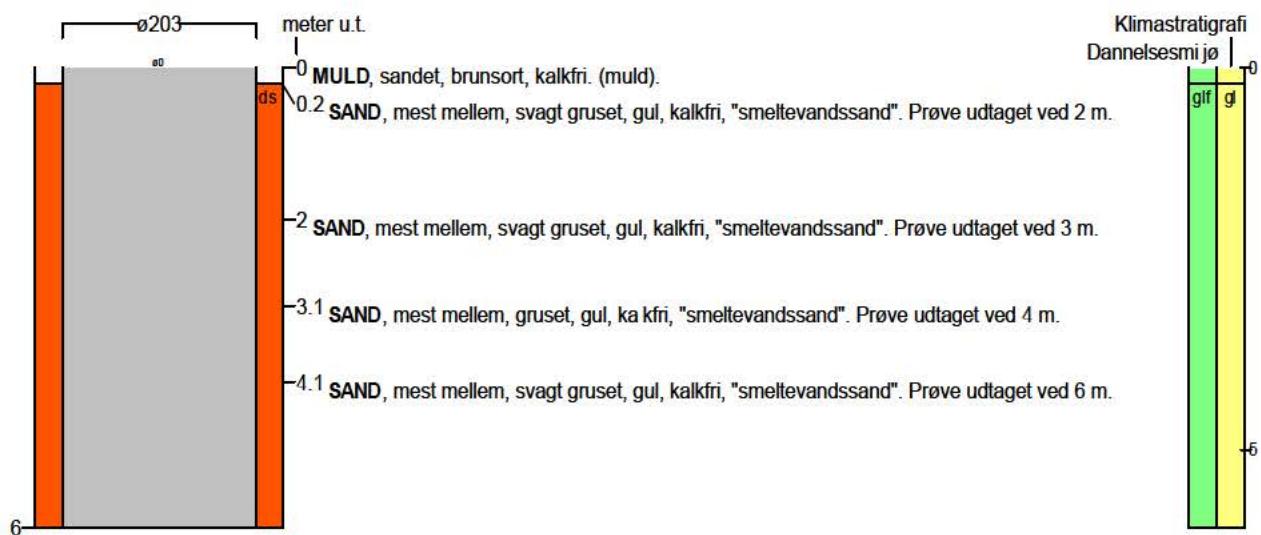
Brøndborer : Glibstrup as
MOB-nr : 43616
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 4
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483177, 6202508

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2775

Borested : Troldhedevej, Borris
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

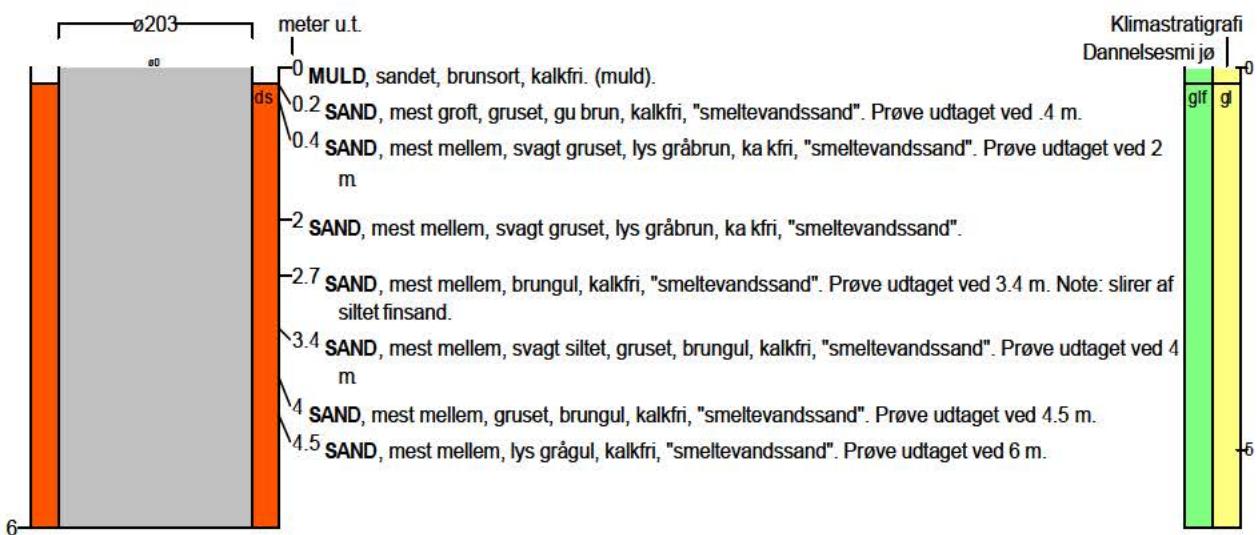
Brøndborer : Glibstrup as
MOB-nr : 43617
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 6
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483225, 6202263

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2776

Borested : Troldhedevej, Borris
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

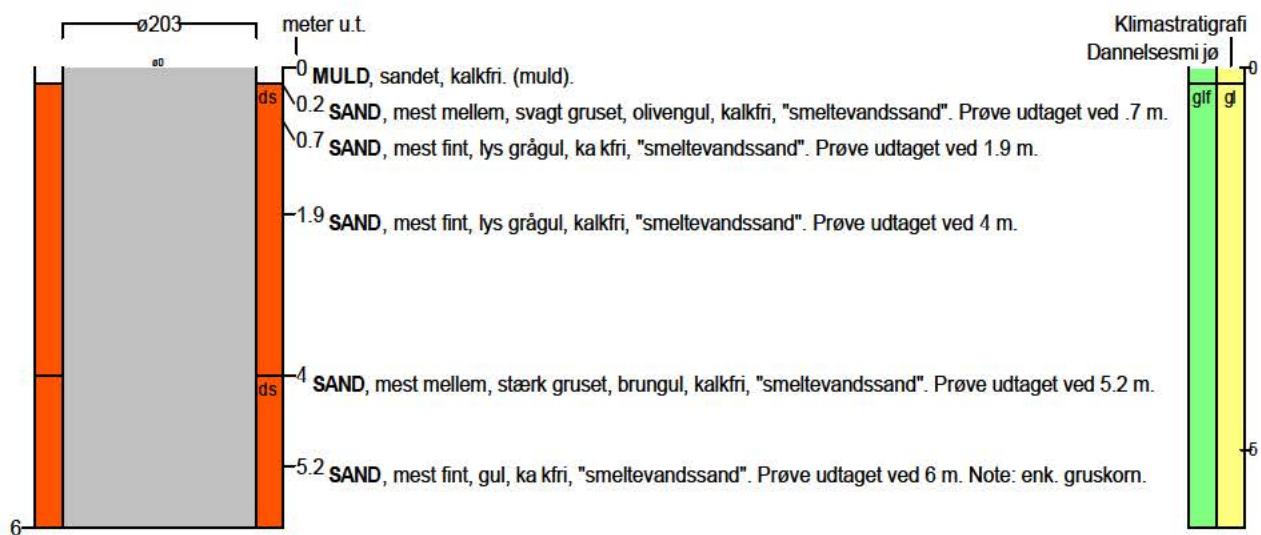
Brøndborer : Glibstrup as
MOB-nr : 43618
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 5
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483440, 6202249

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2777

Borested : Skovvangsvej, Gaasdalhede
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

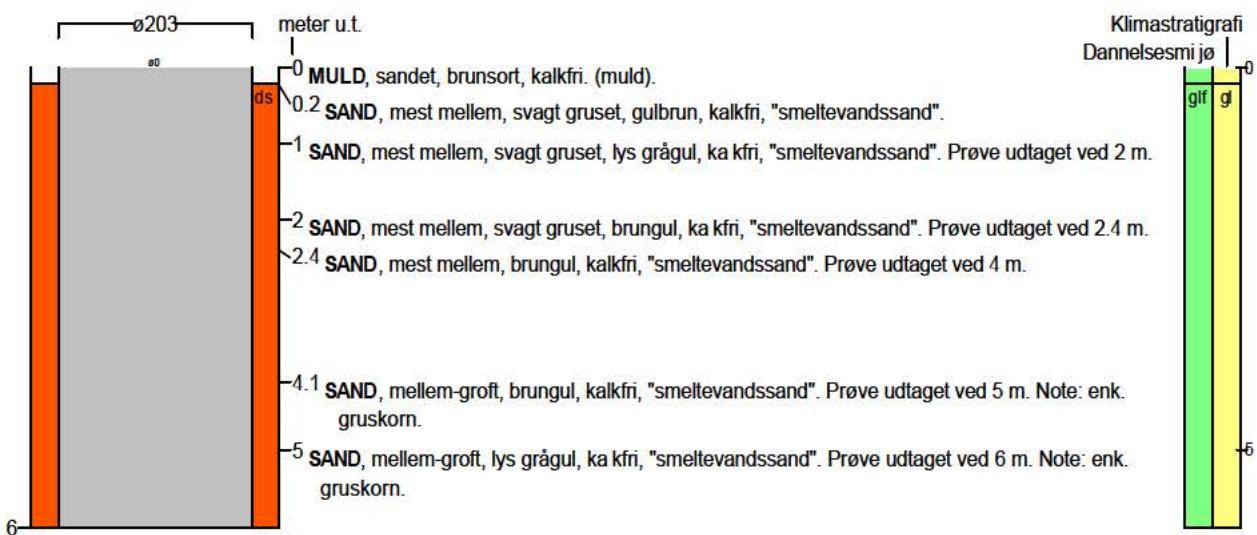
Brøndborer : Glibstrup as
MOB-nr : 43619
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 5
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483425, 6202469

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2778

Borested : Mosegaardsvej, Nørre Mosegård Plantage
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 4 meter

Terrænkote : 21 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43620
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 3
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring

Kortblad : 1114 IINV

Datum : ED50

Anvendelse : Sløjfet/opgivet bor

UTM-zone : 32

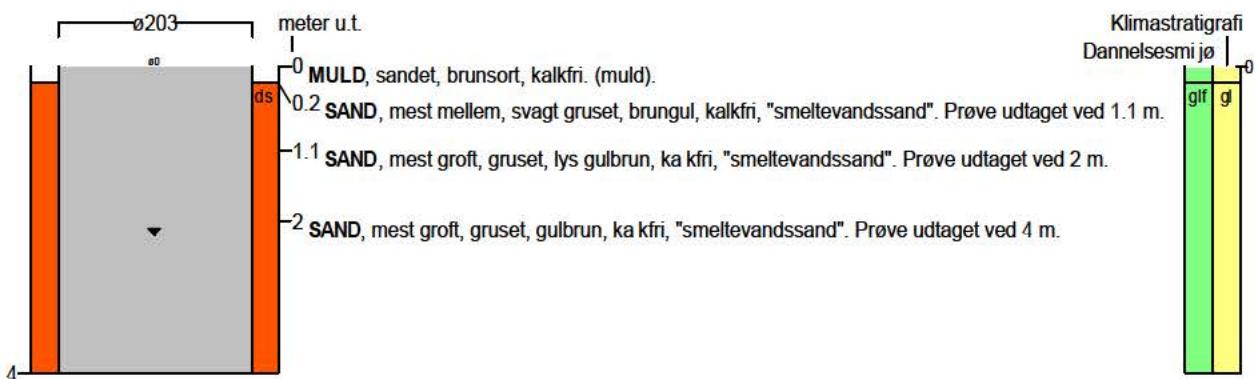
Koordinatkilde : GEUS

Boremetode : Snegleboring

UTM-koord. : 483828, 6202479

Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 2.2 meter u.t. | Pejledato 22/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
|--------------------|--------------------------------|-------------------------|--------|----------|----------|



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 4 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2779

Borested : Nørre Mosegård Plantage
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 4 meter

Terrænkote : 24 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43621
BB-journr :
BB-bor nr :

Prøver
- modtaget : 22/10 2002 antal : 4
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring

Kortblad : 1114 IINV

Datum : ED50

Anvendelse : Sløjfet/opgivet bor

UTM-zone : 32

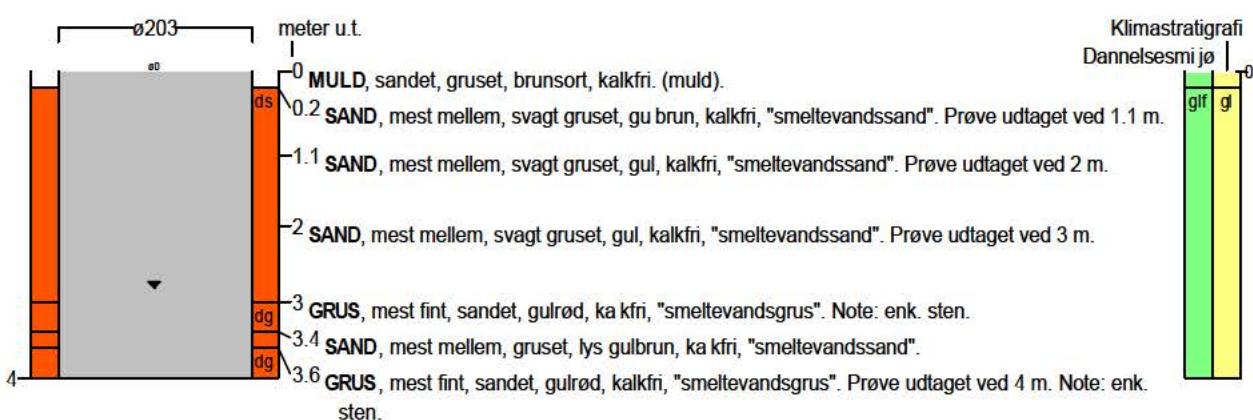
Koordinatkilde : GEUS

Boremetode : Snegleboring

UTM-koord. : 483742, 6202701

Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 2.8 meter u.t. | Pejledato 22/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|--------------------------------|-------------------------|--------|----------|----------|
| | | | | | |



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 4 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2780

Borested : Mosegaardsvej, Nørre Mosegård Plantage
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 25 meter o. DNN

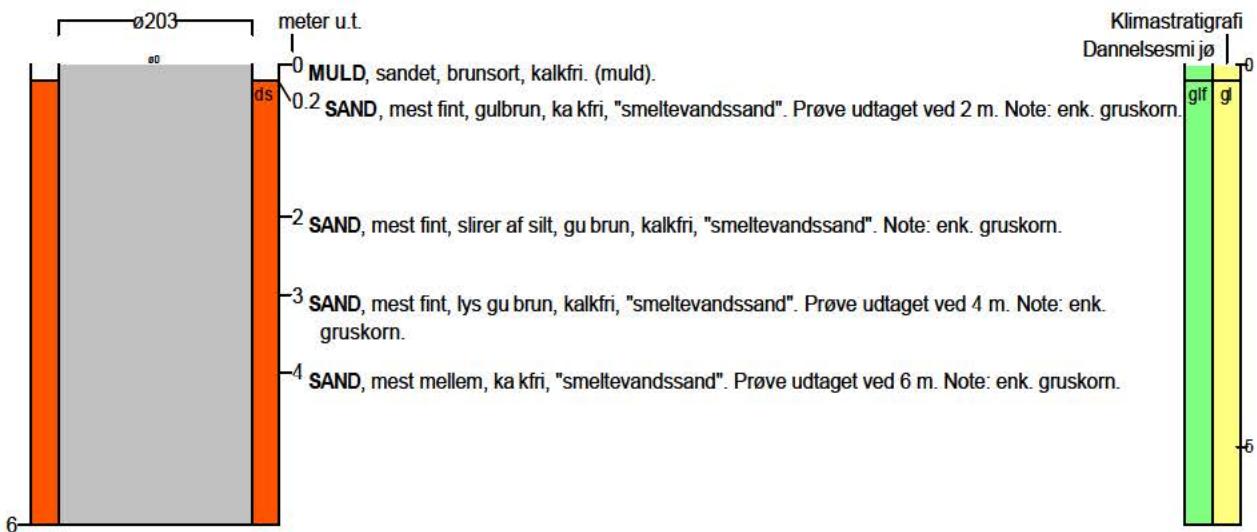
Brøndborer : Glibstrup as
MOB-nr : 43622
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 3
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483629, 6202480

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2781

Borested : Skovvangsvej, Gaasdalhede
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

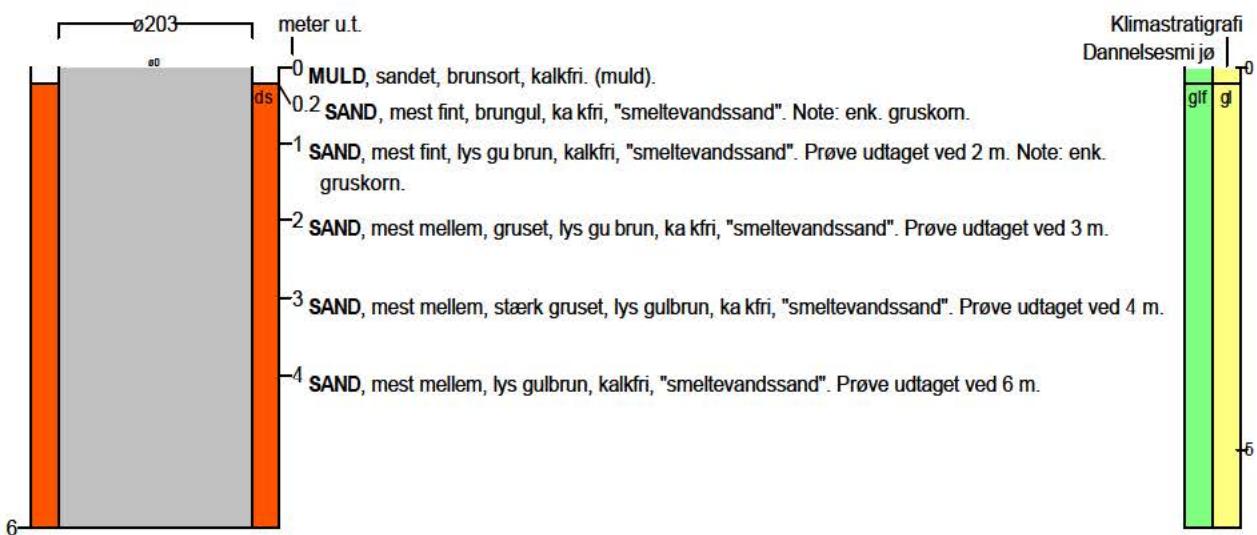
Brøndborer : Glibstrup as
MOB-nr : 43623
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 4
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483371, 6202861

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2782

Borested : Trehøje
7280 Sønder-Felding

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 27.5 meter o. DNN

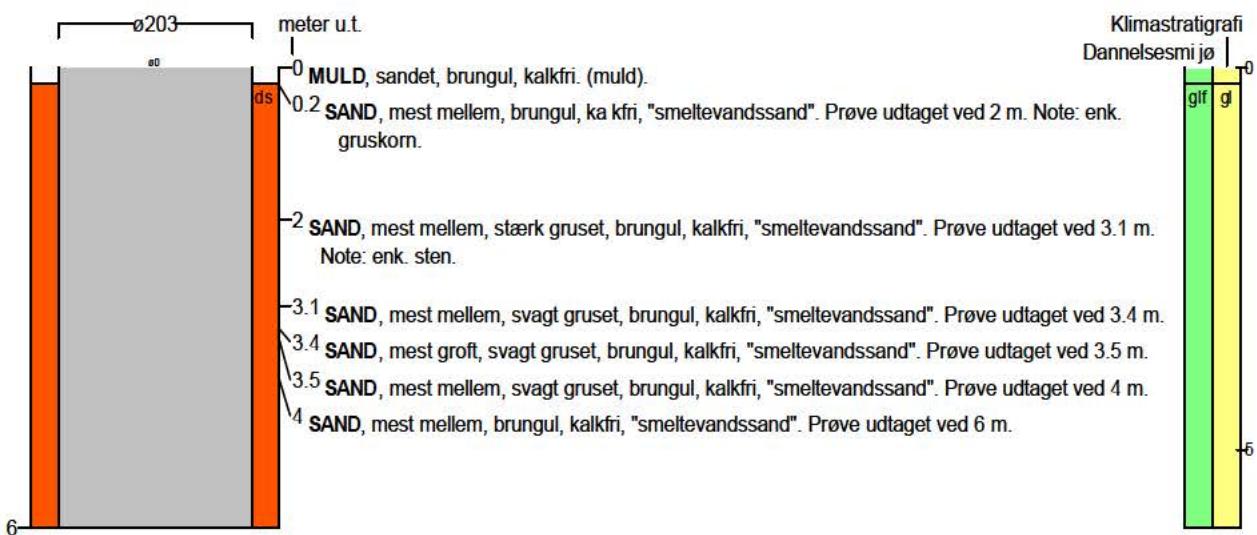
Brøndborer : Glibstrup as
MOB-nr : 43624
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 6
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483540, 6202815

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2783

Borested : Borrisvej, Gaasdalhede
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 29 meter o. DNN

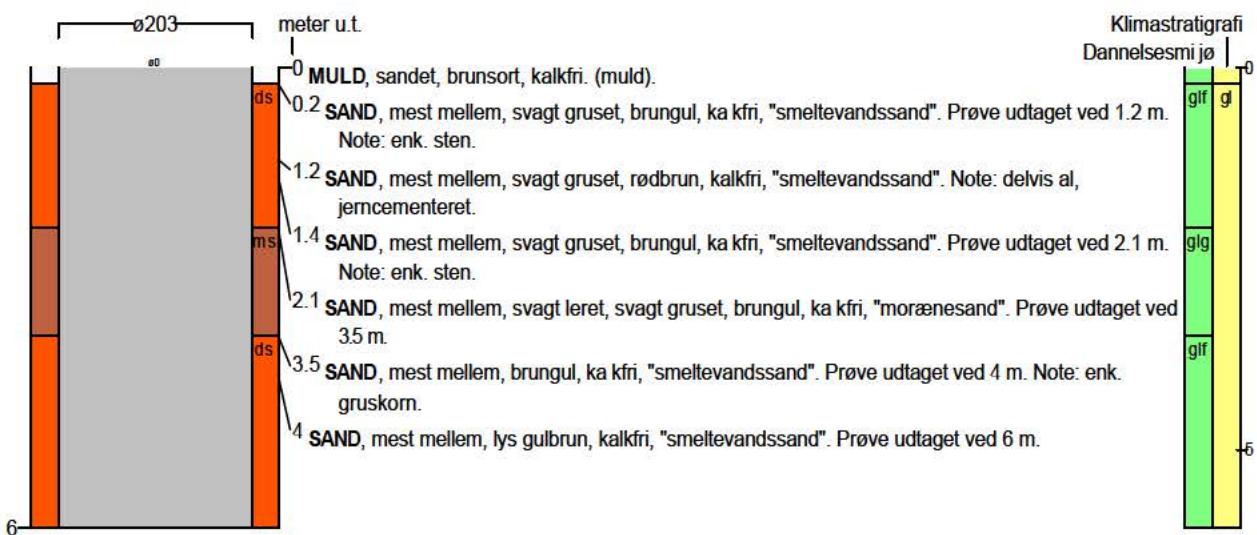
Brøndborer : Glibstrup as
MOB-nr : 43625
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 5
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483487, 6203252

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

- 0 - 0.2 terrigen - postglacial
- 0.2 - 2.1 glaciofluvial - glacial
- 2.1 - 3.5 glacigen - glacial
- 3.5 - 6 glaciofluvial - glacial

BORERAPPORT**DGU arkivnr : 94. 2784**

Borested : Ulhøj, Gaasdalhede
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 29 meter o. DNN

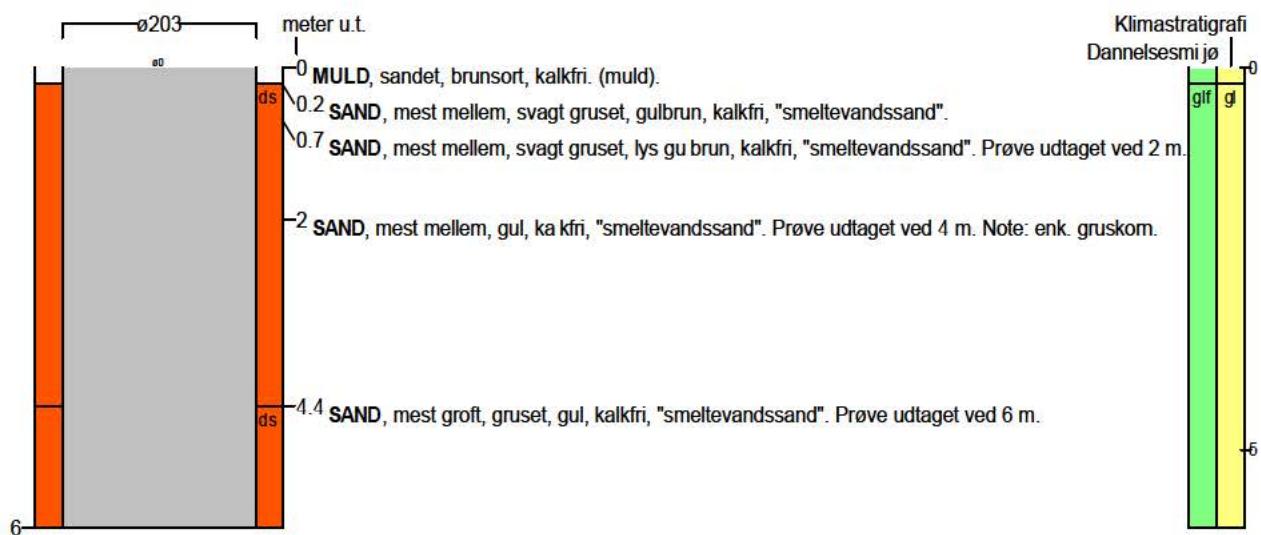
Brøndborer : Glibstrup as
MOB-nr : 43626
BB-journr :
BB-bornr :

Prøver
 - modtaget : 22/10 2002 antal : 3
 - beskrevet : 22/10 2002 af : PRJ
 - antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483292, 6203353

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)****meter u.t.**

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2785

Borested : Borrisvej, Gaasdalhede, Borris Østerland
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002

Boringsdybde : 6 meter

Terrænkote : 27 meter o. DNN

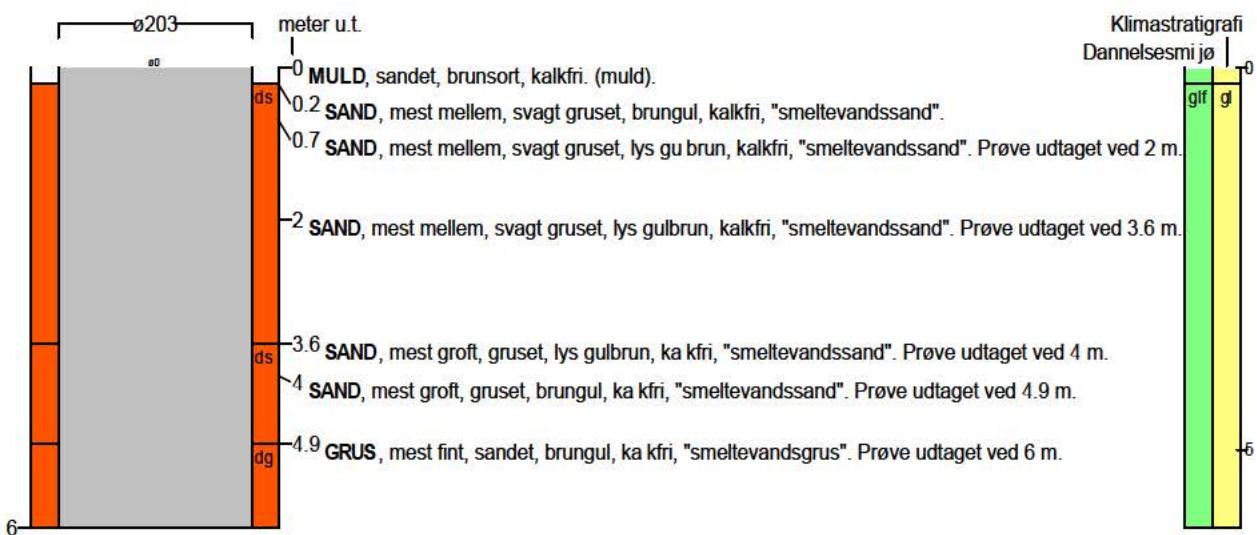
Brøndborer : Glibstrup as
MOB-nr : 43627
BB-journr :
BB-bornr :

Prøver
- modtaget : 22/10 2002 antal : 5
- beskrevet : 22/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 483085, 6203499

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT**DGU arkivnr : 94. 2786**

Borested : Borrisvej, Gaasdalhede
6920 Videbæk

Kommune : Videbæk
Amt : Ringkøbing

Boringsdato : 22/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 27 meter o. DNN

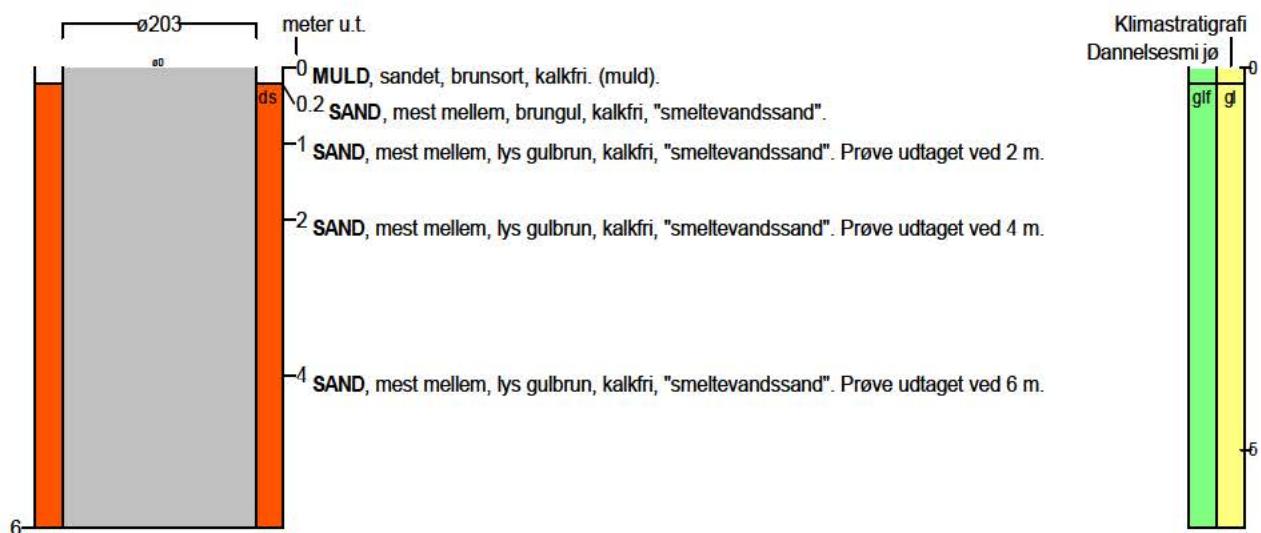
Brøndborer : Glibstrup as
MOB-nr : 43628
BB-journr :
BB-bornr :

Prøver
 - modtaget : 22/10 2002 antal : 3
 - beskrevet : 22/10 2002 af : PRJ
 - antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 482973, 6203280

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)**

meter u.t.

0 - 0.2 terrigen - postglacial
 0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2787

Borested : Troldhøj, Troldhedevej
6933 Kibæk

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 32 meter o. DNN

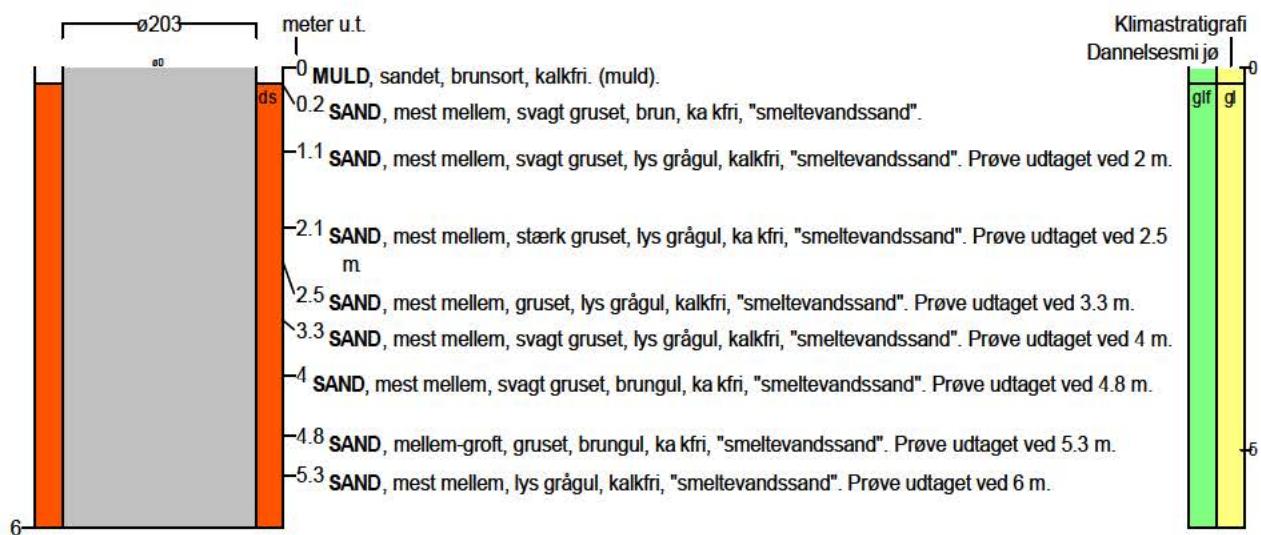
Brøndborer : Glibstrup as
MOB-nr : 43629
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 7
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 485084, 6204065

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT**DGU arkivnr : 94. 2788**

Borested : Trøldhedevej
6933 Kibæk

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 29 meter o. DNN

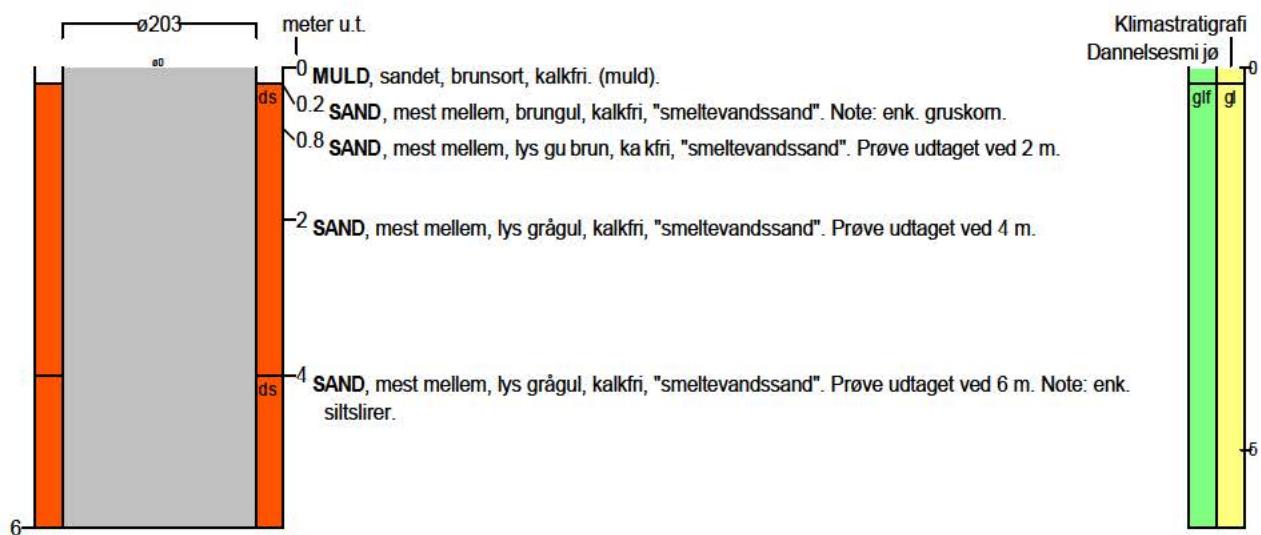
Brøndborer : Glibstrup as
MOB-nr : 43630
BB-journr :
BB-bornr :

Prøver
 - modtaget : 23/10 2002 antal : 3
 - beskrevet : 23/10 2002 af : PRJ
 - antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 484840, 6204173

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)****meter u.t.**

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2789

Borested : Troldhede Plantage, Troldhede
6933 Kibæk

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 31 meter o. DNN

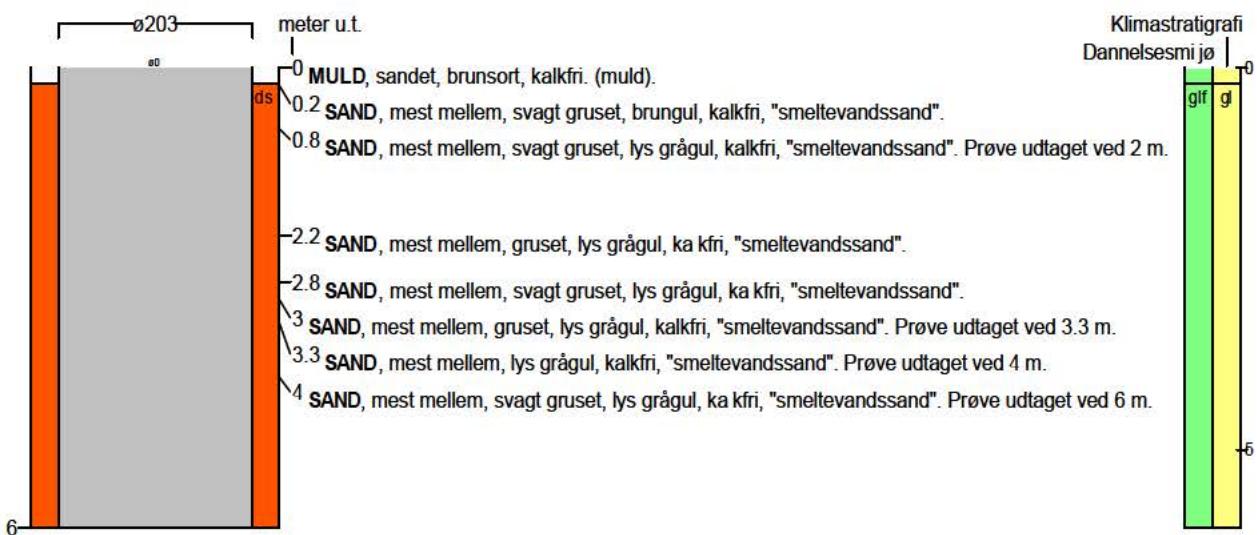
Brøndborer : Glibstrup as
MOB-nr : 43695
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 4
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 485515, 6204426

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2790

Borested : Hedebyvej, Troldhede, Nørrelandet
6933 Kibæk

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 29 meter o. DNN

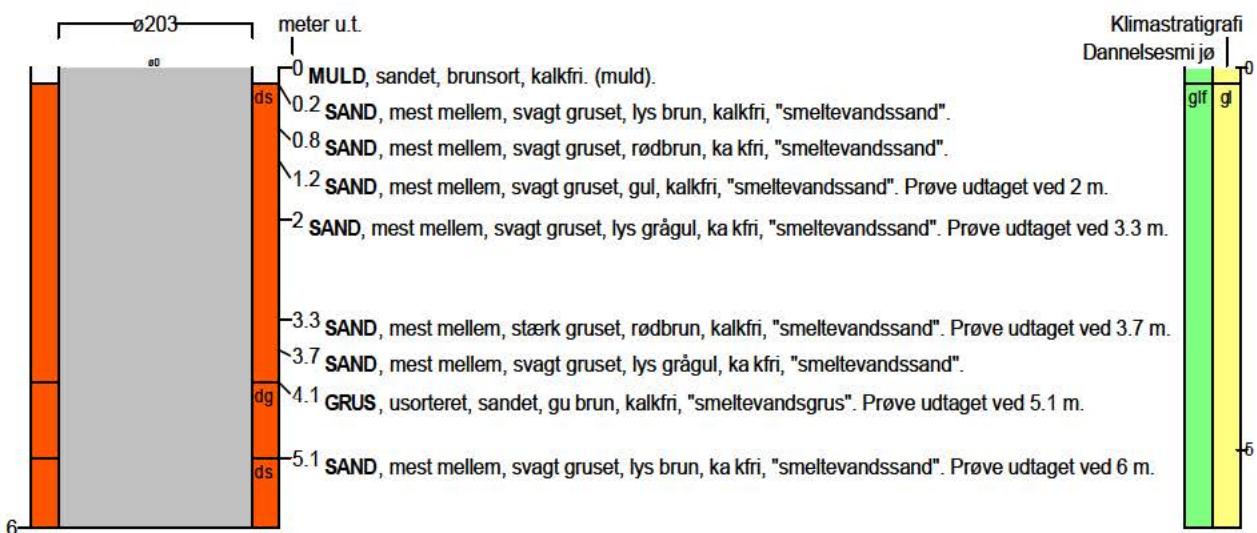
Brøndborer : Glibstrup as
MOB-nr : 43696
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 5
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 484813, 6203283

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2791

Borested : Hedebyvej, Nørrelandet
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

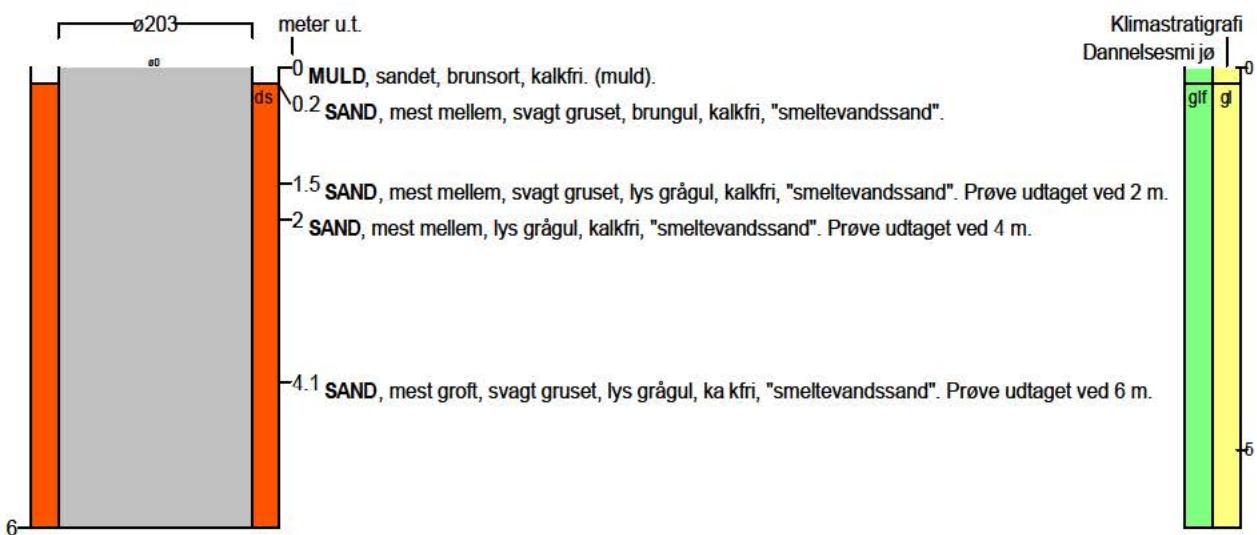
Brøndborer : Glibstrup as
MOB-nr : 43697
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 3
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 485014, 6202543

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT**DGU arkivnr : 94. 2792**

Borested : Hedebyvej, Nørrelandet
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002**Boringsdybde :** 6 meter**Terrænkote :** 29,5 meter o. DNN

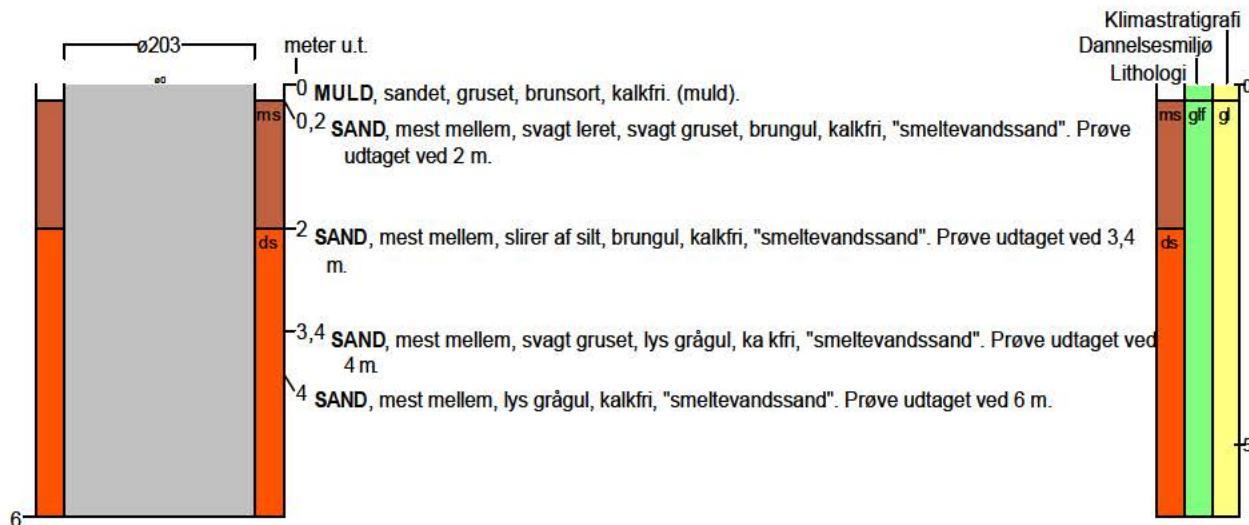
Brøndborer : Glibstrup as
MOB-nr : 43698
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 4
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 484719, 6202734

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

**Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)**

meter u.t.

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0,2 | terrigen - postglacial |
| 0,2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2793

Borested : Nørre Mosegård Plantage
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

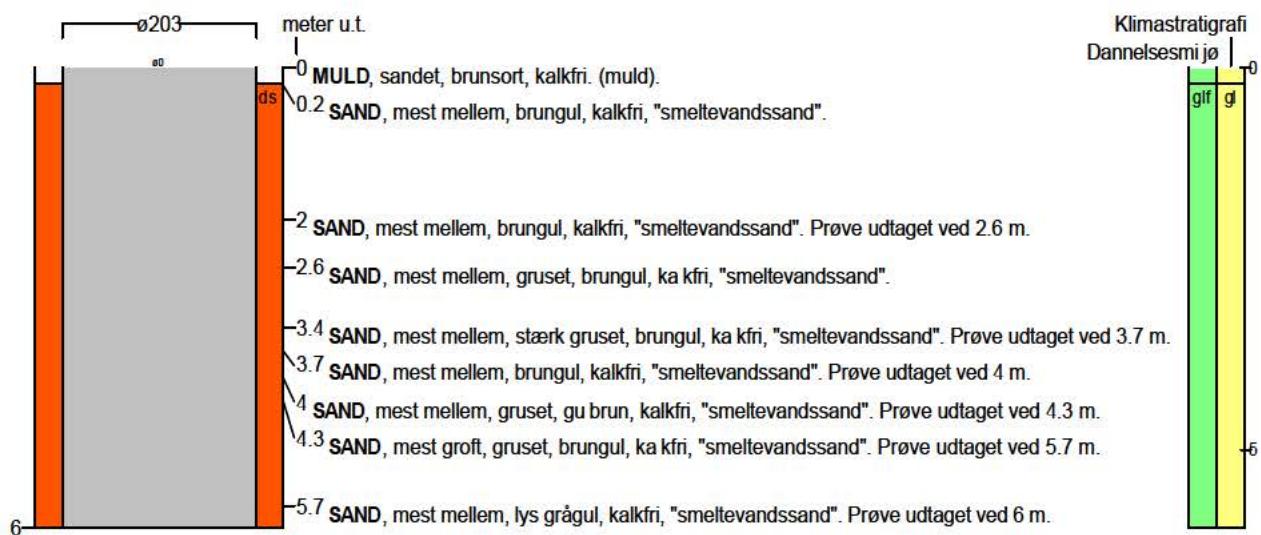
Brøndborer : Glibstrup as
MOB-nr : 43699
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 6
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 484178, 6203105

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

| | | | |
|-----|---|-----|-------------------------|
| 0 | - | 0.2 | terrigen - postglacial |
| 0.2 | - | 6 | glaciofluvial - glacial |

BORERAPPORT

DGU arkivnr : 94. 2794

Borested : Nørre Mosegård Plantage
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 28 meter o. DNN

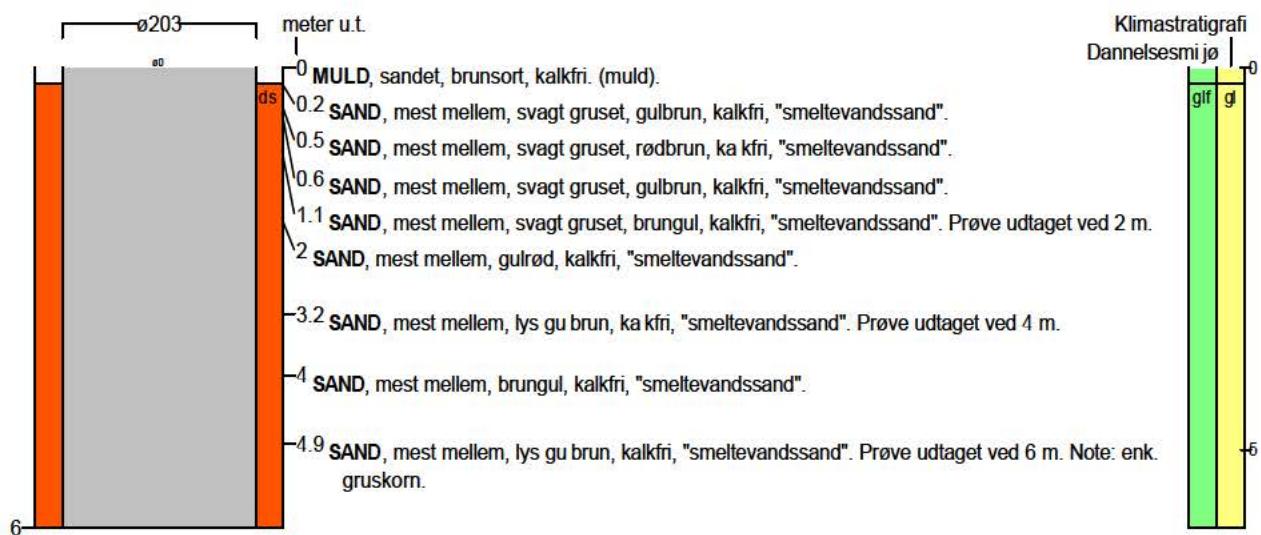
Brøndborer : Glibstrup as
MOB-nr : 43700
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 3
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 484244, 6202616

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2795

Borested : Mosegaardsvej, Gammelmark
7280 Sønder-Felding

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 31 meter o. DNN

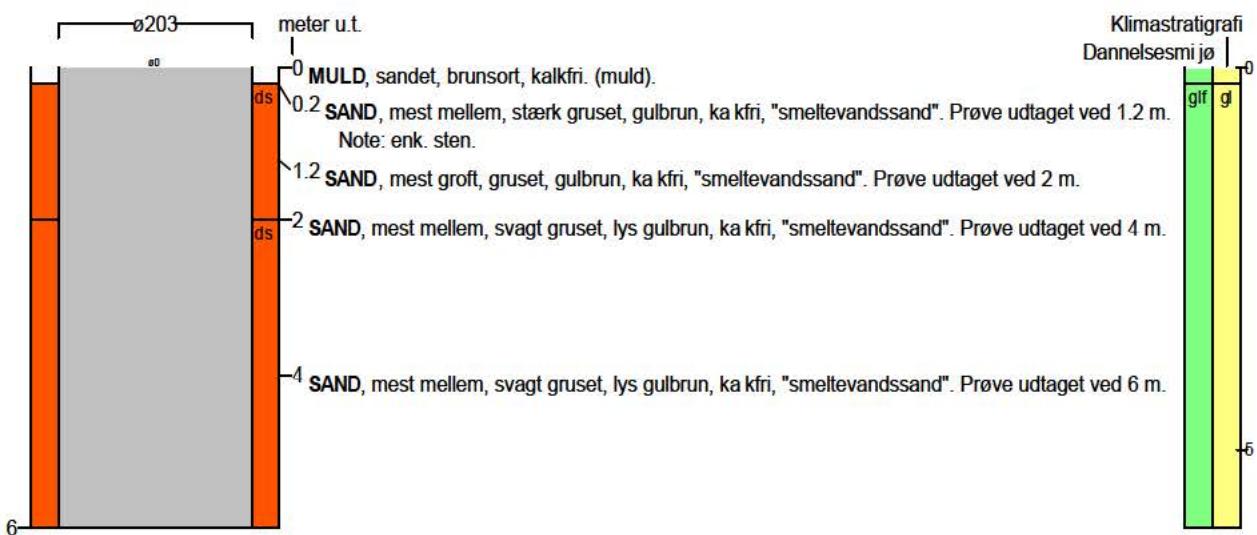
Brøndborer : Glibstrup as
MOB-nr : 43701
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 4
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 485912, 6201601

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2796

Borested : Hedeby, Nørrelandet
6933 Kibæk

Kommune : Aaskov
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 29 meter o. DNN

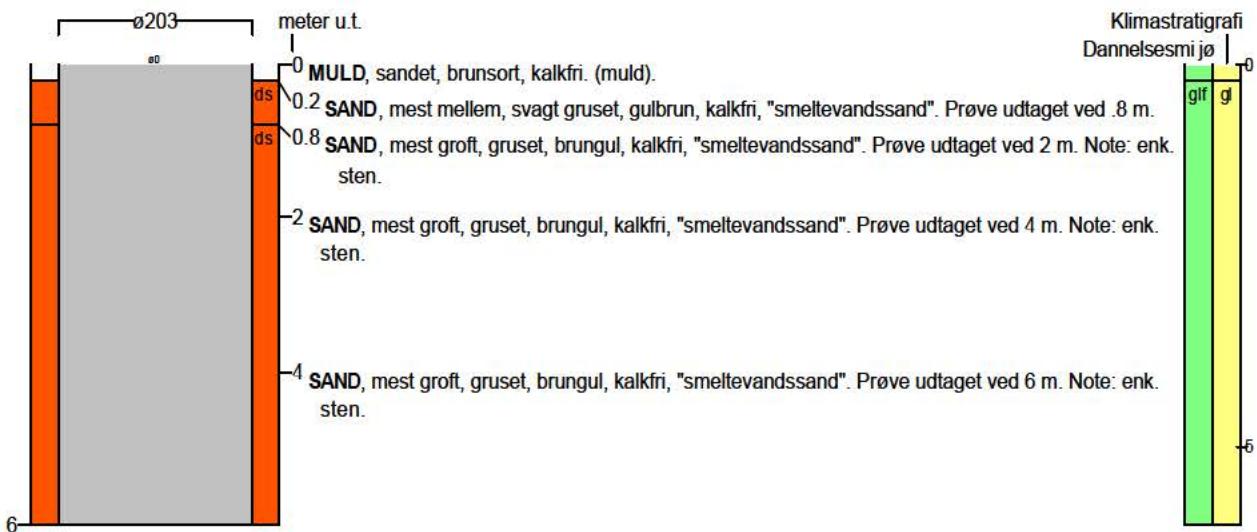
Brøndborer : Glibstrup as
MOB-nr : 43702
BB-journr :
BB-bornr :

Prøver
- modtaget : 23/10 2002 antal : 4
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 486245, 6203635

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

BORERAPPORT

DGU arkivnr : 94. 2797

Borested : Ahler Gårde, Borris
6900 Skjern

Kommune : Skjern
Amt : Ringkøbing

Boringsdato : 23/10 2002

Boringsdybde : 6 meter

Terrænkote : 14 meter o. DNN

Brøndborer : Glibstrup as
MOB-nr : 43703
BB-journr :
BB-bornr :

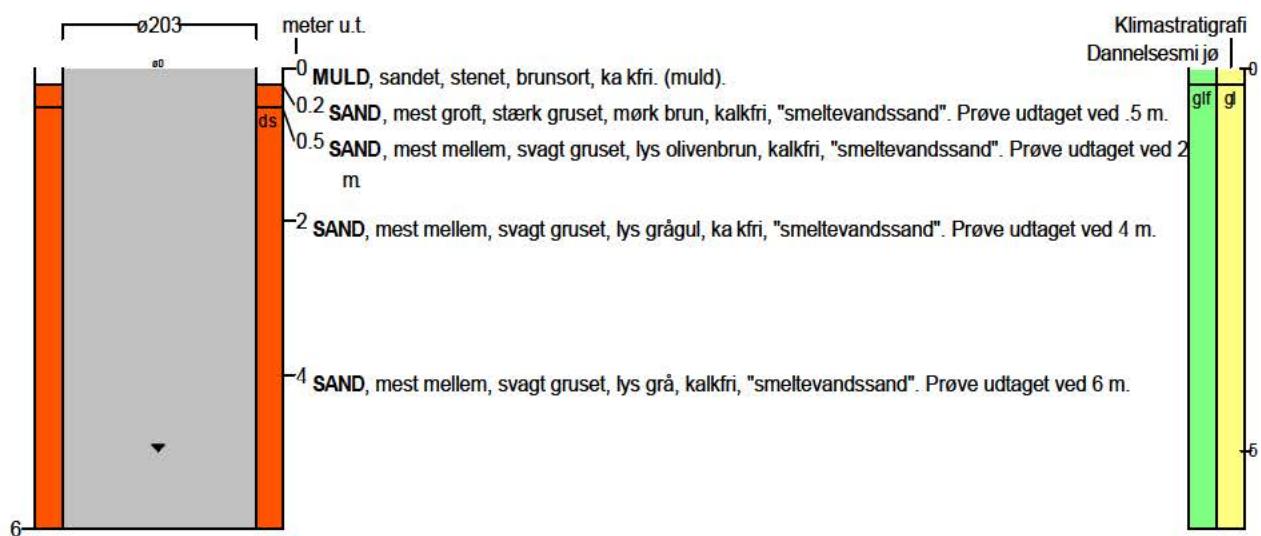
Prøver
- modtaget : 23/10 2002 antal : 4
- beskrevet : 23/10 2002 af : PRJ
- antal gemt : 0

Formål : Råstofboring
Anvendelse : Sløjfet/opgivet bor
Boremetode : Snegleboring

Kortblad : 1114 IINV
UTM-zone : 32
UTM-koord. : 481772, 6202046

Datum : ED50
Koordinatkilde : GEUS
Koordinatmetode : GPS

| Indtag 1 (seneste) | Ro-vandstand 5 meter u.t. | Pejledato 23/10 2002 | Ydelse | Sænkning | Pumpetid |
|--------------------|------------------------------|-------------------------|--------|----------|----------|
|--------------------|------------------------------|-------------------------|--------|----------|----------|



Aflejringsmiljø - Alder (klima-, krono-, litho-, biostratigrafi)

meter u.t.

0 - 0.2 terrigen - postglacial
0.2 - 6 glaciofluvial - glacial

Bilag 2

Grain Size Distribution

Geotechnical

Sample Id: 2761-1-4 0,5-3m
Lab. Id: 20604
SE: 70
Subject: 94. 2761
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 804,24 g

Size Fractions

Sieve Analysis

Gravel

Sand

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 20,54 | 2,55 | 97,45 |
| 4,00 | -2,00 | 25,00 | 3,11 | 94,34 |
| 2,80 | -1,49 | 18,12 | 2,25 | 92,08 |
| 2,00 | -1,00 | 24,26 | 3,02 | 89,07 |
| 1,40 | -0,49 | 53,07 | 6,60 | 82,47 |
| 1,00 | 0,00 | 78,26 | 9,73 | 72,74 |
| 0,710 | 0,49 | 84,53 | 10,51 | 62,23 |
| 0,500 | 1,00 | 104,61 | 13,01 | 49,22 |
| 0,355 | 1,49 | 162,25 | 20,17 | 29,05 |
| 0,250 | 2,00 | 138,27 | 17,19 | 11,85 |
| 0,180 | 2,47 | 48,63 | 6,05 | 5,81 |
| 0,125 | 3,00 | 14,79 | 1,84 | 3,97 |
| 0,090 | 3,47 | 6,39 | 0,79 | 3,17 |
| 0,075 | 3,74 | 2,62 | 0,33 | 2,85 |
| 0,063 | 3,99 | 1,89 | 0,23 | 2,61 |
| < 0,063 | > 3,99 | 21,02 | 2,61 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,61 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,92 |
| Sand, medium | (0,2 mm - 0,6 mm): 47,88 |
| Sand, coarse | (0,6 mm - 2 mm): 33,65 |
| Gravel | (> 2 mm): 10,93 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 4,85 | -2,28 |
| 16% | 84% | 1,54 | -0,62 |
| 25% | 75% | 1,09 | -0,13 |
| 40% | 60% | 0,67 | 0,57 |
| Median 50% | 50% | 0,51 | 0,96 |
| 75% | 25% | 0,33 | 1,60 |
| 84% | 16% | 0,28 | 1,86 |
| 90% | 10% | 0,23 | 2,13 |
| 95% | 5% | 0,16 | 2,68 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,73 |
| Sorting | 1,37 |
| Skewness | -0,29 |
| Kurtosis | 1,18 |
| Uniformity Coefficient | 2,95 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

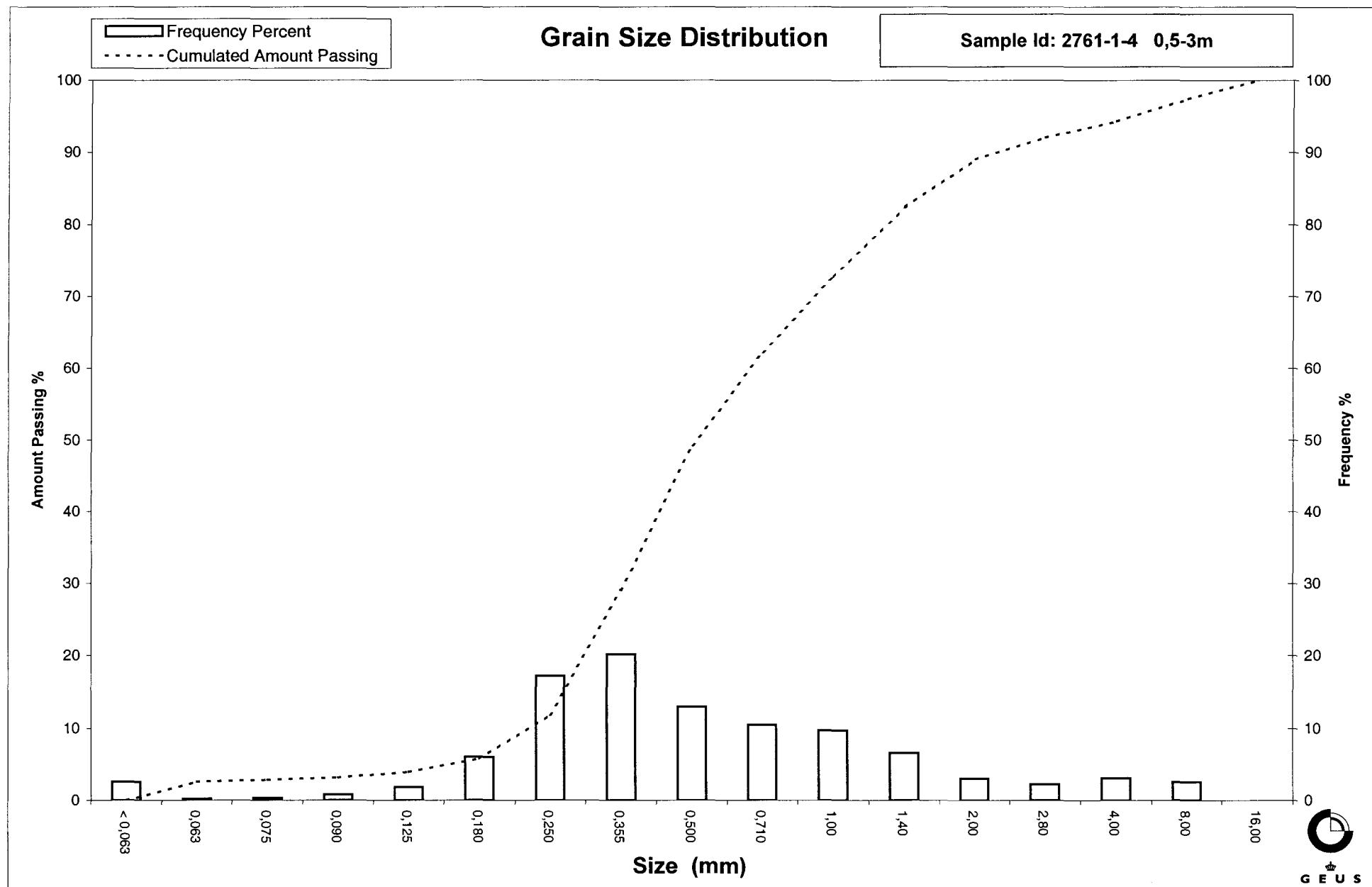
Kurtosis ($(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient (d_{60} / d_{10}) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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 Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
 Email: GEUS@geus.dk
 www.geus.dk



Grain Size Distribution

Geotechnical

Sample Id: 2761-5-6 3,2-4,3m
Lab. Id: 20605
SE: 62
Subject: 94. 2761
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 834,33 g

Size Fractions

| Size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 46,67 | 5,59 | 94,41 |
| 8,00 | -3,00 | 44,40 | 5,32 | 89,09 |
| 4,00 | -2,00 | 48,09 | 5,76 | 83,32 |
| 2,80 | -1,49 | 28,55 | 3,42 | 79,90 |
| 2,00 | -1,00 | 44,96 | 5,39 | 74,51 |
| 1,40 | -0,49 | 74,83 | 8,97 | 65,54 |
| 1,00 | 0,00 | 99,84 | 11,97 | 53,58 |
| 0,710 | 0,49 | 124,50 | 14,92 | 38,65 |
| 0,500 | 1,00 | 128,36 | 15,39 | 23,27 |
| 0,355 | 1,49 | 107,49 | 12,88 | 10,39 |
| 0,250 | 2,00 | 41,20 | 4,94 | 5,45 |
| 0,180 | 2,47 | 7,92 | 0,95 | 4,50 |
| 0,125 | 3,00 | 7,23 | 0,87 | 3,63 |
| 0,090 | 3,47 | 4,75 | 0,57 | 3,06 |
| 0,075 | 3,74 | 2,55 | 0,31 | 2,76 |
| 0,063 | 3,99 | 1,93 | 0,23 | 2,52 |
| < 0,063 | > 3,99 | 21,06 | 2,52 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,52 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,25 |
| Sand, medium | (0,2 mm - 0,6 mm): 25,83 |
| Sand, coarse | (0,6 mm - 2 mm): 43,92 |
| Gravel | (> 2 mm): 25,49 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 4,47 | -2,16 |
| 25% | 75% | 2,07 | -1,05 |
| 40% | 60% | 1,21 | -0,28 |
| Median 50% | 50% | 0,93 | 0,10 |
| 75% | 25% | 0,52 | 0,93 |
| 84% | 16% | 0,42 | 1,26 |
| 90% | 10% | 0,35 | 1,53 |
| 95% | 5% | 0,22 | 2,20 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,27 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,50 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

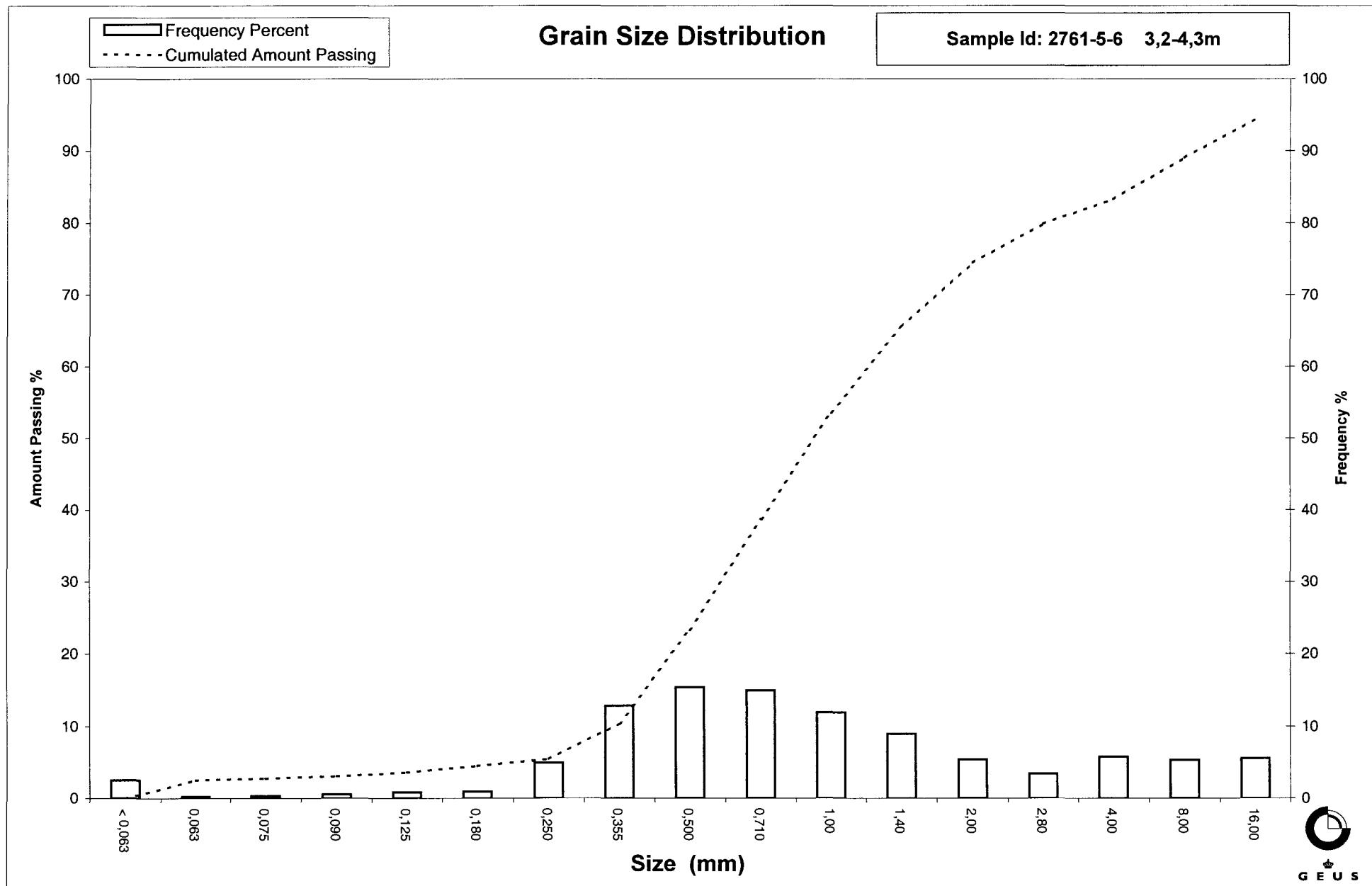
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

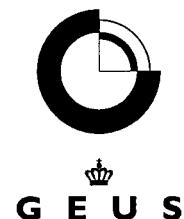
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Grain Size Distribution

Geotechnical

Sample Id: 2761-7 4,3-4,8m
Lab. Id: 20606
SE: 50
Subject: 94. 2761
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 202,232 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,08 | 0,04 | 99,96 |
| 1,40 | -0,49 | 0,13 | 0,06 | 99,90 |
| 1,00 | 0,00 | 0,34 | 0,17 | 99,73 |
| 0,710 | 0,49 | 0,63 | 0,31 | 99,42 |
| 0,500 | 1,00 | 0,93 | 0,46 | 98,96 |
| 0,355 | 1,49 | 11,78 | 5,83 | 93,13 |
| 0,250 | 2,00 | 92,77 | 45,88 | 47,26 |
| 0,180 | 2,47 | 67,90 | 33,58 | 13,68 |
| 0,125 | 3,00 | 16,68 | 8,25 | 5,43 |
| 0,090 | 3,47 | 5,28 | 2,61 | 2,82 |
| 0,075 | 3,74 | 1,39 | 0,69 | 2,13 |
| 0,063 | 3,99 | 0,93 | 0,46 | 1,67 |
| < 0,063 | > 3,99 | 3,38 | 1,67 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 1,67 |
| Sand, fine | (0,063 mm - 0,200 mm): 21,60 |
| Sand, medium | (0,2 mm - 0,6 mm): 75,90 |
| Sand, coarse | (0,6 mm - 2 mm): 0,78 |
| Gravel | (> 2 mm): 0,04 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,40 | 1,32 |
| 16% | 84% | 0,33 | 1,58 |
| 25% | 75% | 0,31 | 1,67 |
| 40% | 60% | 0,28 | 1,84 |
| Median 50% | 50% | 0,26 | 1,96 |
| 75% | 25% | 0,20 | 2,30 |
| 84% | 16% | 0,18 | 2,44 |
| 90% | 10% | 0,16 | 2,69 |
| 95% | 5% | 0,12 | 3,07 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,99 |
| Sorting | 0,48 |
| Skewness | 0,18 |
| Kurtosis | 1,15 |
| Uniformity Coefficient | 1,80 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

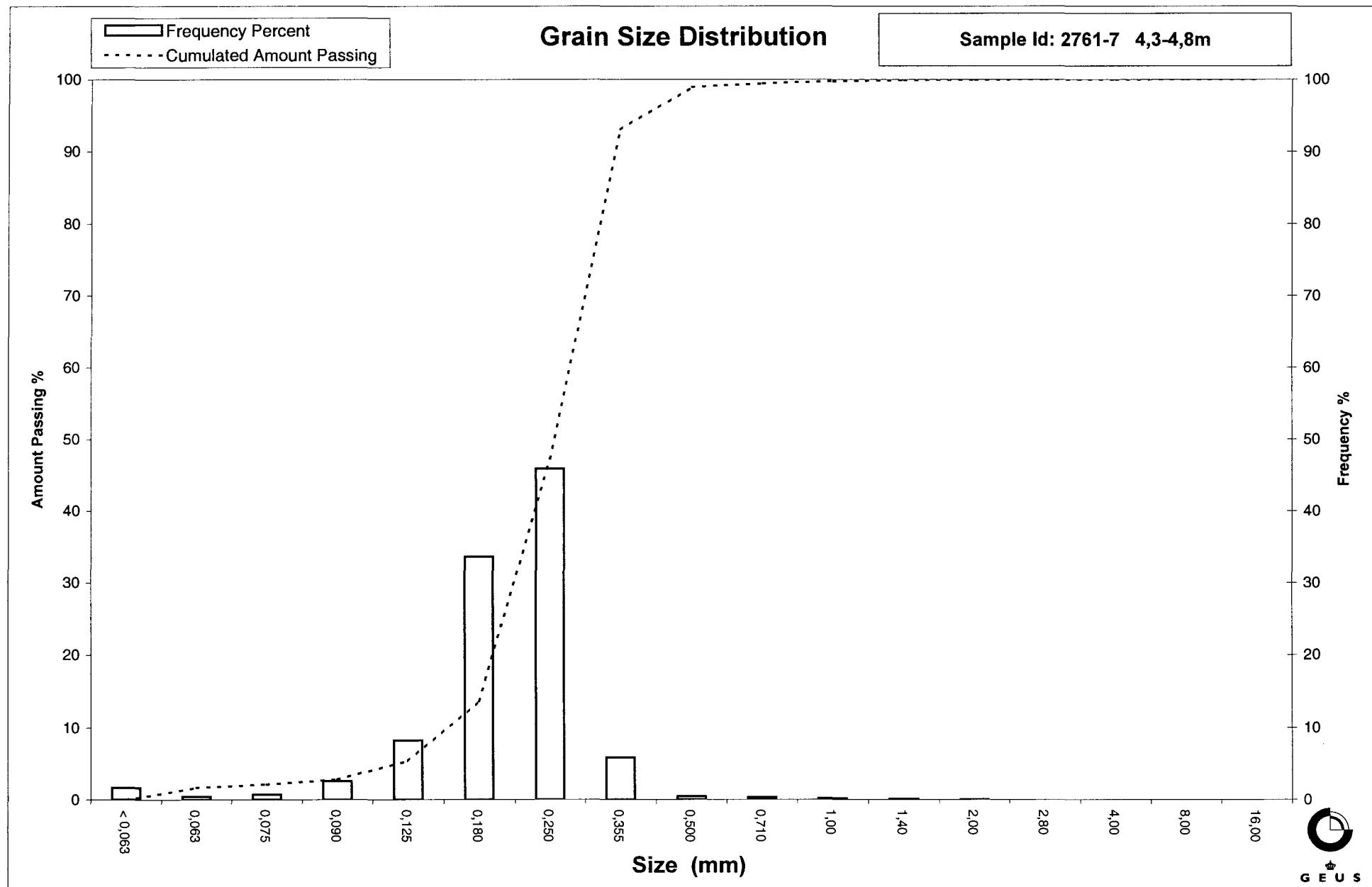
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

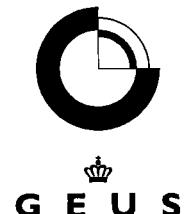
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Grain Size Distribution

Geotechnical

Sample Id: 2761-8-10 4,8-6m
Lab. Id: 20607
SE: 36
Subject: 94. 2761
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 716,535 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 70,31 | 9,81 | 90,19 |
| 8,00 | -3,00 | 20,99 | 2,93 | 87,26 |
| 4,00 | -2,00 | 17,96 | 2,51 | 84,75 |
| 2,80 | -1,49 | 8,55 | 1,19 | 83,56 |
| 2,00 | -1,00 | 7,62 | 1,06 | 82,50 |
| 1,40 | -0,49 | 8,60 | 1,20 | 81,30 |
| 1,00 | 0,00 | 24,83 | 3,46 | 77,83 |
| 0,710 | 0,49 | 74,60 | 10,41 | 67,42 |
| 0,500 | 1,00 | 200,58 | 27,99 | 39,43 |
| 0,355 | 1,49 | 131,47 | 18,35 | 21,08 |
| 0,250 | 2,00 | 48,15 | 6,72 | 14,36 |
| 0,180 | 2,47 | 36,37 | 5,08 | 9,28 |
| 0,125 | 3,00 | 35,16 | 4,91 | 4,38 |
| 0,090 | 3,47 | 10,39 | 1,45 | 2,92 |
| 0,075 | 3,74 | 3,35 | 0,47 | 2,46 |
| 0,063 | 3,99 | 1,79 | 0,25 | 2,21 |
| < 0,063 | > 3,99 | 15,82 | 2,21 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,21 |
| Sand, fine | (0,063 mm - 0,200 mm): 8,53 |
| Sand, medium | (0,2 mm - 0,6 mm): 42,02 |
| Sand, coarse | (0,6 mm - 2 mm): 29,74 |
| Gravel | (> 2 mm): 17,50 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 3,24 | -1,70 |
| 25% | 75% | 0,92 | 0,12 |
| 40% | 60% | 0,65 | 0,61 |
| Median 50% | 50% | 0,58 | 0,79 |
| 75% | 25% | 0,39 | 1,37 |
| 84% | 16% | 0,28 | 1,86 |
| 90% | 10% | 0,19 | 2,40 |
| 95% | 5% | 0,13 | 2,92 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,32 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,45 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

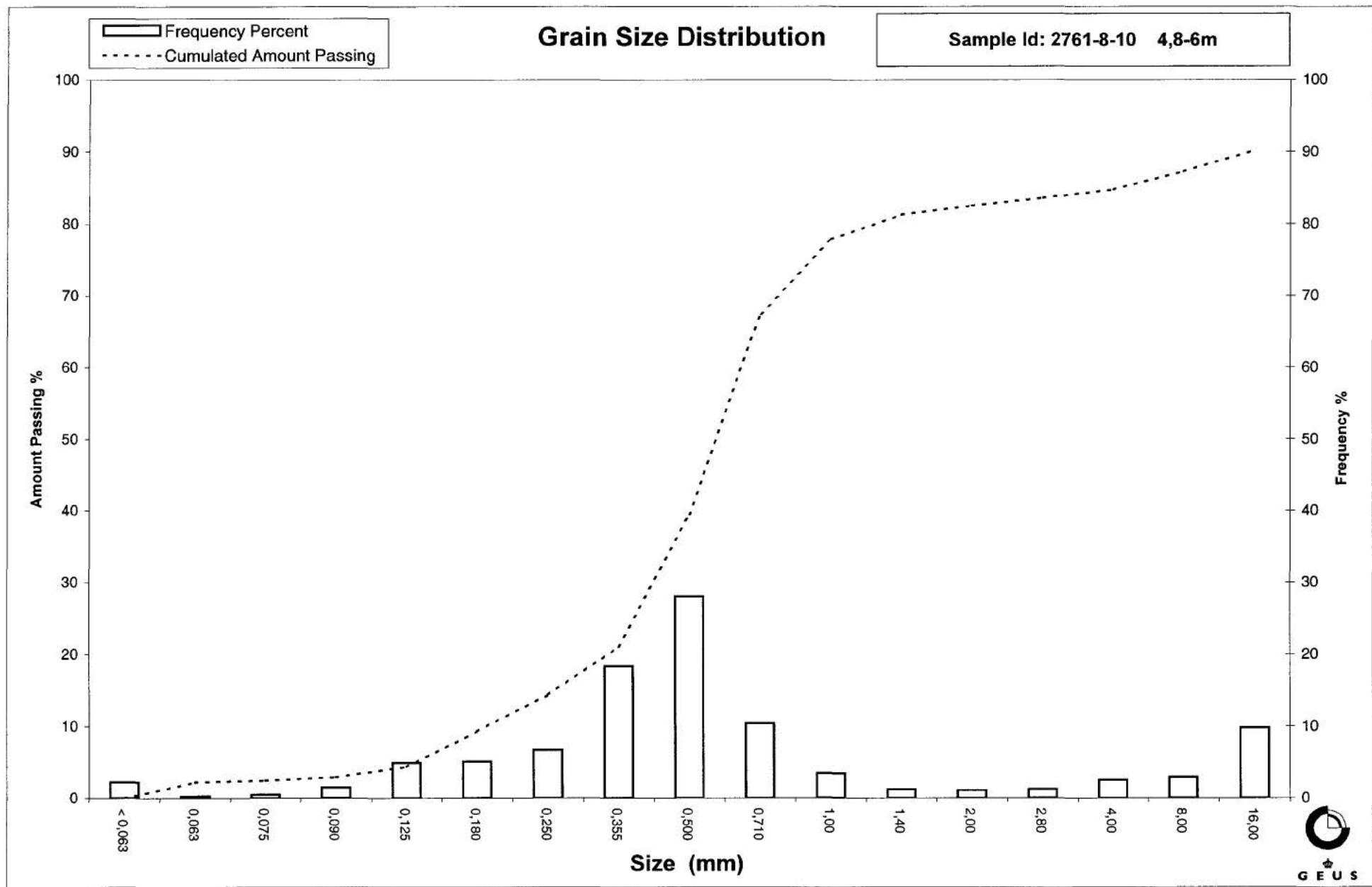
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2762-1 0,5-1m
Lab. Id: 20608
SE: 74
Subject: 94. 2762
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 238,47 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,11 | 0,04 | 99,96 |
| 2,80 | -1,49 | 0,03 | 0,01 | 99,94 |
| 2,00 | -1,00 | 0,03 | 0,01 | 99,93 |
| 1,40 | -0,49 | 0,17 | 0,07 | 99,86 |
| 1,00 | 0,00 | 1,55 | 0,65 | 99,21 |
| 0,710 | 0,49 | 7,25 | 3,04 | 96,18 |
| 0,500 | 1,00 | 30,56 | 12,81 | 83,36 |
| 0,355 | 1,49 | 66,84 | 28,03 | 55,33 |
| 0,250 | 2,00 | 71,45 | 29,96 | 25,37 |
| 0,180 | 2,47 | 32,43 | 13,60 | 11,78 |
| 0,125 | 3,00 | 11,99 | 5,03 | 6,75 |
| 0,090 | 3,47 | 4,89 | 2,05 | 4,70 |
| 0,075 | 3,74 | 2,07 | 0,87 | 3,83 |
| 0,063 | 3,99 | 1,95 | 0,82 | 3,01 |
| < 0,063 | > 3,99 | 7,19 | 3,01 | 0,00 |

Sieve Analysis

Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,01 |
| Sand, fine | (0,063 mm - 0,200 mm): 12,65 |
| Sand, medium | (0,2 mm - 0,6 mm): 73,80 |
| Sand, coarse | (0,6 mm - 2 mm): 10,47 |
| Gravel | (> 2 mm): 0,07 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,69 | 0,53 |
| 16% | 84% | 0,51 | 0,97 |
| 25% | 75% | 0,46 | 1,13 |
| 40% | 60% | 0,38 | 1,40 |
| Median 50% | 50% | 0,34 | 1,57 |
| 75% | 25% | 0,25 | 2,01 |
| 84% | 16% | 0,20 | 2,31 |
| 90% | 10% | 0,16 | 2,64 |
| 95% | 5% | 0,10 | 3,39 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,62 |
| Sorting | 0,77 |
| Skewness | 0,19 |
| Kurtosis | 1,33 |
| Uniformity Coefficient | 2,36 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

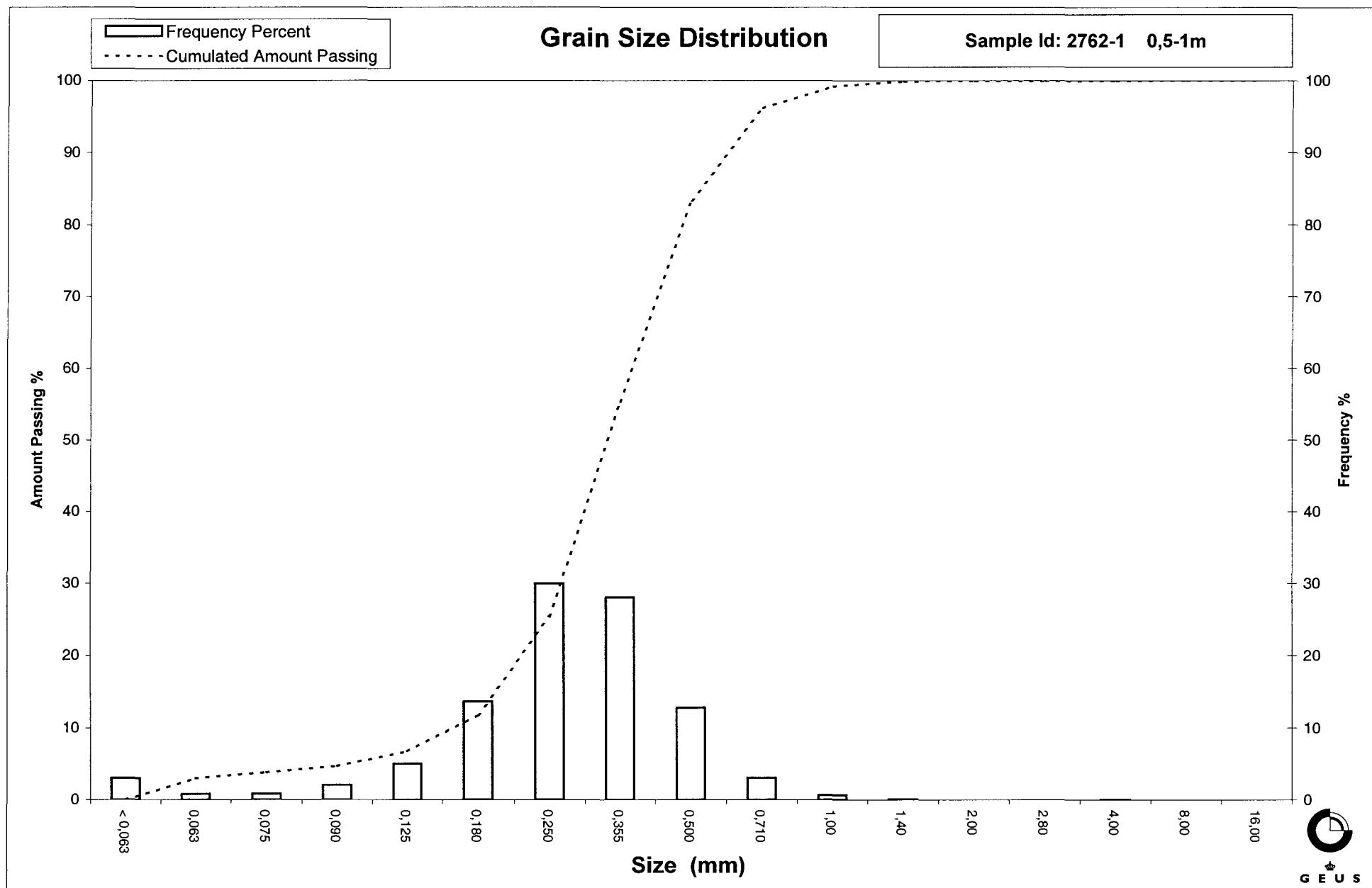
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2762-2 1,10-1,5m
Lab. Id: 20609
SE: 6
Subject: 94. 2762
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 655,38 g

Size Fractions

Sieve Analysis

Gravel

Sand

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 146,16 | 22,30 | 77,70 |
| 8,00 | -3,00 | 3,09 | 0,47 | 77,23 |
| 4,00 | -2,00 | 2,52 | 0,38 | 76,84 |
| 2,80 | -1,49 | 0,33 | 0,05 | 76,79 |
| 2,00 | -1,00 | 0,90 | 0,14 | 76,65 |
| 1,40 | -0,49 | 0,60 | 0,09 | 76,56 |
| 1,00 | 0,00 | 1,59 | 0,24 | 76,32 |
| 0,710 | 0,49 | 5,73 | 0,87 | 75,45 |
| 0,500 | 1,00 | 18,75 | 2,86 | 72,59 |
| 0,355 | 1,49 | 29,97 | 4,57 | 68,01 |
| 0,250 | 2,00 | 47,19 | 7,20 | 60,81 |
| 0,180 | 2,47 | 28,29 | 4,32 | 56,50 |
| 0,125 | 3,00 | 30,93 | 4,72 | 51,78 |
| 0,090 | 3,47 | 19,26 | 2,94 | 48,84 |
| 0,075 | 3,74 | 20,13 | 3,07 | 45,77 |
| 0,063 | 3,99 | 36,96 | 5,64 | 40,13 |
| < 0,063 | > 3,99 | 262,98 | 40,13 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 40,13 |
| Sand, fine | (0,063 mm - 0,200 mm): 17,60 |
| Sand, medium | (0,2 mm - 0,6 mm): 16,22 |
| Sand, coarse | (0,6 mm - 2 mm): 2,71 |
| Gravel | (> 2 mm): 23,35 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | 0,68 | 0,56 |
| 40% | 60% | 0,24 | 2,08 |
| Median 50% | 50% | 0,10 | 3,27 |
| 75% | 25% | ----- | ----- |
| 84% | 16% | ----- | ----- |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,27 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

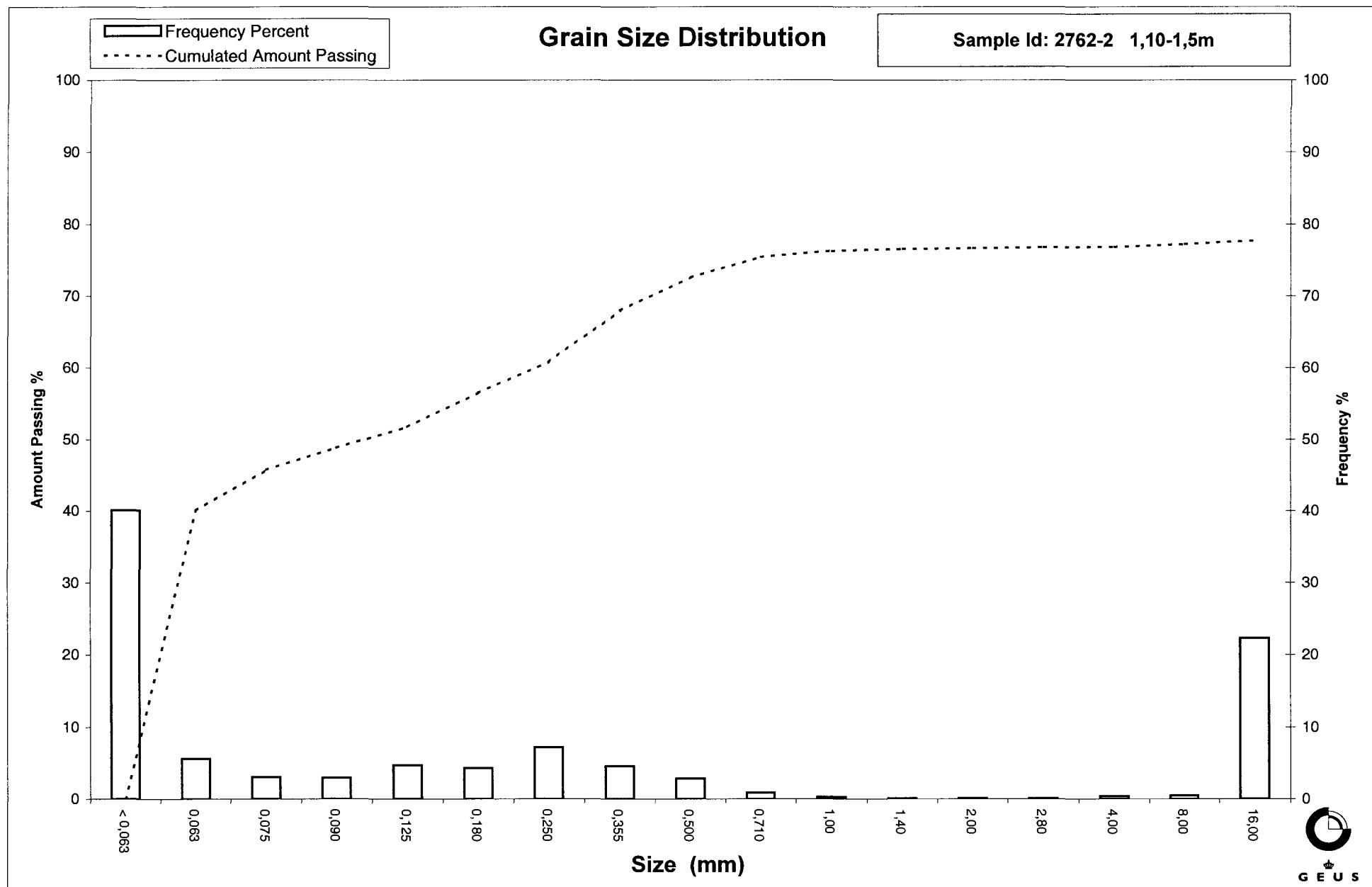
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

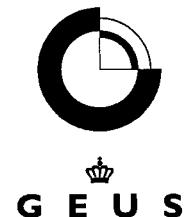
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Grain Size Distribution

Geotechnical

Sample Id: 2762-3-4 1,5-2,75m
Lab. Id: 20610
SE: 85
Subject: 94. 2762
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 818,76 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 38,58 | 4,71 | 95,29 | |
| 4,00 | -2,00 | 10,14 | 1,24 | 94,05 | |
| 2,80 | -1,49 | 6,09 | 0,74 | 93,31 | |
| 2,00 | -1,00 | 7,86 | 0,96 | 92,35 | |
| 1,40 | -0,49 | 10,40 | 1,27 | 91,08 | |
| 1,00 | 0,00 | 24,99 | 3,05 | 88,02 | |
| 0,710 | 0,49 | 67,91 | 8,29 | 79,73 | |
| 0,500 | 1,00 | 188,52 | 23,03 | 56,70 | |
| 0,355 | 1,49 | 252,76 | 30,87 | 25,83 | |
| 0,250 | 2,00 | 136,08 | 16,62 | 9,21 | |
| 0,180 | 2,47 | 33,25 | 4,06 | 5,15 | |
| 0,125 | 3,00 | 17,93 | 2,19 | 2,96 | |
| 0,090 | 3,47 | 6,60 | 0,81 | 2,16 | |
| 0,075 | 3,74 | 2,60 | 0,32 | 1,84 | |
| 0,063 | 3,99 | 1,60 | 0,20 | 1,64 | |
| < 0,063 | > 3,99 | 13,46 | 1,64 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,64 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,67 |
| Sand, medium | (0,2 mm - 0,6 mm): 61,36 |
| Sand, coarse | (0,6 mm - 2 mm): 24,68 |
| Gravel | (> 2 mm): 7,65 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 7,07 | -2,82 |
| 16% | 84% | 0,86 | 0,22 |
| 25% | 75% | 0,67 | 0,58 |
| 40% | 60% | 0,53 | 0,92 |
| Median 50% | 50% | 0,47 | 1,09 |
| 75% | 25% | 0,35 | 1,52 |
| 84% | 16% | 0,29 | 1,77 |
| 90% | 10% | 0,25 | 1,97 |
| 95% | 5% | 0,18 | 2,50 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,03 |
| Sorting | 1,20 |
| Skewness | -0,30 |
| Kurtosis | 2,34 |
| Uniformity Coefficient | 2,08 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

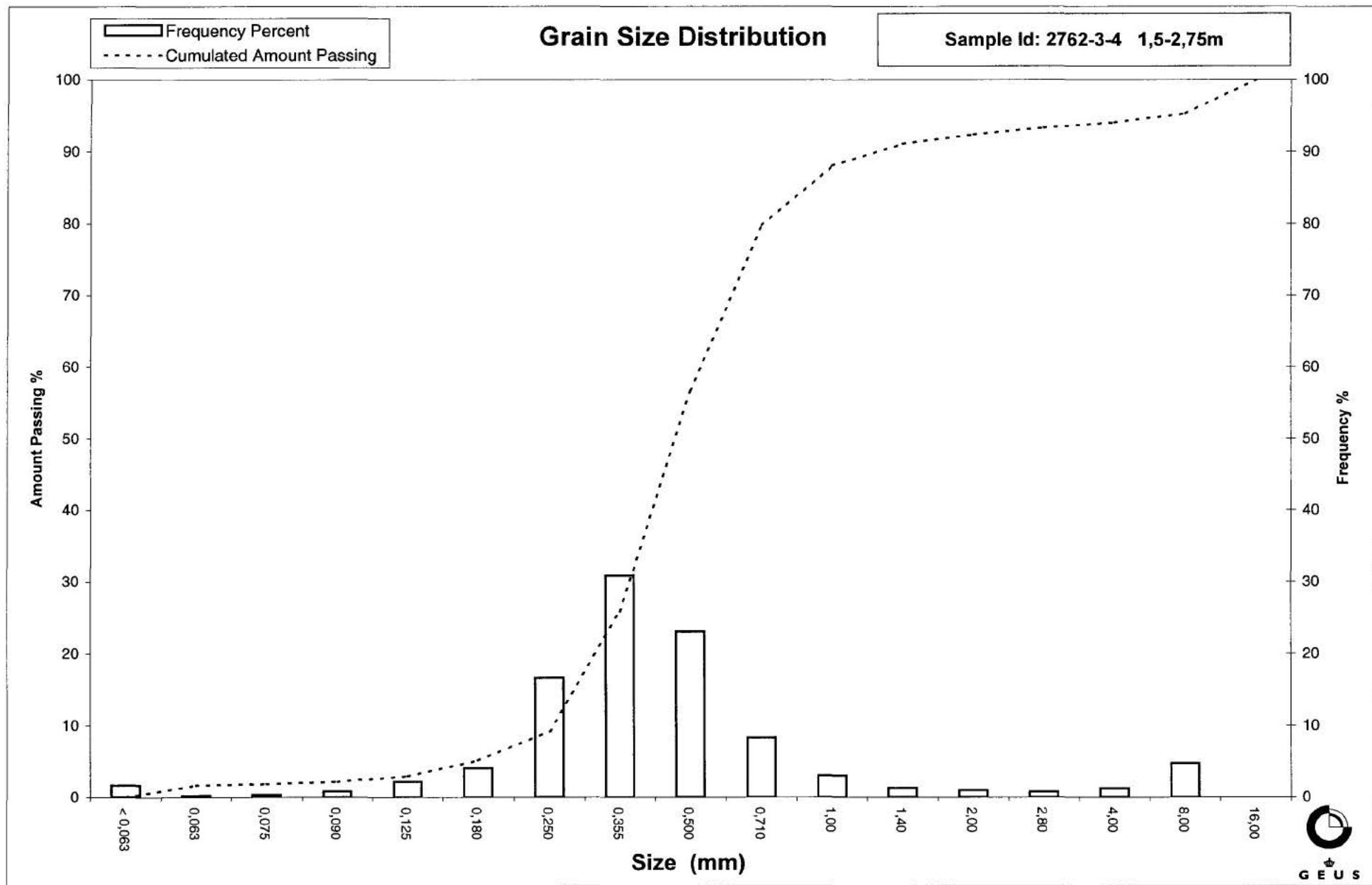
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

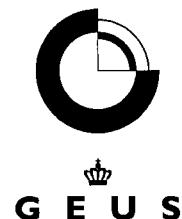
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Grain Size Distribution

Geotechnical

Sample Id: 2762-5 4-5,0m
Lab. Id: 20611
SE: 84
Subject: 94. 2762
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 249,04 g

Size Fractions

Sieve Analysis

| Size | Size | Weight | Weight | Cumulated amount passing | |
|---------|--------|--------|--------|--------------------------|---|
| | | | | mm | Φ |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 | |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 | |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 | |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 | |
| 1,40 | -0,49 | 0,05 | 0,02 | 99,98 | |
| 1,00 | 0,00 | 0,30 | 0,12 | 99,86 | |
| 0,710 | 0,49 | 1,18 | 0,48 | 99,39 | |
| 0,500 | 1,00 | 3,87 | 1,55 | 97,83 | |
| 0,355 | 1,49 | 10,77 | 4,32 | 93,51 | |
| 0,250 | 2,00 | 84,83 | 34,06 | 59,45 | |
| 0,180 | 2,47 | 100,26 | 40,26 | 19,19 | |
| 0,125 | 3,00 | 34,70 | 13,93 | 5,25 | |
| 0,090 | 3,47 | 6,16 | 2,47 | 2,78 | |
| 0,075 | 3,74 | 1,18 | 0,48 | 2,31 | |
| 0,063 | 3,99 | 0,74 | 0,30 | 2,01 | |
| < 0,063 | > 3,99 | 5,00 | 2,01 | 0,00 | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,01 |
| Sand, fine | (0,063 mm - 0,200 mm): 28,68 |
| Sand, medium | (0,2 mm - 0,6 mm): 67,88 |
| Sand, coarse | (0,6 mm - 2 mm): 1,43 |
| Gravel | (> 2 mm): 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,41 | 1,30 |
| 16% | 84% | 0,33 | 1,62 |
| 25% | 75% | 0,30 | 1,75 |
| 40% | 60% | 0,25 | 1,99 |
| Median 50% | 50% | 0,23 | 2,10 |
| 75% | 25% | 0,19 | 2,40 |
| 84% | 16% | 0,17 | 2,58 |
| 90% | 10% | 0,14 | 2,80 |
| 95% | 5% | 0,12 | 3,04 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,10 |
| Sorting | 0,50 |
| Skewness | 0,04 |
| Kurtosis | 1,10 |
| Uniformity Coefficient | 1,75 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

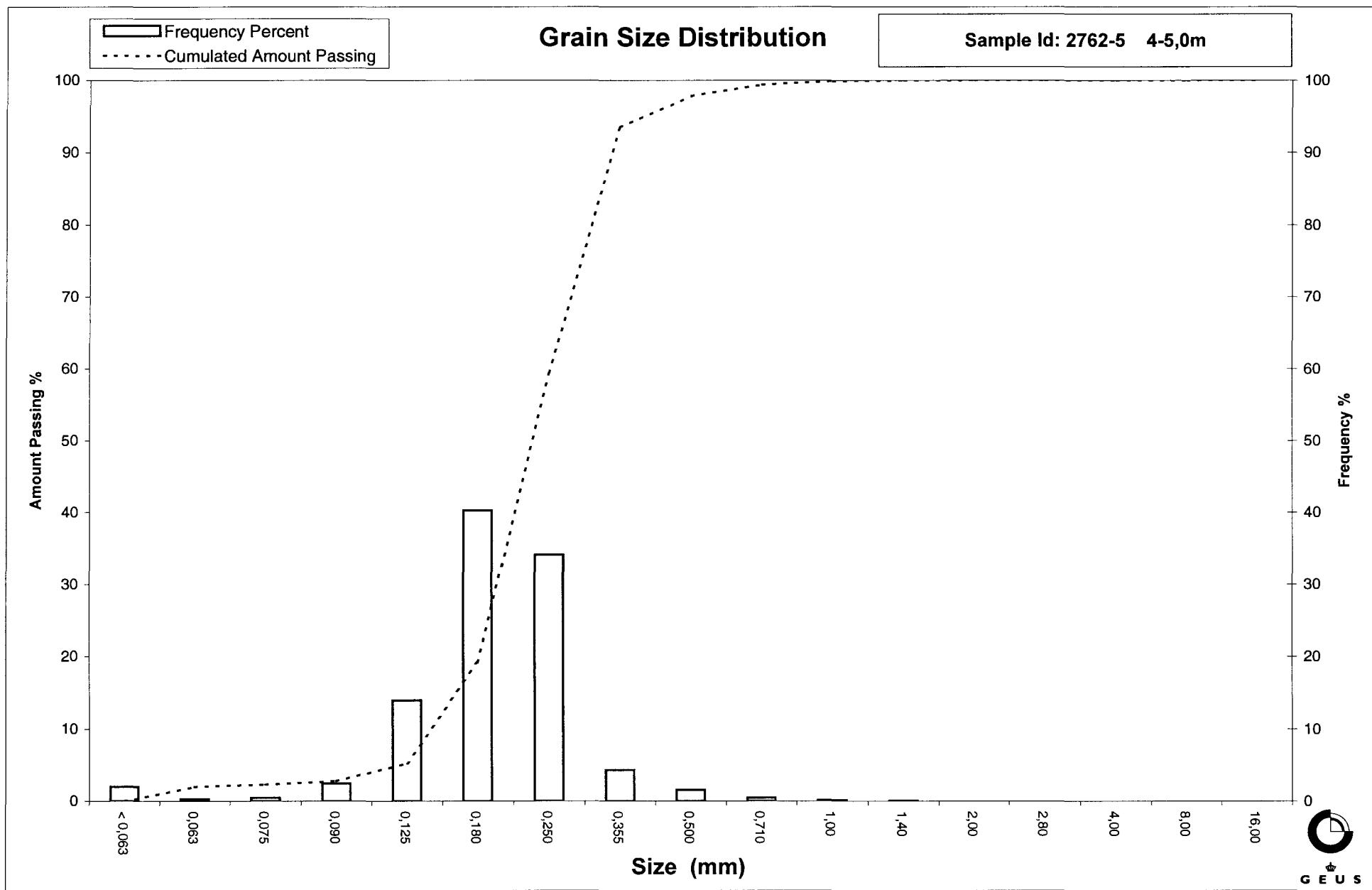
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2763-1 0,2-0,5m
Lab. Id: 20612
SE: 85
Subject: 94. 2763
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 743,24 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 21,88 | 2,94 | 97,06 | |
| 8,00 | -3,00 | 108,64 | 14,62 | 82,44 | |
| 4,00 | -2,00 | 54,36 | 7,31 | 75,13 | |
| 2,80 | -1,49 | 34,74 | 4,67 | 70,45 | |
| 2,00 | -1,00 | 33,22 | 4,47 | 65,98 | |
| 1,40 | -0,49 | 35,44 | 4,77 | 61,21 | |
| 1,00 | 0,00 | 45,18 | 6,08 | 55,13 | |
| 0,710 | 0,49 | 50,47 | 6,79 | 48,34 | |
| 0,500 | 1,00 | 77,43 | 10,42 | 37,93 | |
| 0,355 | 1,49 | 93,50 | 12,58 | 25,34 | |
| 0,250 | 2,00 | 76,39 | 10,28 | 15,07 | |
| 0,180 | 2,47 | 54,43 | 7,32 | 7,74 | |
| 0,125 | 3,00 | 34,07 | 4,58 | 3,16 | |
| 0,090 | 3,47 | 12,88 | 1,73 | 1,43 | |
| 0,075 | 3,74 | 2,97 | 0,40 | 1,03 | |
| 0,063 | 3,99 | 1,87 | 0,25 | 0,78 | |
| < 0,063 | > 3,99 | 5,77 | 0,78 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,78 |
| Sand, fine | (0,063 mm - 0,200 mm): 9,06 |
| Sand, medium | (0,2 mm - 0,6 mm): 33,05 |
| Sand, coarse | (0,6 mm - 2 mm): 23,09 |
| Gravel | (> 2 mm): 34,02 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 14,87 | -3,89 |
| 16% | 84% | 8,85 | -3,15 |
| 25% | 75% | 3,97 | -1,99 |
| 40% | 60% | 1,32 | -0,40 |
| Median 50% | 50% | 0,78 | 0,36 |
| 75% | 25% | 0,35 | 1,51 |
| 84% | 16% | 0,26 | 1,95 |
| 90% | 10% | 0,20 | 2,31 |
| 95% | 5% | 0,15 | 2,77 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,28 |
| Sorting | 2,28 |
| Skewness | -0,33 |
| Kurtosis | 0,78 |
| Uniformity Coefficient | 6,55 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

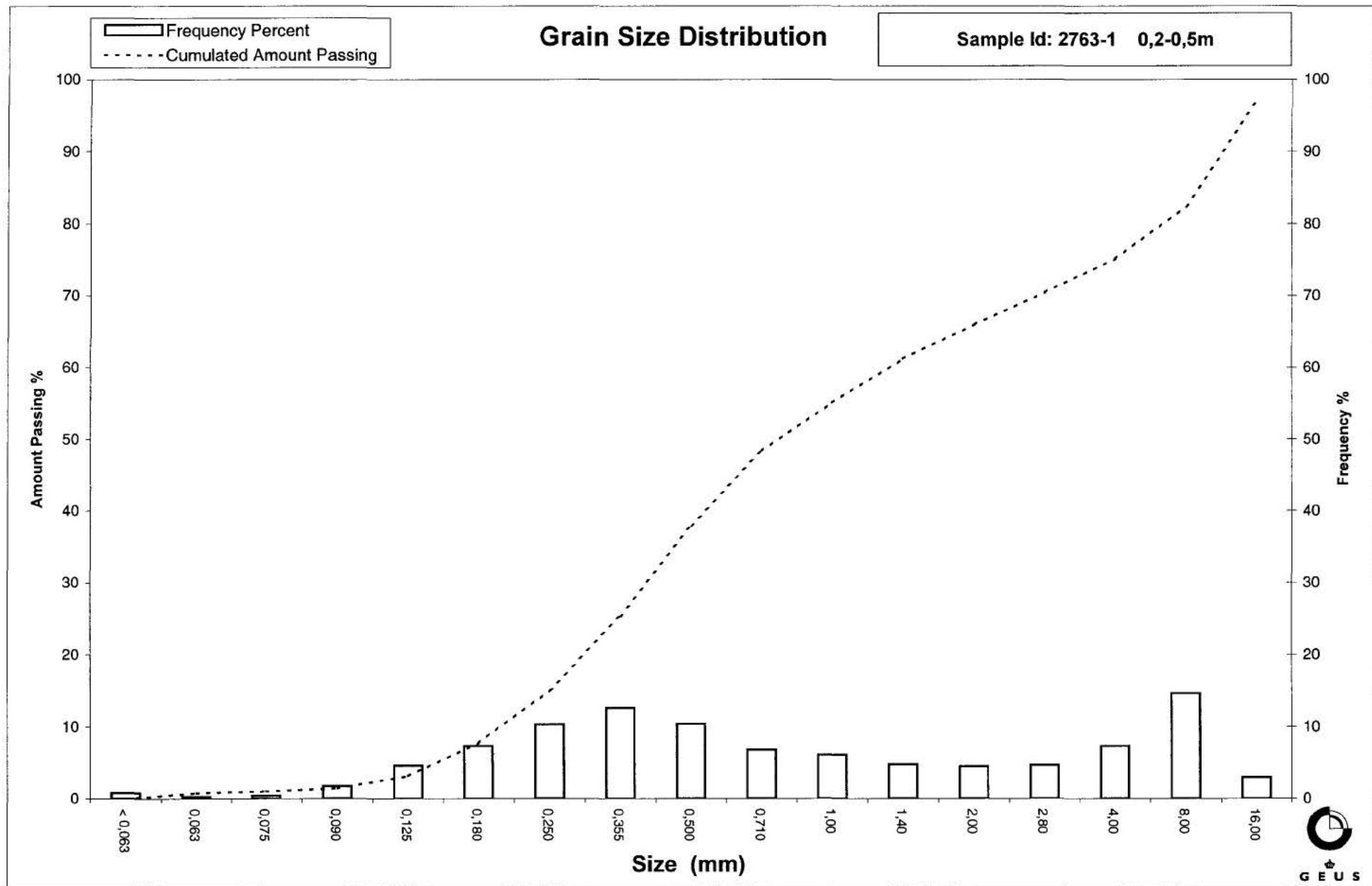
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

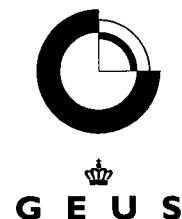
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Grain Size Distribution

Geotechnical

Sample Id: 2763-2 0,5-1m
Lab. Id: 20613
SE: 90
Subject: 94. 2763
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 607,48 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 20,66 | 3,40 | 96,60 |
| 4,00 | -2,00 | 7,74 | 1,27 | 95,32 |
| 2,80 | -1,49 | 8,44 | 1,39 | 93,94 |
| 2,00 | -1,00 | 11,52 | 1,90 | 92,04 |
| 1,40 | -0,49 | 25,30 | 4,17 | 87,87 |
| 1,00 | 0,00 | 38,49 | 6,34 | 81,54 |
| 0,710 | 0,49 | 66,47 | 10,94 | 70,60 |
| 0,500 | 1,00 | 123,24 | 20,29 | 50,31 |
| 0,355 | 1,49 | 125,38 | 20,64 | 29,67 |
| 0,250 | 2,00 | 113,11 | 18,62 | 11,05 |
| 0,180 | 2,47 | 38,49 | 6,34 | 4,71 |
| 0,125 | 3,00 | 12,60 | 2,07 | 2,64 |
| 0,090 | 3,47 | 3,27 | 0,54 | 2,10 |
| 0,075 | 3,74 | 1,61 | 0,26 | 1,84 |
| 0,063 | 3,99 | 1,18 | 0,19 | 1,64 |
| < 0,063 | > 3,99 | 9,98 | 1,64 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,64 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,88 |
| Sand, medium | (0,2 mm - 0,6 mm): 53,45 |
| Sand, coarse | (0,6 mm - 2 mm): 32,07 |
| Gravel | (> 2 mm): 7,96 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 3,72 | -1,90 |
| 16% | 84% | 1,16 | -0,21 |
| 25% | 75% | 0,83 | 0,27 |
| 40% | 60% | 0,60 | 0,74 |
| Median 50% | 50% | 0,50 | 1,01 |
| 75% | 25% | 0,33 | 1,61 |
| 84% | 16% | 0,28 | 1,85 |
| 90% | 10% | 0,24 | 2,07 |
| 95% | 5% | 0,18 | 2,45 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,88 |
| Sorting | 1,17 |
| Skewness | -0,26 |
| Kurtosis | 1,34 |
| Uniformity Coefficient | 2,52 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

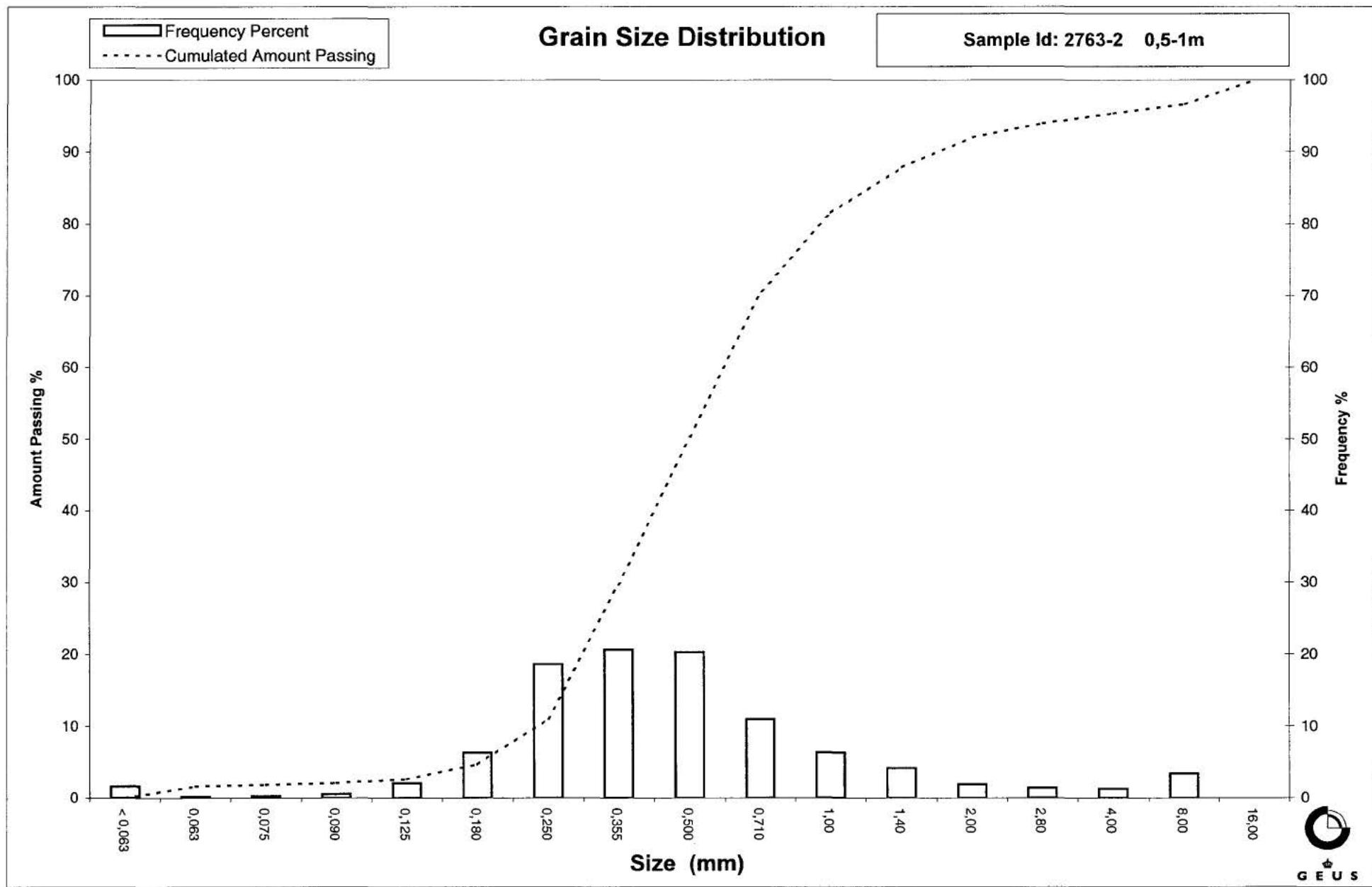
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient (d_{60} / d_{10}) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

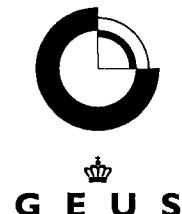
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Grain Size Distribution

Geotechnical

Sample Id: 2763-3 1-1,5m
Lab. Id: 20614
SE: 42
Subject: 94. 2763
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 626,72 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 33,12 | 5,28 | 94,72 | |
| 8,00 | -3,00 | 110,12 | 17,57 | 77,14 | |
| 4,00 | -2,00 | 59,42 | 9,48 | 67,66 | |
| 2,80 | -1,49 | 28,30 | 4,52 | 63,15 | |
| 2,00 | -1,00 | 30,40 | 4,85 | 58,30 | |
| 1,40 | -0,49 | 40,18 | 6,41 | 51,89 | |
| 1,00 | 0,00 | 59,70 | 9,53 | 42,36 | |
| 0,710 | 0,49 | 59,98 | 9,57 | 32,79 | |
| 0,500 | 1,00 | 67,74 | 10,81 | 21,98 | |
| 0,355 | 1,49 | 54,00 | 8,62 | 13,36 | |
| 0,250 | 2,00 | 32,09 | 5,12 | 8,24 | |
| 0,180 | 2,47 | 14,86 | 2,37 | 5,87 | |
| 0,125 | 3,00 | 8,88 | 1,42 | 4,46 | |
| 0,090 | 3,47 | 5,61 | 0,89 | 3,56 | |
| 0,075 | 3,74 | 2,57 | 0,41 | 3,15 | |
| 0,063 | 3,99 | 2,10 | 0,34 | 2,82 | |
| < 0,063 | > 3,99 | 17,66 | 2,82 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,82 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,73 |
| Sand, medium | (0,2 mm - 0,6 mm): 20,58 |
| Sand, coarse | (0,6 mm - 2 mm): 31,17 |
| Gravel | (> 2 mm): 41,70 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 11,12 | -3,48 |
| 25% | 75% | 7,10 | -2,83 |
| 40% | 60% | 2,28 | -1,19 |
| Median 50% | 50% | 1,32 | -0,40 |
| 75% | 25% | 0,56 | 0,84 |
| 84% | 16% | 0,40 | 1,32 |
| 90% | 10% | 0,29 | 1,81 |
| 95% | 5% | 0,15 | 2,78 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,85 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 7,97 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

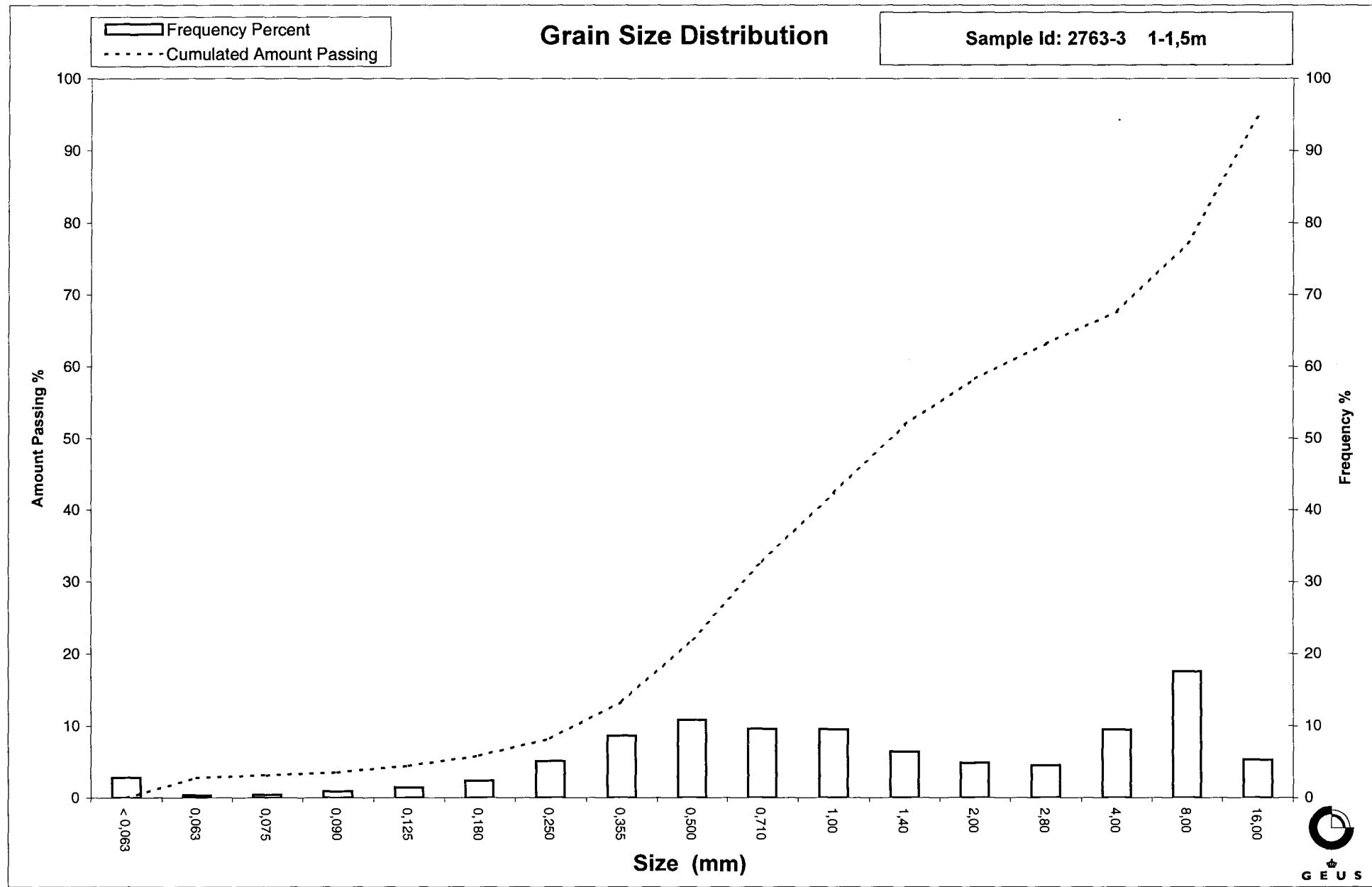
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

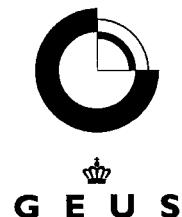
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Grain Size Distribution

Geotechnical

Sample Id: 2763-4-6 2,25-4m
Lab. Id: 20615
SE: 50
Subject: 94. 2763
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 843,225 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 49,05 | 5,82 | 94,18 | |
| 8,00 | -3,00 | 34,17 | 4,05 | 90,13 | |
| 4,00 | -2,00 | 35,03 | 4,15 | 85,98 | |
| 2,80 | -1,49 | 27,56 | 3,27 | 82,71 | |
| 2,00 | -1,00 | 25,37 | 3,01 | 79,70 | |
| 1,40 | -0,49 | 38,15 | 4,52 | 75,18 | |
| 1,00 | 0,00 | 48,37 | 5,74 | 69,44 | |
| 0,710 | 0,49 | 84,07 | 9,97 | 59,47 | |
| 0,500 | 1,00 | 150,65 | 17,87 | 41,60 | |
| 0,355 | 1,49 | 135,61 | 16,08 | 25,52 | |
| 0,250 | 2,00 | 127,69 | 15,14 | 10,38 | |
| 0,180 | 2,47 | 39,80 | 4,72 | 5,66 | |
| 0,125 | 3,00 | 18,50 | 2,19 | 3,47 | |
| 0,090 | 3,47 | 6,41 | 0,76 | 2,71 | |
| 0,075 | 3,74 | 3,24 | 0,38 | 2,32 | |
| 0,063 | 3,99 | 1,94 | 0,23 | 2,09 | |
| < 0,063 | > 3,99 | 17,63 | 2,09 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,09 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,92 |
| Sand, medium | (0,2 mm - 0,6 mm): 43,10 |
| Sand, coarse | (0,6 mm - 2 mm): 29,59 |
| Gravel | (> 2 mm): 20,30 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 3,27 | -1,71 |
| 25% | 75% | 1,39 | -0,47 |
| 40% | 60% | 0,73 | 0,46 |
| Median 50% | 50% | 0,60 | 0,74 |
| 75% | 25% | 0,35 | 1,51 |
| 84% | 16% | 0,29 | 1,79 |
| 90% | 10% | 0,24 | 2,03 |
| 95% | 5% | 0,16 | 2,61 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,27 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,97 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

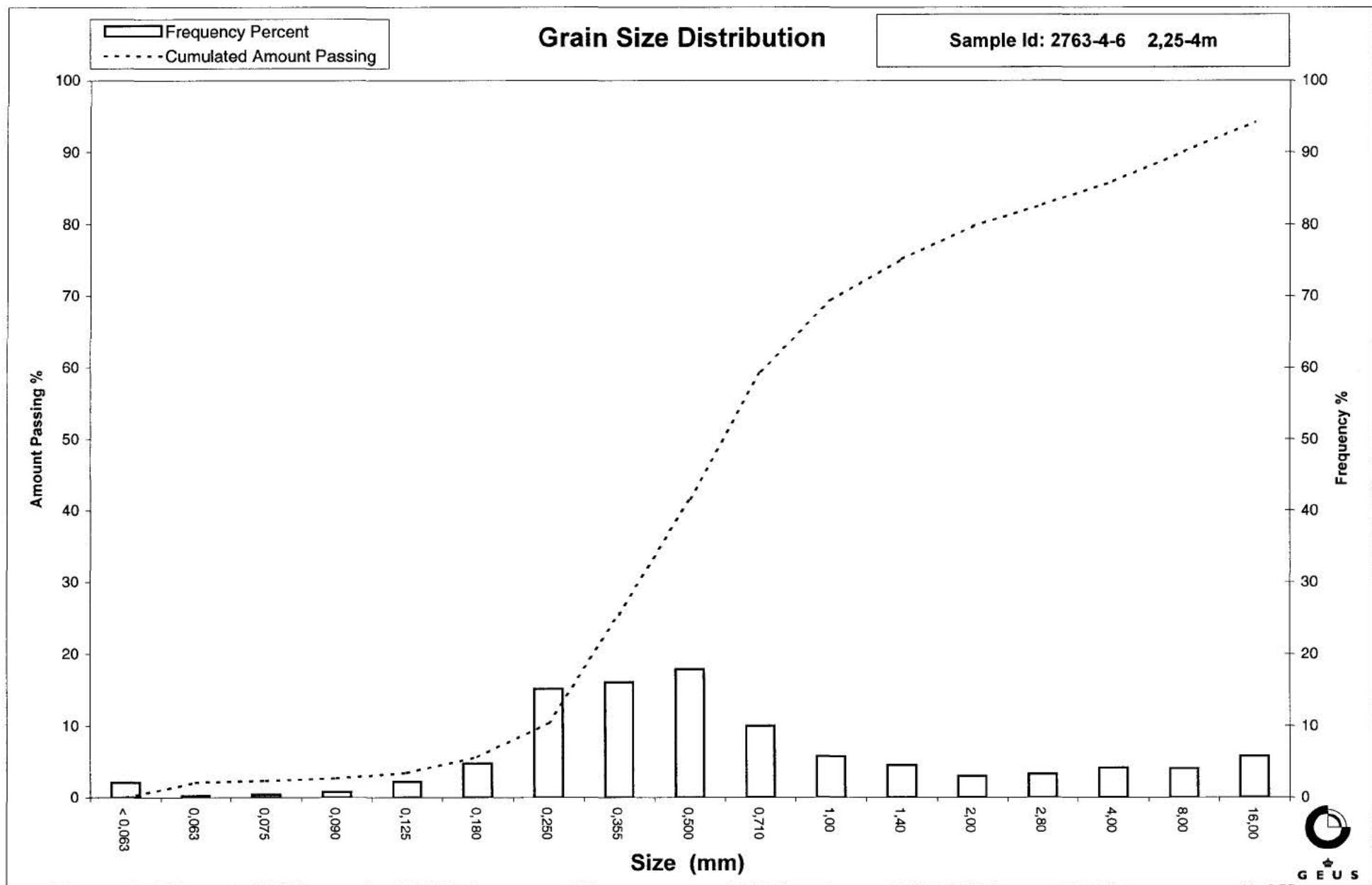
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2763-7-9 4,5-7m
Lab. Id: 20616
SE: 87
Subject: 94. 2763
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 781,23 g

Size Fractions

Sieve Analysis

Gravel

Sand

| Size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 70,58 | 9,03 | 90,97 |
| 8,00 | -3,00 | 6,86 | 0,88 | 90,09 |
| 4,00 | -2,00 | 13,10 | 1,68 | 88,41 |
| 2,80 | -1,49 | 11,37 | 1,46 | 86,96 |
| 2,00 | -1,00 | 23,07 | 2,95 | 84,00 |
| 1,40 | -0,49 | 44,42 | 5,69 | 78,32 |
| 1,00 | 0,00 | 91,66 | 11,73 | 66,59 |
| 0,710 | 0,49 | 140,03 | 17,92 | 48,66 |
| 0,500 | 1,00 | 174,76 | 22,37 | 26,29 |
| 0,355 | 1,49 | 111,85 | 14,32 | 11,97 |
| 0,250 | 2,00 | 55,64 | 7,12 | 4,85 |
| 0,180 | 2,47 | 11,47 | 1,47 | 3,38 |
| 0,125 | 3,00 | 7,43 | 0,95 | 2,43 |
| 0,090 | 3,47 | 3,23 | 0,41 | 2,02 |
| 0,075 | 3,74 | 1,62 | 0,21 | 1,81 |
| 0,063 | 3,99 | 1,05 | 0,13 | 1,68 |
| < 0,063 | > 3,99 | 13,11 | 1,68 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,68 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,13 |
| Sand, medium | (0,2 mm - 0,6 mm): 33,14 |
| Sand, coarse | (0,6 mm - 2 mm): 47,06 |
| Gravel | (> 2 mm): 16,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 2,00 | -1,00 |
| 25% | 75% | 1,29 | -0,36 |
| 40% | 60% | 0,89 | 0,16 |
| Median 50% | 50% | 0,73 | 0,45 |
| 75% | 25% | 0,49 | 1,04 |
| 84% | 16% | 0,40 | 1,34 |
| 90% | 10% | 0,33 | 1,62 |
| 95% | 5% | 0,25 | 1,99 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,26 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,74 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

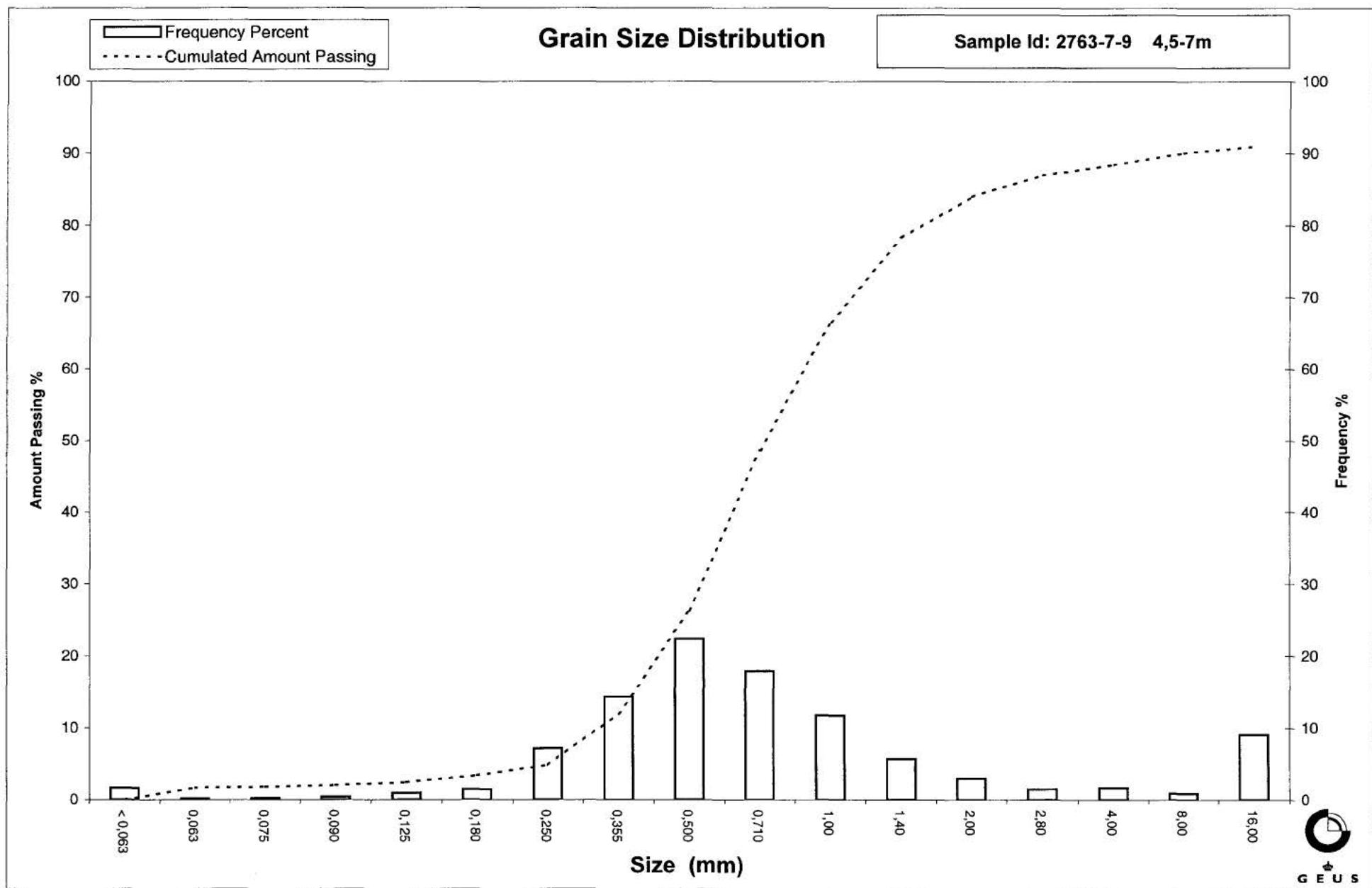
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
"Amount in sieve". Uniformity coefficient is based on
"Amount passing".

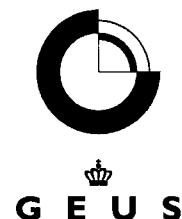
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Grain Size Distribution

Geotechnical

Sample Id: 2764-1-2 0,5-1,7m
Lab. Id: 20617
SE: 44
Subject: 94. 2764
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 331,95 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 1,27 | 0,38 | 99,62 |
| 2,80 | -1,49 | 4,47 | 1,35 | 98,27 |
| 2,00 | -1,00 | 5,63 | 1,70 | 96,57 |
| 1,40 | -0,49 | 8,45 | 2,54 | 94,03 |
| 1,00 | 0,00 | 16,31 | 4,91 | 89,12 |
| 0,710 | 0,49 | 24,23 | 7,30 | 81,82 |
| 0,500 | 1,00 | 43,11 | 12,99 | 68,83 |
| 0,355 | 1,49 | 64,67 | 19,48 | 49,35 |
| 0,250 | 2,00 | 65,69 | 19,79 | 29,56 |
| 0,180 | 2,47 | 39,37 | 11,86 | 17,70 |
| 0,125 | 3,00 | 25,73 | 7,75 | 9,95 |
| 0,090 | 3,47 | 16,90 | 5,09 | 4,86 |
| 0,075 | 3,74 | 5,24 | 1,58 | 3,28 |
| 0,063 | 3,99 | 3,79 | 1,14 | 2,14 |
| < 0,063 | > 3,99 | 7,09 | 2,14 | 0,00 |

Sieve Analysis

| |
|--------|
| Gravel |
| Sand |
| |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,14 |
| Sand, fine | (0,063 mm - 0,200 mm): 18,95 |
| Sand, medium | (0,2 mm - 0,6 mm): 53,93 |
| Sand, coarse | (0,6 mm - 2 mm): 21,56 |
| Gravel | (> 2 mm): 3,43 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 1,63 | -0,70 |
| 16% | 84% | 0,80 | 0,33 |
| 25% | 75% | 0,60 | 0,74 |
| 40% | 60% | 0,43 | 1,20 |
| Median 50% | 50% | 0,36 | 1,47 |
| 75% | 25% | 0,22 | 2,16 |
| 84% | 16% | 0,17 | 2,57 |
| 90% | 10% | 0,13 | 3,00 |
| 95% | 5% | 0,09 | 3,46 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,46 |
| Sorting | 1,19 |
| Skewness | -0,03 |
| Kurtosis | 1,20 |
| Uniformity Coefficient | 3,46 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

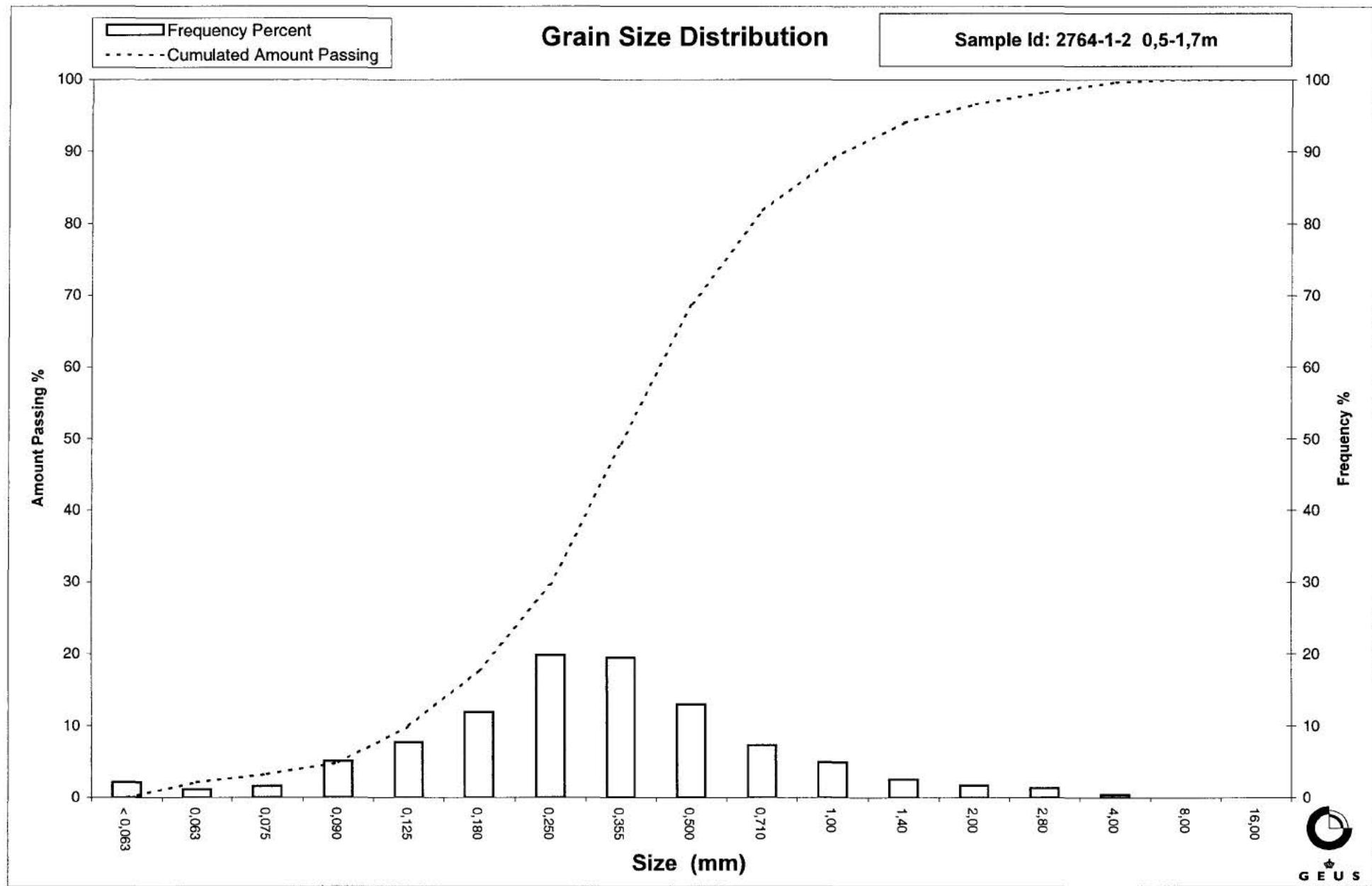
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)
 Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)
 Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)
 Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)
 Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2764-3 2-2,4m
Lab. Id: 20618
SE: 33
Subject: 94. 2764
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 168,78 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,75 | 0,44 | 99,56 |
| 2,80 | -1,49 | 1,72 | 1,02 | 98,54 |
| 2,00 | -1,00 | 2,18 | 1,29 | 97,24 |
| 1,40 | -0,49 | 1,97 | 1,17 | 96,08 |
| 1,00 | 0,00 | 3,37 | 2,00 | 94,08 |
| 0,710 | 0,49 | 5,59 | 3,31 | 90,77 |
| 0,500 | 1,00 | 15,14 | 8,97 | 81,80 |
| 0,355 | 1,49 | 31,97 | 18,94 | 62,86 |
| 0,250 | 2,00 | 46,35 | 27,46 | 35,40 |
| 0,180 | 2,47 | 29,00 | 17,18 | 18,21 |
| 0,125 | 3,00 | 15,40 | 9,12 | 9,09 |
| 0,090 | 3,47 | 7,90 | 4,68 | 4,41 |
| 0,075 | 3,74 | 2,30 | 1,36 | 3,05 |
| 0,063 | 3,99 | 1,33 | 0,79 | 2,26 |
| < 0,063 | > 3,99 | 3,81 | 2,26 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,26 |
| Sand, fine | (0,063 mm - 0,200 mm): 20,86 |
| Sand, medium | (0,2 mm - 0,6 mm): 62,95 |
| Sand, coarse | (0,6 mm - 2 mm): 11,17 |
| Gravel | (> 2 mm): 2,76 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,18 | -0,24 |
| 16% | 84% | 0,55 | 0,86 |
| 25% | 75% | 0,45 | 1,16 |
| 40% | 60% | 0,34 | 1,54 |
| Median 50% | 50% | 0,31 | 1,71 |
| 75% | 25% | 0,21 | 2,27 |
| 84% | 16% | 0,17 | 2,59 |
| 90% | 10% | 0,13 | 2,94 |
| 95% | 5% | 0,09 | 3,40 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,72 |
| Sorting | 0,98 |
| Skewness | -0,03 |
| Kurtosis | 1,35 |
| Uniformity Coefficient | 2,64 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

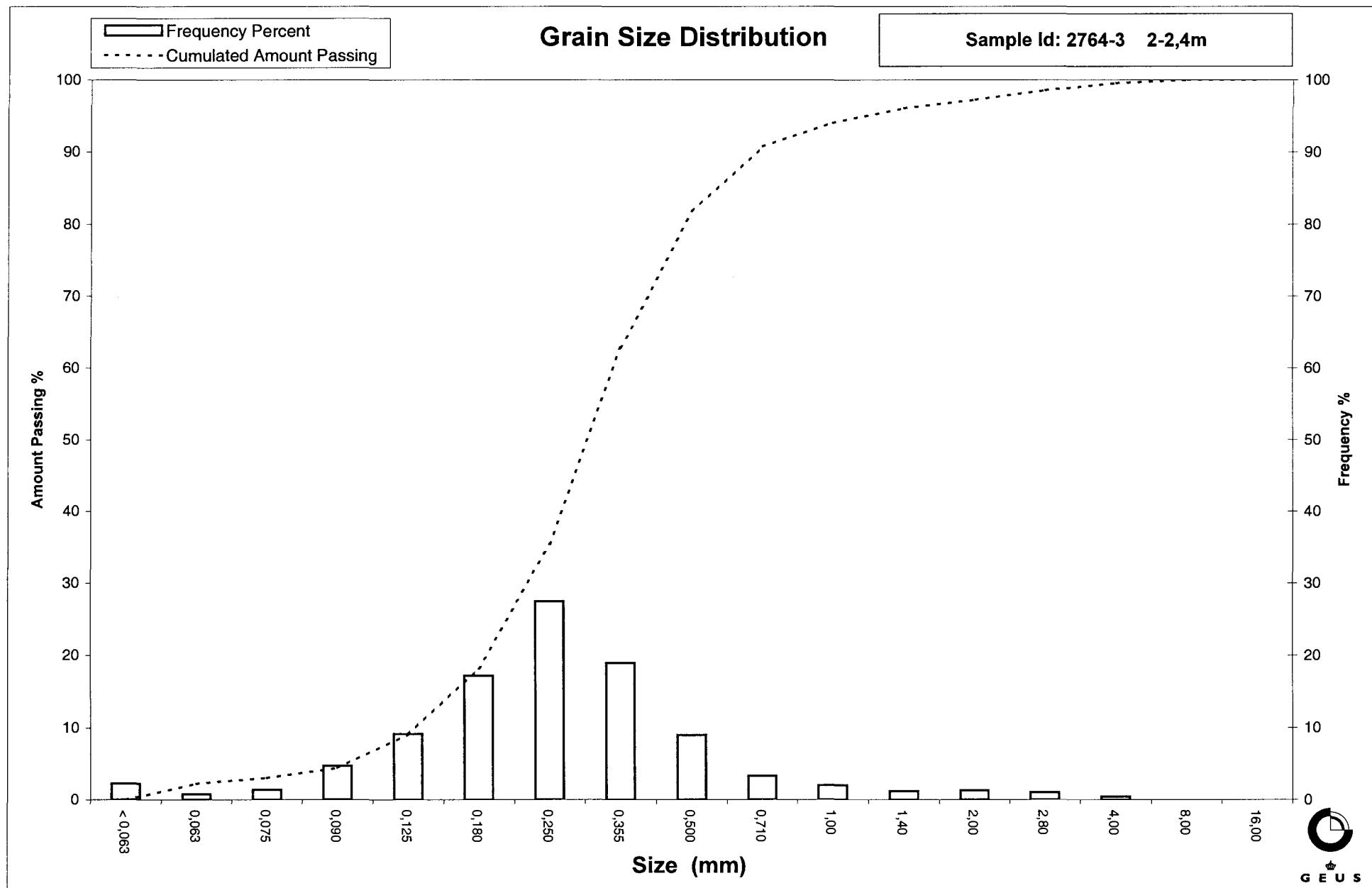
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2764-4-6 2,4-4m
Lab. Id: 20619
SE: 26
Subject: 94. 2764
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 861,275 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 36,23 | 4,21 | 95,79 |
| 4,00 | -2,00 | 16,78 | 1,95 | 93,85 |
| 2,80 | -1,49 | 11,43 | 1,33 | 92,52 |
| 2,00 | -1,00 | 13,23 | 1,54 | 90,98 |
| 1,40 | -0,49 | 14,05 | 1,63 | 89,35 |
| 1,00 | 0,00 | 18,85 | 2,19 | 87,16 |
| 0,710 | 0,49 | 36,10 | 4,19 | 82,97 |
| 0,500 | 1,00 | 81,19 | 9,43 | 73,55 |
| 0,355 | 1,49 | 128,63 | 14,93 | 58,61 |
| 0,250 | 2,00 | 158,07 | 18,35 | 40,26 |
| 0,180 | 2,47 | 75,40 | 8,75 | 31,50 |
| 0,125 | 3,00 | 100,54 | 11,67 | 19,83 |
| 0,090 | 3,47 | 72,45 | 8,41 | 11,42 |
| 0,075 | 3,74 | 31,05 | 3,60 | 7,81 |
| 0,063 | 3,99 | 17,62 | 2,05 | 5,77 |
| < 0,063 | > 3,99 | 49,68 | 5,77 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 5,77 |
| Sand, fine | (0,063 mm - 0,200 mm): 28,24 |
| Sand, medium | (0,2 mm - 0,6 mm): 44,03 |
| Sand, coarse | (0,6 mm - 2 mm): 12,95 |
| Gravel | (> 2 mm): 9,02 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 6,37 | -2,67 |
| 16% | 84% | 0,78 | 0,36 |
| 25% | 75% | 0,53 | 0,91 |
| 40% | 60% | 0,37 | 1,44 |
| Median 50% | 50% | 0,31 | 1,71 |
| 75% | 25% | 0,15 | 2,74 |
| 84% | 16% | 0,11 | 3,20 |
| 90% | 10% | 0,08 | 3,57 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,75 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 4,38 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

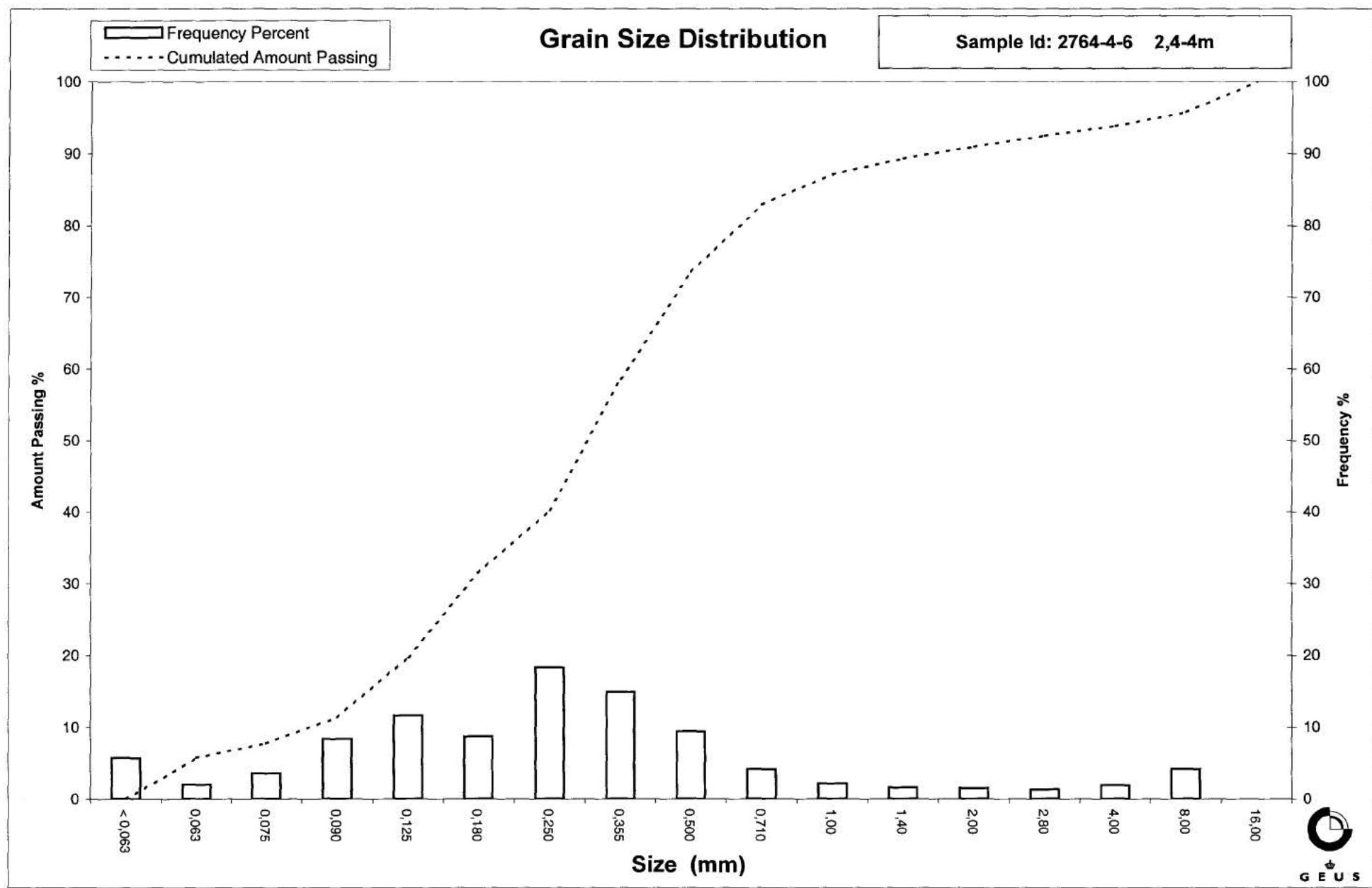
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient (d_{60} / d_{10}) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

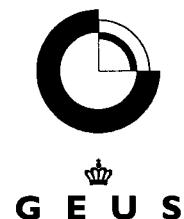
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Grain Size Distribution

Geotechnical

Sample Id: 2764-7-9 4-6m
Lab. Id: 20620
SE: 41
Subject: 94. 2764
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 717,315 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 47,28 | 6,59 | 93,41 |
| 8,00 | -3,00 | 27,83 | 3,88 | 89,53 |
| 4,00 | -2,00 | 28,13 | 3,92 | 85,61 |
| 2,80 | -1,49 | 18,50 | 2,58 | 83,03 |
| 2,00 | -1,00 | 25,16 | 3,51 | 79,52 |
| 1,40 | -0,49 | 35,39 | 4,93 | 74,59 |
| 1,00 | 0,00 | 63,31 | 8,83 | 65,76 |
| 0,710 | 0,49 | 76,66 | 10,69 | 55,08 |
| 0,500 | 1,00 | 76,21 | 10,62 | 44,45 |
| 0,355 | 1,49 | 95,73 | 13,35 | 31,11 |
| 0,250 | 2,00 | 137,69 | 19,19 | 11,91 |
| 0,180 | 2,47 | 45,39 | 6,33 | 5,58 |
| 0,125 | 3,00 | 12,82 | 1,79 | 3,80 |
| 0,090 | 3,47 | 6,26 | 0,87 | 2,92 |
| 0,075 | 3,74 | 2,67 | 0,37 | 2,55 |
| 0,063 | 3,99 | 2,29 | 0,32 | 2,23 |
| < 0,063 | > 3,99 | 16,02 | 2,23 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,23 |
| Sand, fine | (0,063 mm - 0,200 mm): 5,16 |
| Sand, medium | (0,2 mm - 0,6 mm): 42,12 |
| Sand, coarse | (0,6 mm - 2 mm): 30,01 |
| Gravel | (> 2 mm): 20,48 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 3,25 | -1,70 |
| 25% | 75% | 1,45 | -0,54 |
| 40% | 60% | 0,84 | 0,25 |
| Median 50% | 50% | 0,61 | 0,71 |
| 75% | 25% | 0,32 | 1,64 |
| 84% | 16% | 0,27 | 1,88 |
| 90% | 10% | 0,23 | 2,13 |
| 95% | 5% | 0,16 | 2,63 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,30 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,69 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

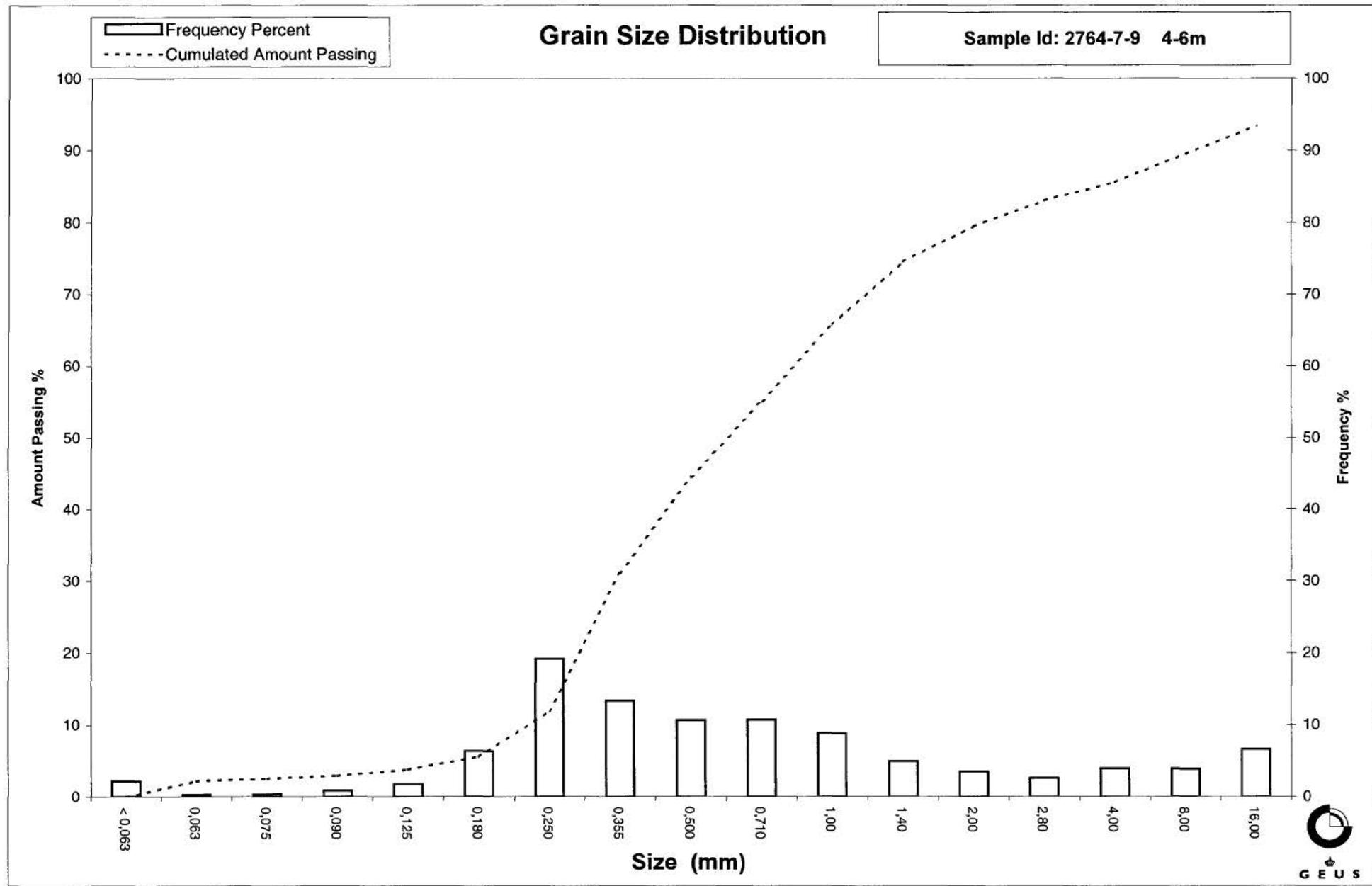
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient (d_{60} / d_{10}) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

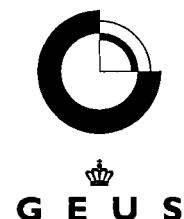
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Grain Size Distribution

Geotechnical

Sample Id: 2765-1 1-1,5m
Lab. Id: 20621
SE: 35
Subject: 94. 2765
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 701,4 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing |
|---------|-------------|----------|----------|--------------------------|
| | | | | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 21,46 | 3,06 | 96,94 |
| 4,00 | -2,00 | 17,44 | 2,49 | 94,45 |
| 2,80 | -1,49 | 10,48 | 1,49 | 92,96 |
| 2,00 | -1,00 | 9,14 | 1,30 | 91,66 |
| 1,40 | -0,49 | 6,50 | 0,93 | 90,73 |
| 1,00 | 0,00 | 9,10 | 1,30 | 89,43 |
| 0,710 | 0,49 | 21,10 | 3,01 | 86,42 |
| 0,500 | 1,00 | 80,30 | 11,45 | 74,98 |
| 0,355 | 1,49 | 142,49 | 20,32 | 54,66 |
| 0,250 | 2,00 | 152,89 | 21,80 | 32,86 |
| 0,180 | 2,47 | 101,89 | 14,53 | 18,34 |
| 0,125 | 3,00 | 64,20 | 9,15 | 9,18 |
| 0,090 | 3,47 | 25,00 | 3,56 | 5,62 |
| 0,075 | 3,74 | 7,90 | 1,13 | 4,49 |
| 0,063 | 3,99 | 5,90 | 0,84 | 3,65 |
| < 0,063 | > 3,99 | 25,62 | 3,65 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,65 |
| Sand, fine | (0,063 mm - 0,200 mm): 18,83 |
| Sand, medium | (0,2 mm - 0,6 mm): 57,94 |
| Sand, coarse | (0,6 mm - 2 mm): 11,23 |
| Gravel | (> 2 mm): 8,34 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 4,88 | -2,29 |
| 16% | 84% | 0,67 | 0,59 |
| 25% | 75% | 0,50 | 1,00 |
| 40% | 60% | 0,39 | 1,35 |
| Median 50% | 50% | 0,33 | 1,59 |
| 75% | 25% | 0,21 | 2,24 |
| 84% | 16% | 0,17 | 2,59 |
| 90% | 10% | 0,13 | 2,94 |
| 95% | 5% | 0,08 | 3,61 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,59 |
| Sorting | 1,39 |
| Skewness | -0,16 |
| Kurtosis | 1,95 |
| Uniformity Coefficient | 3,03 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

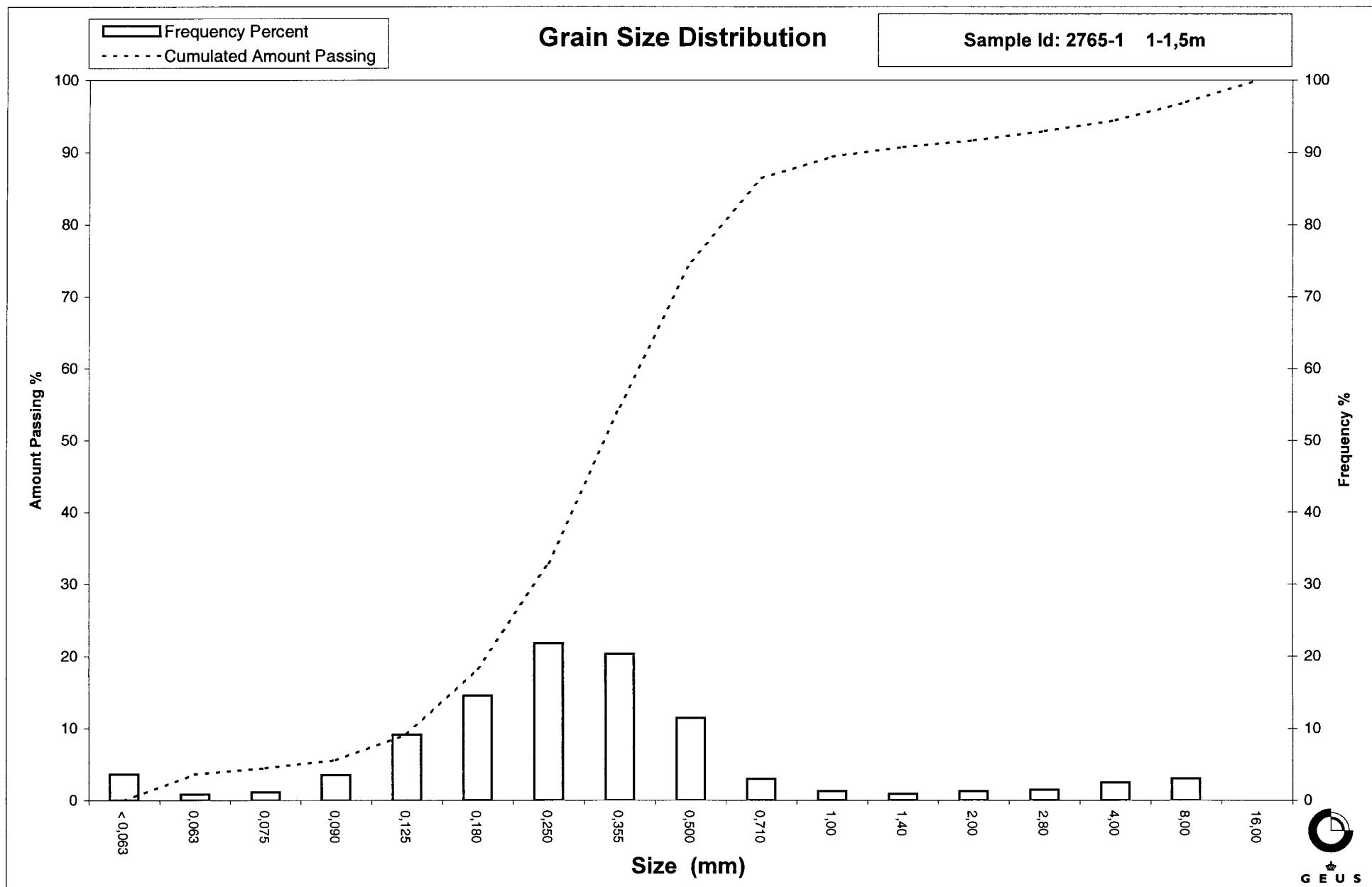
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

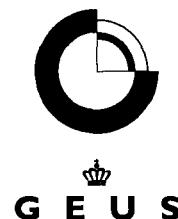
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Grain Size Distribution

Geotechnical

Sample Id: 2765-2-3 4,3-6m
Lab. Id: 20622
SE: 31
Subject: 94. 2765
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 706,725 g

Size Fractions

| | | Gravel | | Sand | |
|---------|--------|--------|--------|--------------------------|--|
| | | | | | |
| size | size | Weight | Weight | Cumulated amount passing | |
| mm | Φ | g | % | % | |
| 16,00 | -4,00 | 44,18 | 6,25 | 93,75 | |
| 8,00 | -3,00 | 30,12 | 4,26 | 89,49 | |
| 4,00 | -2,00 | 25,13 | 3,56 | 85,93 | |
| 2,80 | -1,49 | 16,91 | 2,39 | 83,54 | |
| 2,00 | -1,00 | 21,27 | 3,01 | 80,53 | |
| 1,40 | -0,49 | 48,10 | 6,81 | 73,72 | |
| 1,00 | 0,00 | 66,00 | 9,34 | 64,39 | |
| 0,710 | 0,49 | 104,17 | 14,74 | 49,65 | |
| 0,500 | 1,00 | 125,88 | 17,81 | 31,83 | |
| 0,355 | 1,49 | 78,77 | 11,15 | 20,69 | |
| 0,250 | 2,00 | 49,02 | 6,94 | 13,75 | |
| 0,180 | 2,47 | 19,74 | 2,79 | 10,96 | |
| 0,125 | 3,00 | 18,10 | 2,56 | 8,40 | |
| 0,090 | 3,47 | 10,92 | 1,55 | 6,85 | |
| 0,075 | 3,74 | 5,86 | 0,83 | 6,02 | |
| 0,063 | 3,99 | 3,95 | 0,56 | 5,47 | |
| < 0,063 | > 3,99 | 38,62 | 5,47 | 0,00 | |

Sieve Analysis

| size | size | Weight | Weight | Cumulated amount passing | |
|---------|--------|--------|--------|--------------------------|--|
| mm | Φ | g | % | % | |
| 16,00 | -4,00 | 44,18 | 6,25 | 93,75 | |
| 8,00 | -3,00 | 30,12 | 4,26 | 89,49 | |
| 4,00 | -2,00 | 25,13 | 3,56 | 85,93 | |
| 2,80 | -1,49 | 16,91 | 2,39 | 83,54 | |
| 2,00 | -1,00 | 21,27 | 3,01 | 80,53 | |
| 1,40 | -0,49 | 48,10 | 6,81 | 73,72 | |
| 1,00 | 0,00 | 66,00 | 9,34 | 64,39 | |
| 0,710 | 0,49 | 104,17 | 14,74 | 49,65 | |
| 0,500 | 1,00 | 125,88 | 17,81 | 31,83 | |
| 0,355 | 1,49 | 78,77 | 11,15 | 20,69 | |
| 0,250 | 2,00 | 49,02 | 6,94 | 13,75 | |
| 0,180 | 2,47 | 19,74 | 2,79 | 10,96 | |
| 0,125 | 3,00 | 18,10 | 2,56 | 8,40 | |
| 0,090 | 3,47 | 10,92 | 1,55 | 6,85 | |
| 0,075 | 3,74 | 5,86 | 0,83 | 6,02 | |
| 0,063 | 3,99 | 3,95 | 0,56 | 5,47 | |
| < 0,063 | > 3,99 | 38,62 | 5,47 | 0,00 | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 5,47 |
| Sand, fine | (0,063 mm - 0,200 mm): 6,29 |
| Sand, medium | (0,2 mm - 0,6 mm): 28,56 |
| Sand, coarse | (0,6 mm - 2 mm): 40,21 |
| Gravel | (> 2 mm): 19,47 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 3,03 | -1,60 |
| 25% | 75% | 1,51 | -0,60 |
| 40% | 60% | 0,91 | 0,13 |
| Median 50% | 50% | 0,72 | 0,48 |
| 75% | 25% | 0,41 | 1,28 |
| 84% | 16% | 0,28 | 1,82 |
| 90% | 10% | 0,16 | 2,65 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,23 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 5,73 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

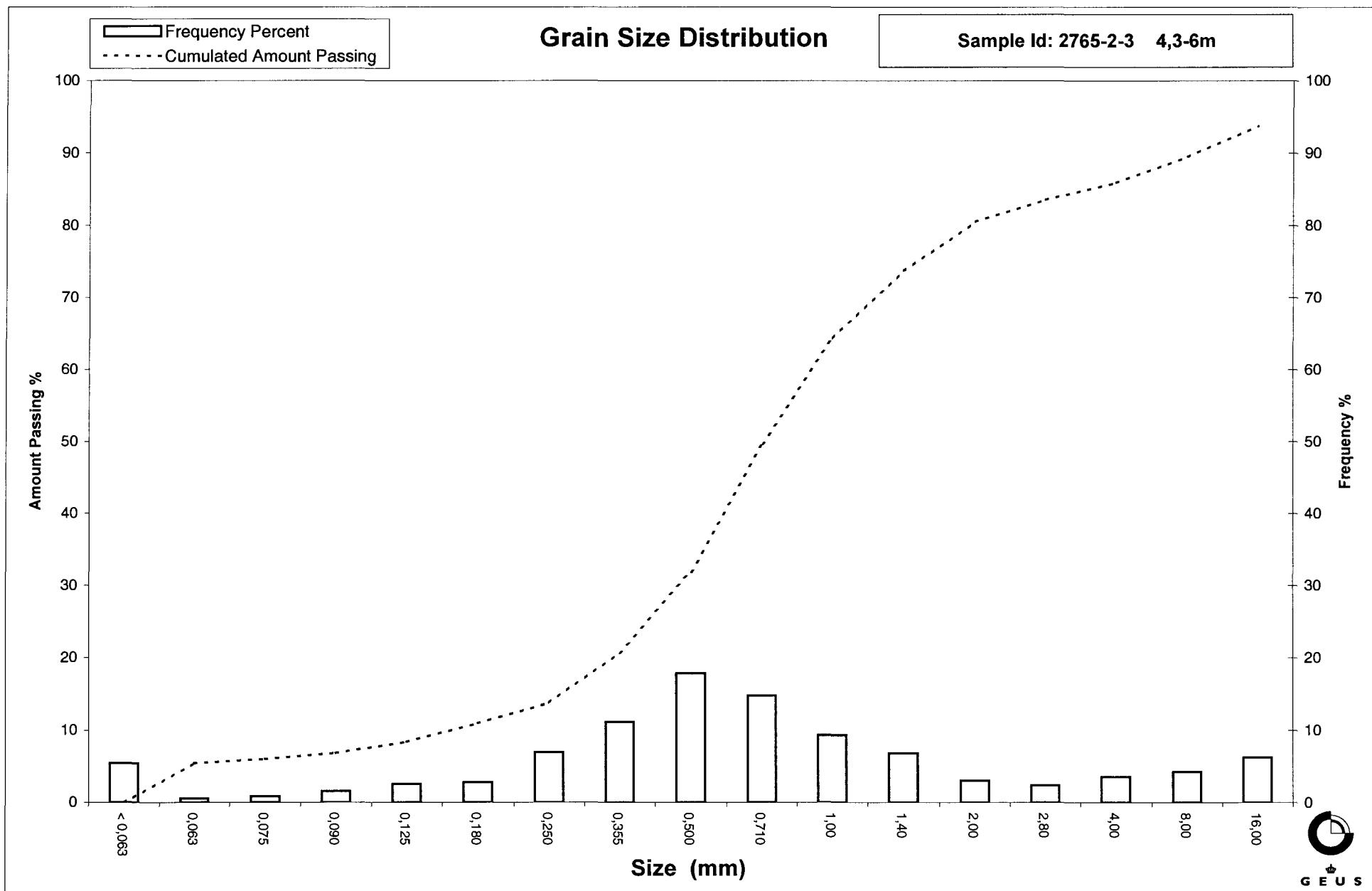
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

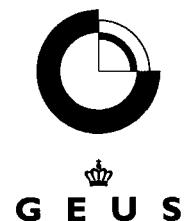
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Grain Size Distribution

Geotechnical

Sample Id: 2766-1 0,3-2m
Lab. Id: 20623
SE: 68
Subject: 94. 2766
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 691,11 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 78,68 | 11,38 | 88,62 | |
| 4,00 | -2,00 | 35,57 | 5,15 | 83,47 | |
| 2,80 | -1,49 | 19,05 | 2,76 | 80,71 | |
| 2,00 | -1,00 | 24,36 | 3,52 | 77,19 | |
| 1,40 | -0,49 | 47,69 | 6,90 | 70,29 | |
| 1,00 | 0,00 | 71,40 | 10,33 | 59,96 | |
| 0,710 | 0,49 | 102,74 | 14,87 | 45,09 | |
| 0,500 | 1,00 | 110,59 | 16,00 | 29,09 | |
| 0,355 | 1,49 | 76,72 | 11,10 | 17,99 | |
| 0,250 | 2,00 | 70,27 | 10,17 | 7,82 | |
| 0,180 | 2,47 | 18,23 | 2,64 | 5,18 | |
| 0,125 | 3,00 | 9,62 | 1,39 | 3,79 | |
| 0,090 | 3,47 | 5,27 | 0,76 | 3,03 | |
| 0,075 | 3,74 | 3,49 | 0,51 | 2,52 | |
| 0,063 | 3,99 | 2,10 | 0,30 | 2,22 | |
| < 0,063 | > 3,99 | 15,34 | 2,22 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,22 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,72 |
| Sand, medium | (0,2 mm - 0,6 mm): 30,77 |
| Sand, coarse | (0,6 mm - 2 mm): 40,48 |
| Gravel | (> 2 mm): 22,81 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 12,49 | -3,64 |
| 16% | 84% | 4,41 | -2,14 |
| 25% | 75% | 1,81 | -0,86 |
| 40% | 60% | 1,00 | 0,00 |
| Median 50% | 50% | 0,81 | 0,31 |
| 75% | 25% | 0,45 | 1,16 |
| 84% | 16% | 0,33 | 1,58 |
| 90% | 10% | 0,27 | 1,88 |
| 95% | 5% | 0,17 | 2,53 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,08 |
| Sorting | 1,87 |
| Skewness | -0,30 |
| Kurtosis | 1,25 |
| Uniformity Coefficient | 3,68 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

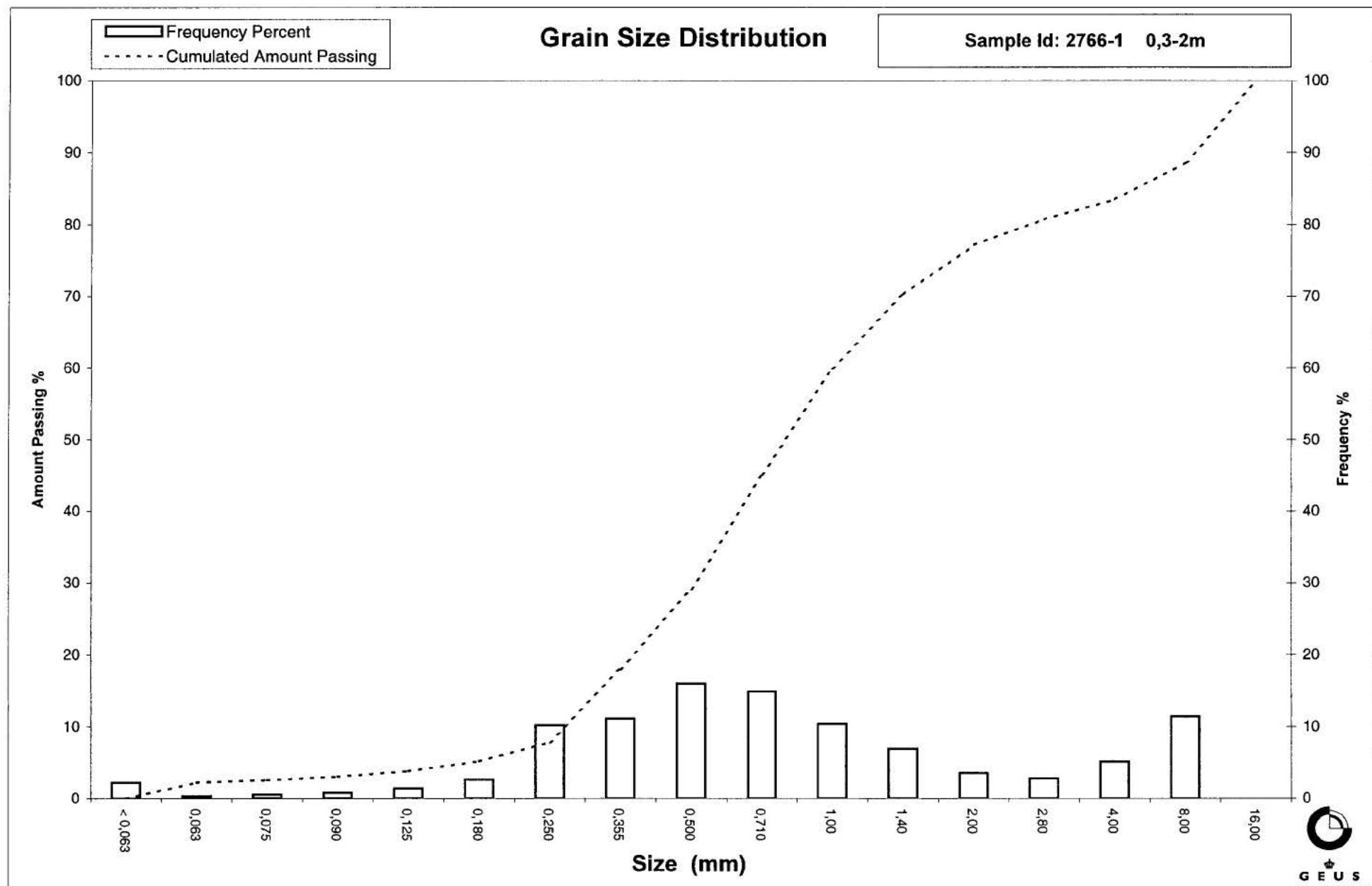
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
"Amount in sieve". Uniformity coefficient is based on
"Amount passing".

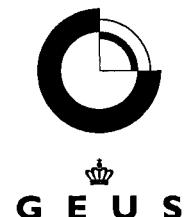
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www.geus.dk



Grain Size Distribution

Geotechnical

Sample Id: 2766-2 2-2,8m
Lab. Id: 20624
SE: 27
Subject: 94. 2766
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 213,17 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 | |
| 4,00 | -2,00 | 0,35 | 0,16 | 99,84 | |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,84 | |
| 2,00 | -1,00 | 0,07 | 0,03 | 99,80 | |
| 1,40 | -0,49 | 0,09 | 0,04 | 99,76 | |
| 1,00 | 0,00 | 0,29 | 0,13 | 99,63 | |
| 0,710 | 0,49 | 0,84 | 0,39 | 99,23 | |
| 0,500 | 1,00 | 3,46 | 1,62 | 97,61 | |
| 0,355 | 1,49 | 12,18 | 5,71 | 91,90 | |
| 0,250 | 2,00 | 29,00 | 13,60 | 78,30 | |
| 0,180 | 2,47 | 33,93 | 15,92 | 62,38 | |
| 0,125 | 3,00 | 66,66 | 31,27 | 31,11 | |
| 0,090 | 3,47 | 43,84 | 20,57 | 10,54 | |
| 0,075 | 3,74 | 9,03 | 4,24 | 6,30 | |
| 0,063 | 3,99 | 4,38 | 2,06 | 4,25 | |
| < 0,063 | > 3,99 | 9,06 | 4,25 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 4,25 |
| Sand, fine | (0,063 mm - 0,200 mm): 62,68 |
| Sand, medium | (0,2 mm - 0,6 mm): 31,46 |
| Sand, coarse | (0,6 mm - 2 mm): 1,42 |
| Gravel | (> 2 mm): 0,20 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 0,43 | 1,21 |
| 16% | 84% | 0,29 | 1,77 |
| 25% | 75% | 0,24 | 2,09 |
| 40% | 60% | 0,18 | 2,51 |
| Median 50% | 50% | 0,16 | 2,66 |
| 75% | 25% | 0,11 | 3,13 |
| 84% | 16% | 0,10 | 3,33 |
| 90% | 10% | 0,09 | 3,50 |
| 95% | 5% | 0,07 | 3,89 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,59 |
| Sorting | 0,80 |
| Skewness | -0,11 |
| Kurtosis | 1,06 |
| Uniformity Coefficient | 2,00 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

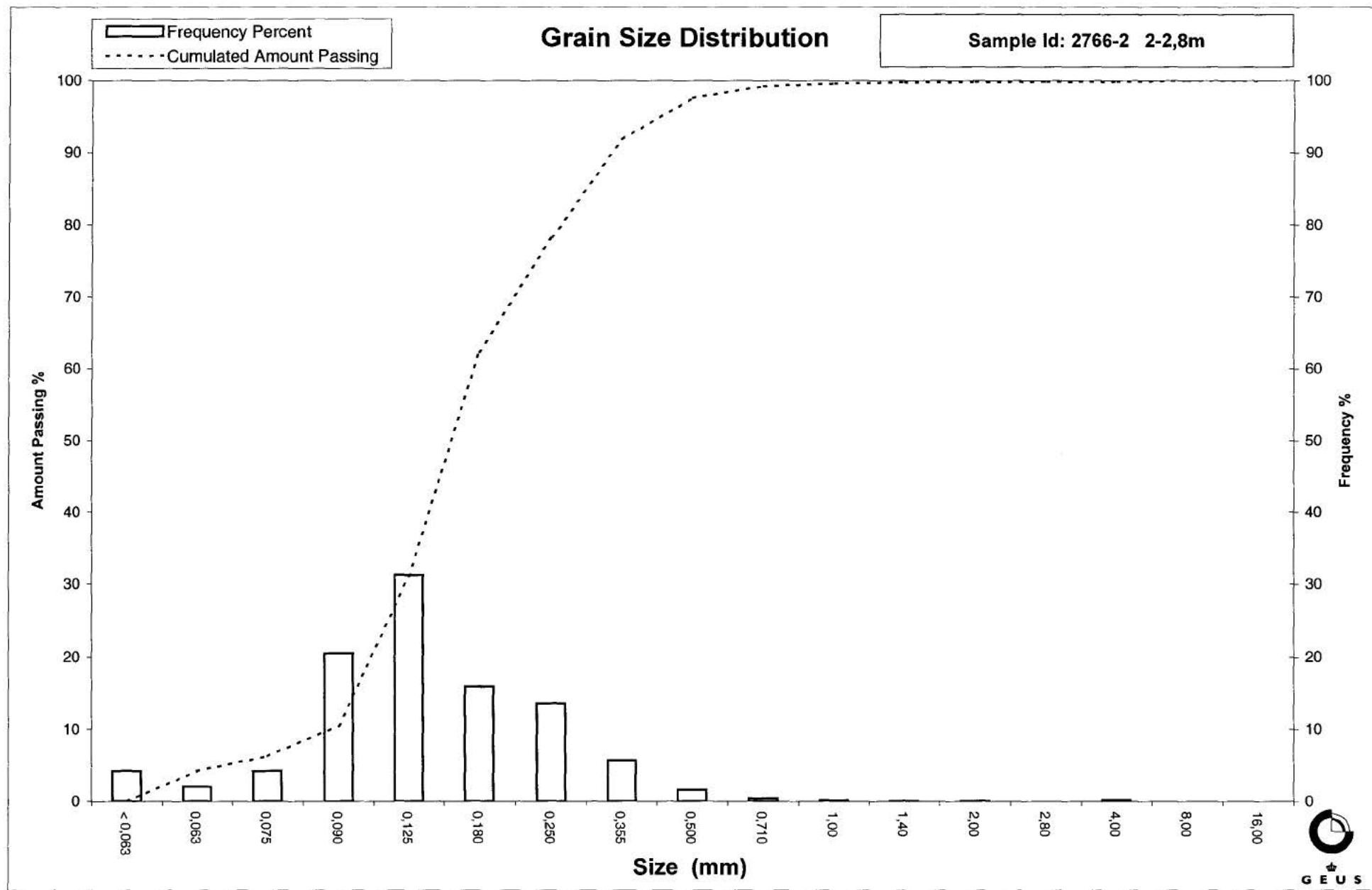
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2766-3-4 2,8-5,5m
Lab. Id: 20625
SE: 29
Subject: 94. 2766
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 719,415 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 2,84 | 0,39 | 99,61 | |
| 4,00 | -2,00 | 5,96 | 0,83 | 98,78 | |
| 2,80 | -1,49 | 3,90 | 0,54 | 98,24 | |
| 2,00 | -1,00 | 4,41 | 0,61 | 97,62 | |
| 1,40 | -0,49 | 7,63 | 1,06 | 96,56 | |
| 1,00 | 0,00 | 20,64 | 2,87 | 93,69 | |
| 0,710 | 0,49 | 59,20 | 8,23 | 85,46 | |
| 0,500 | 1,00 | 143,58 | 19,96 | 65,51 | |
| 0,355 | 1,49 | 170,82 | 23,74 | 41,76 | |
| 0,250 | 2,00 | 140,99 | 19,60 | 22,16 | |
| 0,180 | 2,47 | 63,67 | 8,85 | 13,31 | |
| 0,125 | 3,00 | 36,88 | 5,13 | 8,19 | |
| 0,090 | 3,47 | 15,21 | 2,11 | 6,07 | |
| 0,075 | 3,74 | 5,89 | 0,82 | 5,26 | |
| 0,063 | 3,99 | 3,17 | 0,44 | 4,82 | |
| < 0,063 | > 3,99 | 34,65 | 4,82 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 4,82 |
| Sand, fine | (0,063 mm - 0,200 mm): 11,03 |
| Sand, medium | (0,2 mm - 0,6 mm): 59,17 |
| Sand, coarse | (0,6 mm - 2 mm): 22,61 |
| Gravel | (> 2 mm): 2,38 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,18 | -0,24 |
| 16% | 84% | 0,69 | 0,53 |
| 25% | 75% | 0,60 | 0,74 |
| 40% | 60% | 0,47 | 1,10 |
| Median 50% | 50% | 0,41 | 1,30 |
| 75% | 25% | 0,27 | 1,91 |
| 84% | 16% | 0,20 | 2,31 |
| 90% | 10% | 0,14 | 2,79 |
| 95% | 5% | 0,07 | 3,88 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,38 |
| Sorting | 1,07 |
| Skewness | 0,19 |
| Kurtosis | 1,43 |
| Uniformity Coefficient | 3,23 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

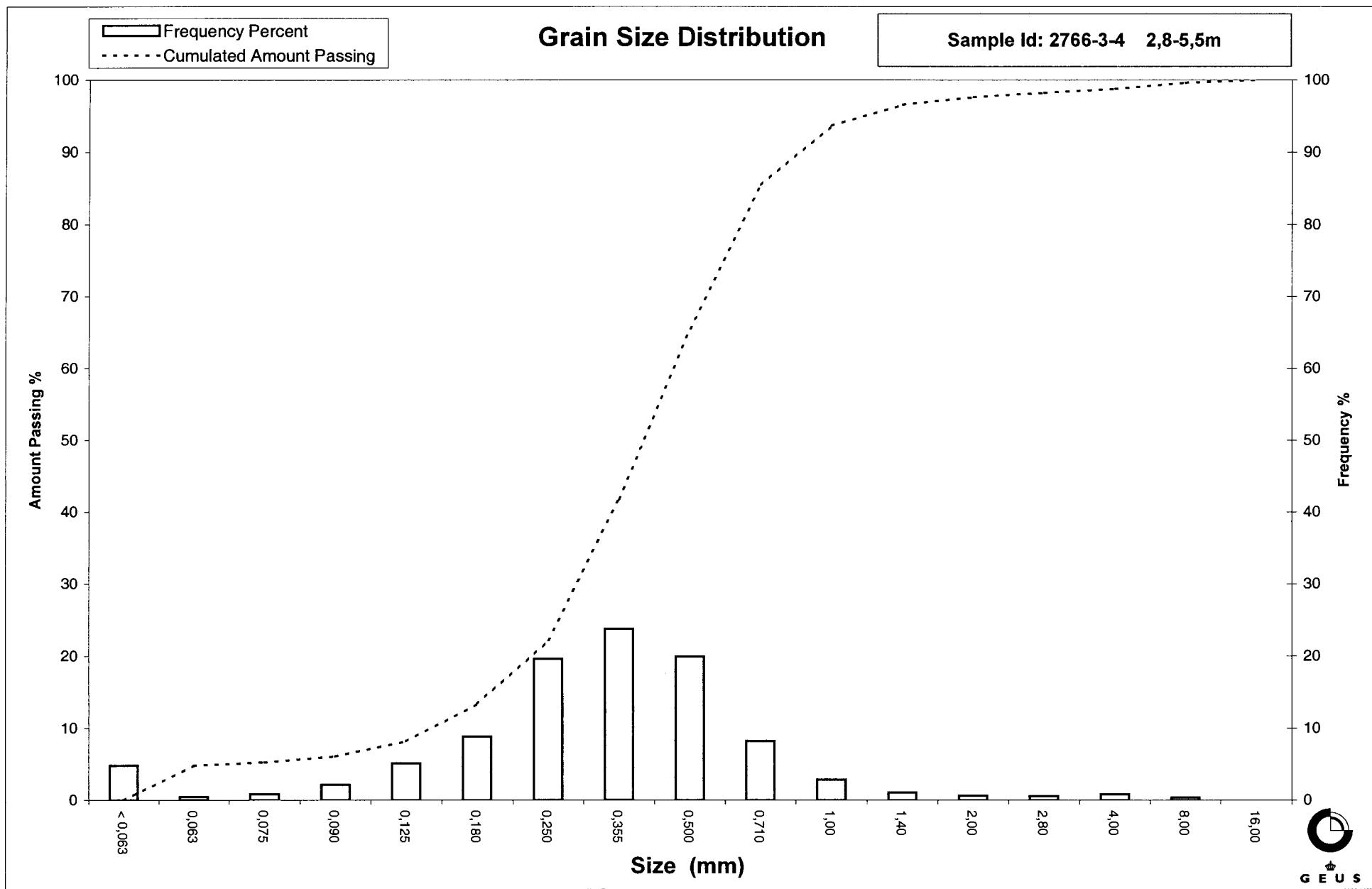
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

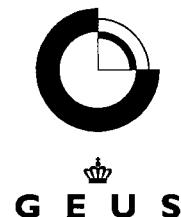
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Grain Size Distribution

Geotechnical

Sample Id: 2766-5 5,5-6m
Lab. Id: 20626
SE: 39
Subject: 94. 2766
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 318,72 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 1,17 | 0,37 | 99,63 |
| 2,80 | -1,49 | 0,70 | 0,22 | 99,41 |
| 2,00 | -1,00 | 0,99 | 0,31 | 99,10 |
| 1,40 | -0,49 | 1,84 | 0,58 | 98,53 |
| 1,00 | 0,00 | 2,86 | 0,90 | 97,63 |
| 0,710 | 0,49 | 6,80 | 2,13 | 95,49 |
| 0,500 | 1,00 | 20,89 | 6,55 | 88,94 |
| 0,355 | 1,49 | 43,86 | 13,76 | 75,18 |
| 0,250 | 2,00 | 80,32 | 25,20 | 49,98 |
| 0,180 | 2,47 | 51,71 | 16,22 | 33,75 |
| 0,125 | 3,00 | 44,31 | 13,90 | 19,85 |
| 0,090 | 3,47 | 19,21 | 6,03 | 13,82 |
| 0,075 | 3,74 | 9,36 | 2,94 | 10,89 |
| 0,063 | 3,99 | 6,09 | 1,91 | 8,98 |
| < 0,063 | > 3,99 | 28,61 | 8,98 | 0,00 |

Stieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 8,98 |
| Sand, fine | (0,063 mm - 0,200 mm): 29,41 |
| Sand, medium | (0,2 mm - 0,6 mm): 53,67 |
| Sand, coarse | (0,6 mm - 2 mm): 7,04 |
| Gravel | (> 2 mm): 0,90 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,69 | 0,53 |
| 16% | 84% | 0,45 | 1,16 |
| 25% | 75% | 0,35 | 1,50 |
| 40% | 60% | 0,29 | 1,78 |
| Median 50% | 50% | 0,25 | 2,00 |
| 75% | 25% | 0,15 | 2,78 |
| 84% | 16% | 0,10 | 3,28 |
| 90% | 10% | 0,07 | 3,85 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,15 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 4,20 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

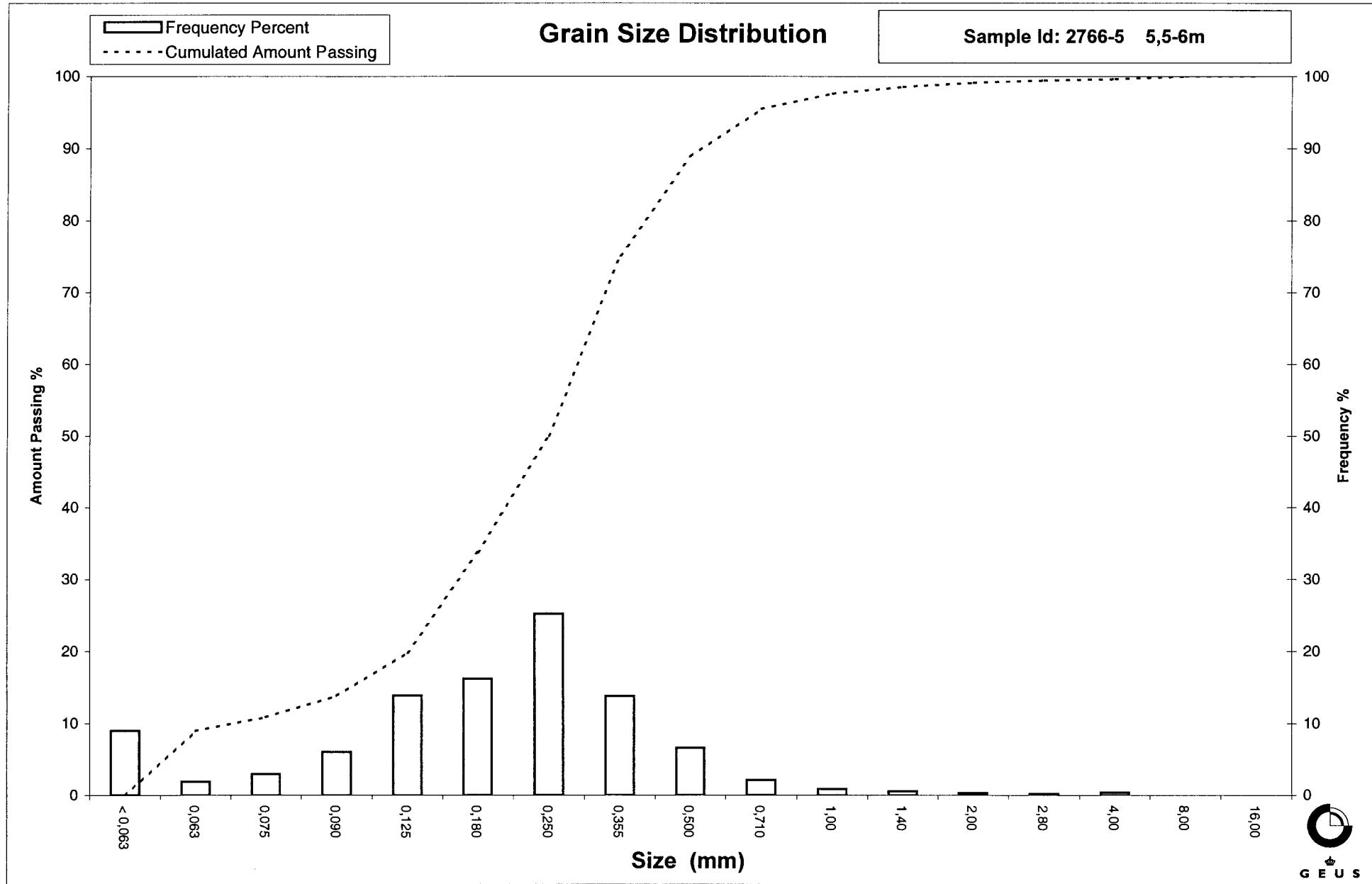
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

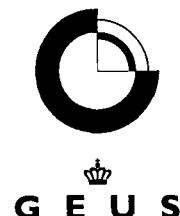
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2767-1 0,5-1,5m
Lab. Id: 20627
SE: 82
Subject: 94. 2767
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 824,91 g

Size Fractions

Sieve Analysis

Gravel

Sand

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 24,48 | 2,97 | 97,03 |
| 8,00 | -3,00 | 16,11 | 1,95 | 95,08 |
| 4,00 | -2,00 | 32,52 | 3,94 | 91,14 |
| 2,80 | -1,49 | 14,60 | 1,77 | 89,37 |
| 2,00 | -1,00 | 17,63 | 2,14 | 87,23 |
| 1,40 | -0,49 | 18,82 | 2,28 | 84,95 |
| 1,00 | 0,00 | 28,09 | 3,41 | 81,54 |
| 0,710 | 0,49 | 54,37 | 6,59 | 74,95 |
| 0,500 | 1,00 | 129,23 | 15,67 | 59,29 |
| 0,355 | 1,49 | 178,72 | 21,67 | 37,62 |
| 0,250 | 2,00 | 181,16 | 21,96 | 15,66 |
| 0,180 | 2,47 | 73,05 | 8,86 | 6,80 |
| 0,125 | 3,00 | 32,27 | 3,91 | 2,89 |
| 0,090 | 3,47 | 6,83 | 0,83 | 2,06 |
| 0,075 | 3,74 | 3,14 | 0,38 | 1,68 |
| 0,063 | 3,99 | 2,09 | 0,25 | 1,43 |
| < 0,063 | > 3,99 | 11,80 | 1,43 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,43 |
| Sand, fine | (0,063 mm - 0,200 mm): 7,90 |
| Sand, medium | (0,2 mm - 0,6 mm): 57,41 |
| Sand, coarse | (0,6 mm - 2 mm): 20,48 |
| Gravel | (> 2 mm): 12,77 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 7,92 | -2,99 |
| 16% | 84% | 1,29 | -0,37 |
| 25% | 75% | 0,71 | 0,49 |
| 40% | 60% | 0,51 | 0,97 |
| Median 50% | 50% | 0,44 | 1,19 |
| 75% | 25% | 0,29 | 1,76 |
| 84% | 16% | 0,25 | 1,99 |
| 90% | 10% | 0,21 | 2,28 |
| 95% | 5% | 0,15 | 2,69 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,94 |
| Sorting | 1,45 |
| Skewness | -0,40 |
| Kurtosis | 1,83 |
| Uniformity Coefficient | 2,48 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

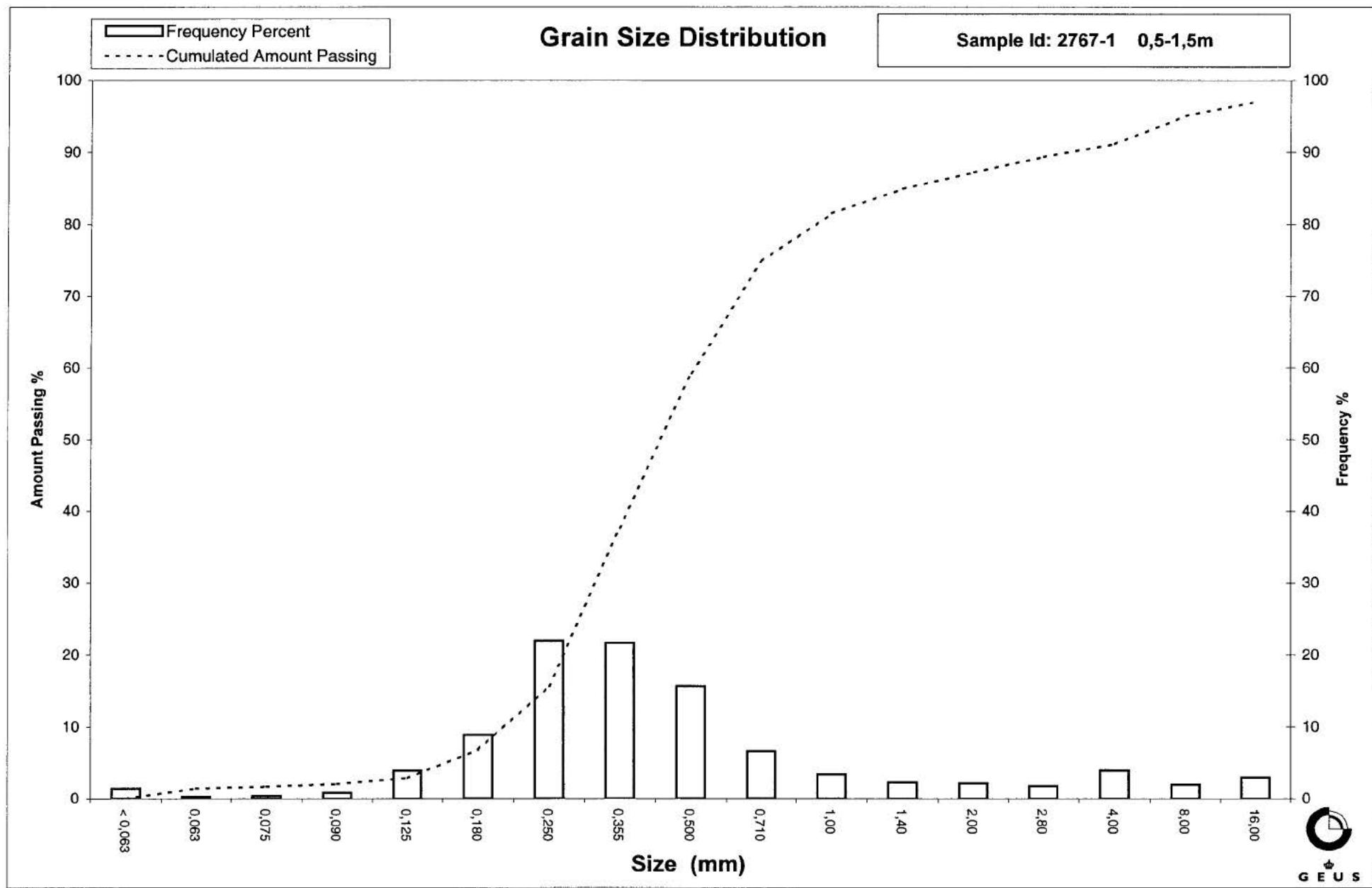
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2767-2-3 1,5-3,0m
Lab. Id: 20628
SE: 81
Subject: 94. 2767
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 909,64 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 27,36 | 3,01 | 96,99 |
| 8,00 | -3,00 | 26,90 | 2,96 | 94,04 |
| 4,00 | -2,00 | 14,84 | 1,63 | 92,40 |
| 2,80 | -1,49 | 10,14 | 1,11 | 91,29 |
| 2,00 | -1,00 | 16,12 | 1,77 | 89,52 |
| 1,40 | -0,49 | 41,97 | 4,61 | 84,90 |
| 1,00 | 0,00 | 87,18 | 9,58 | 75,32 |
| 0,710 | 0,49 | 150,03 | 16,49 | 58,83 |
| 0,500 | 1,00 | 185,33 | 20,37 | 38,45 |
| 0,355 | 1,49 | 126,17 | 13,87 | 24,58 |
| 0,250 | 2,00 | 130,67 | 14,36 | 10,22 |
| 0,180 | 2,47 | 34,50 | 3,79 | 6,42 |
| 0,125 | 3,00 | 13,02 | 1,43 | 4,99 |
| 0,090 | 3,47 | 10,51 | 1,16 | 3,84 |
| 0,075 | 3,74 | 5,42 | 0,60 | 3,24 |
| 0,063 | 3,99 | 3,44 | 0,38 | 2,86 |
| < 0,063 | > 3,99 | 26,05 | 2,86 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,86 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,64 |
| Sand, medium | (0,2 mm - 0,6 mm): 40,65 |
| Sand, coarse | (0,6 mm - 2 mm): 41,36 |
| Gravel | (> 2 mm): 10,48 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 10,61 | -3,41 |
| 16% | 84% | 1,36 | -0,45 |
| 25% | 75% | 0,99 | 0,01 |
| 40% | 60% | 0,73 | 0,45 |
| Median 50% | 50% | 0,62 | 0,69 |
| 75% | 25% | 0,36 | 1,48 |
| 84% | 16% | 0,29 | 1,77 |
| 90% | 10% | 0,25 | 2,02 |
| 95% | 5% | 0,13 | 3,00 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,67 |
| Sorting | 1,53 |
| Skewness | -0,15 |
| Kurtosis | 1,79 |
| Uniformity Coefficient | 2,97 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

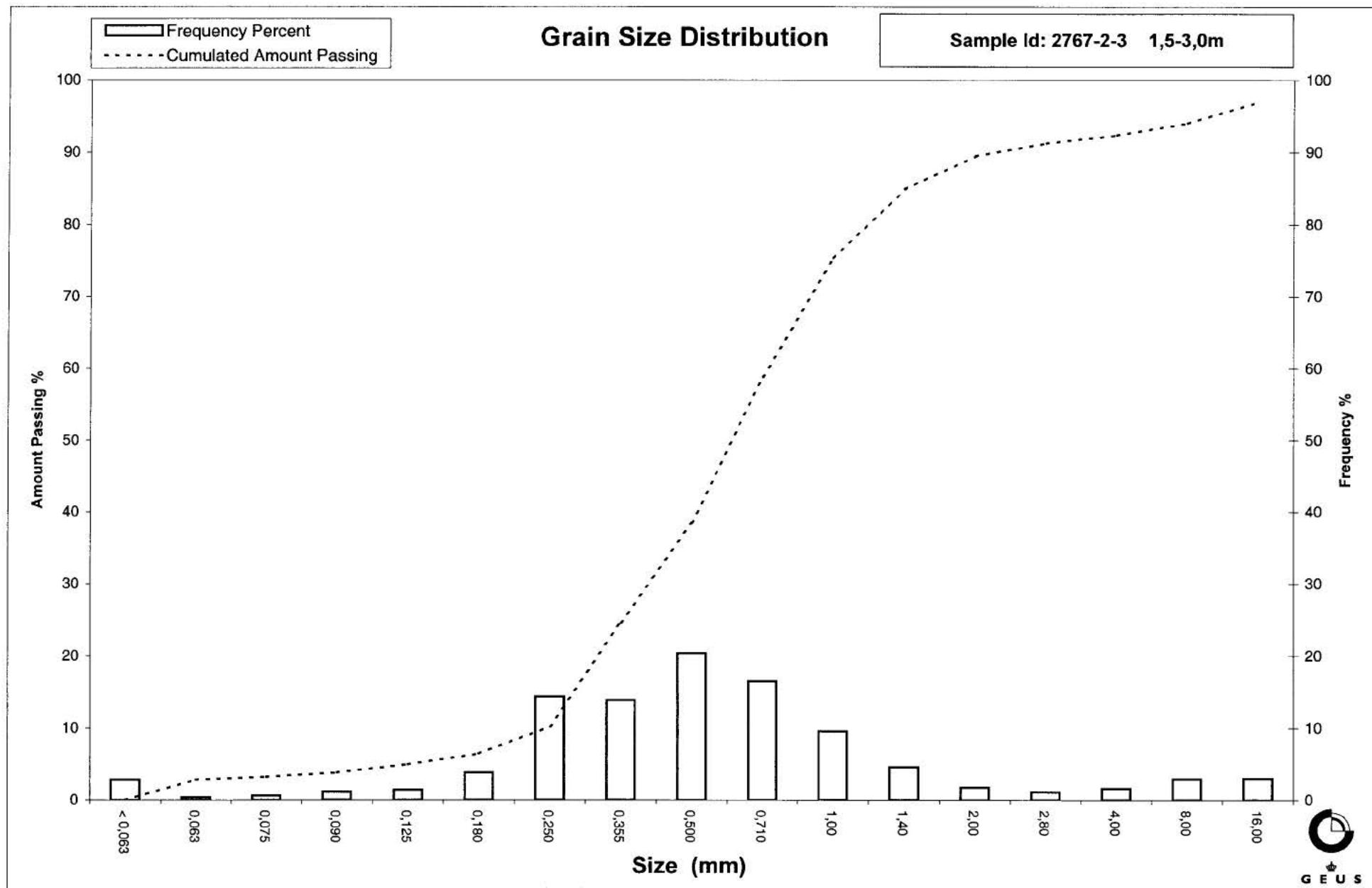
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

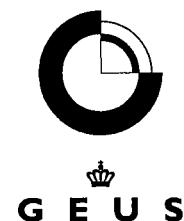
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Grain Size Distribution

Geotechnical

Sample Id: 2767-4 3,0-4m
Lab. Id: 20629
SE: 81
Subject: 94. 2767
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 283,92 g

Size Fractions

| Size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,93 | 0,33 | 99,67 |
| 2,80 | -1,49 | 0,60 | 0,21 | 99,46 |
| 2,00 | -1,00 | 0,67 | 0,24 | 99,23 |
| 1,40 | -0,49 | 1,32 | 0,47 | 98,76 |
| 1,00 | 0,00 | 4,92 | 1,73 | 97,03 |
| 0,710 | 0,49 | 20,50 | 7,22 | 89,81 |
| 0,500 | 1,00 | 48,22 | 16,98 | 72,82 |
| 0,355 | 1,49 | 57,59 | 20,28 | 52,54 |
| 0,250 | 2,00 | 111,33 | 39,21 | 13,33 |
| 0,180 | 2,47 | 23,84 | 8,40 | 4,93 |
| 0,125 | 3,00 | 3,82 | 1,35 | 3,58 |
| 0,090 | 3,47 | 1,81 | 0,64 | 2,95 |
| 0,075 | 3,74 | 0,79 | 0,28 | 2,67 |
| 0,063 | 3,99 | 0,31 | 0,11 | 2,56 |
| < 0,063 | > 3,99 | 7,27 | 2,56 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,56 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,77 |
| Sand, medium | (0,2 mm - 0,6 mm): 73,58 |
| Sand, coarse | (0,6 mm - 2 mm): 18,32 |
| Gravel | (> 2 mm): 0,77 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 0,92 | 0,12 |
| 16% | 84% | 0,64 | 0,65 |
| 25% | 75% | 0,53 | 0,92 |
| 40% | 60% | 0,41 | 1,29 |
| Median 50% | 50% | 0,35 | 1,52 |
| 75% | 25% | 0,28 | 1,83 |
| 84% | 16% | 0,26 | 1,96 |
| 90% | 10% | 0,22 | 2,17 |
| 95% | 5% | 0,18 | 2,47 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,38 |
| Sorting | 0,68 |
| Skewness | -0,26 |
| Kurtosis | 1,06 |
| Uniformity Coefficient | 1,84 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

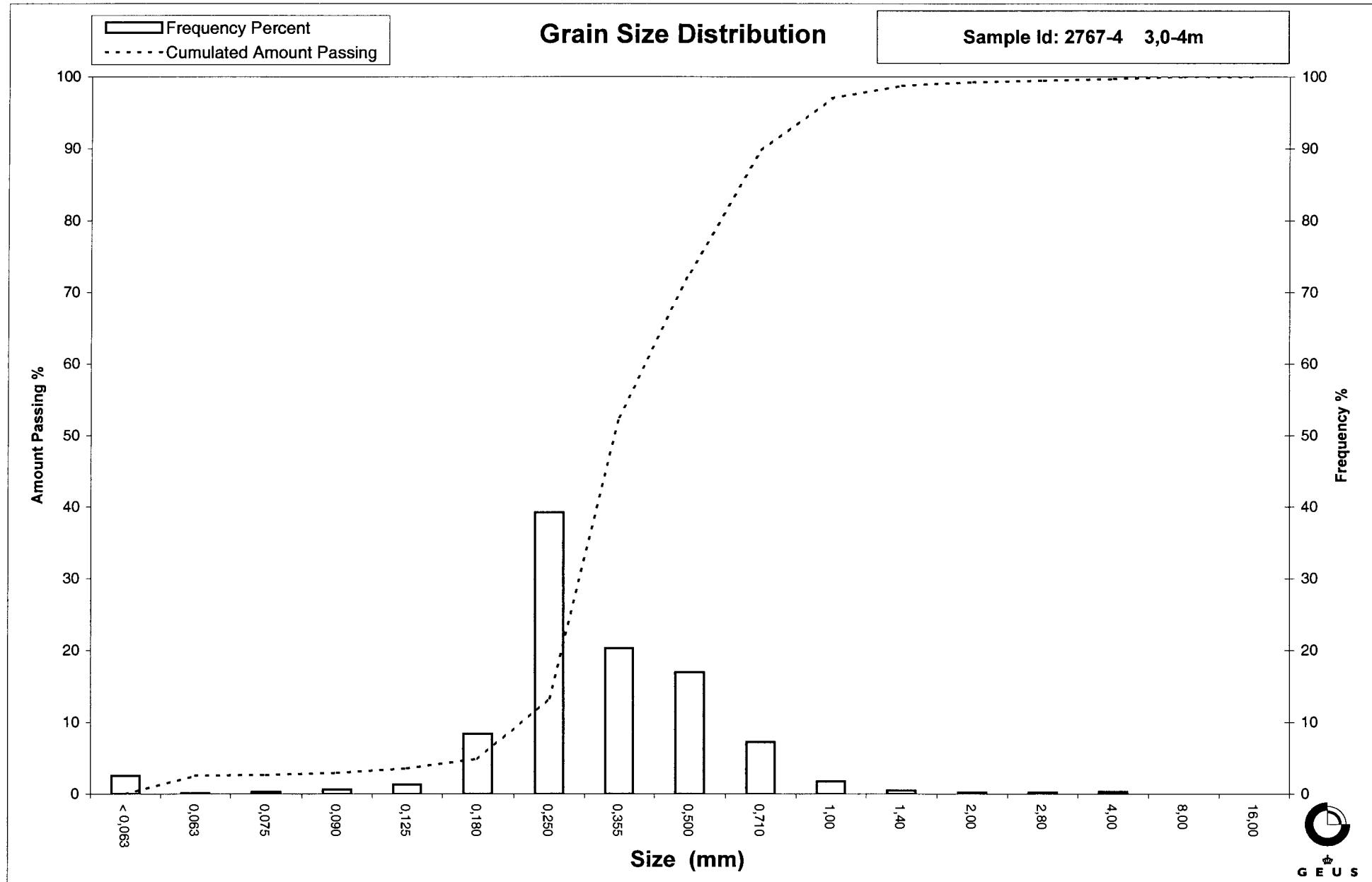
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2768-1 0,3-1m
Lab. Id: 20630
SE: 11
Subject: 94. 2768
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 362,17 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,11 | 0,03 | 99,97 |
| 2,80 | -1,49 | 0,04 | 0,01 | 99,96 |
| 2,00 | -1,00 | 0,11 | 0,03 | 99,93 |
| 1,40 | -0,49 | 0,79 | 0,22 | 99,71 |
| 1,00 | 0,00 | 0,96 | 0,26 | 99,45 |
| 0,710 | 0,49 | 3,24 | 0,90 | 98,55 |
| 0,500 | 1,00 | 13,53 | 3,73 | 94,82 |
| 0,355 | 1,49 | 24,49 | 6,76 | 88,05 |
| 0,250 | 2,00 | 43,66 | 12,05 | 76,00 |
| 0,180 | 2,47 | 32,65 | 9,02 | 66,98 |
| 0,125 | 3,00 | 30,25 | 8,35 | 58,63 |
| 0,090 | 3,47 | 14,69 | 4,06 | 54,57 |
| 0,075 | 3,74 | 17,49 | 4,83 | 49,74 |
| 0,063 | 3,99 | 22,39 | 6,18 | 43,56 |
| < 0,063 | > 3,99 | 157,77 | 43,56 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 43,56 |
| Sand, fine | (0,063 mm - 0,200 mm): 26,00 |
| Sand, medium | (0,2 mm - 0,6 mm): 27,03 |
| Sand, coarse | (0,6 mm - 2 mm): 3,33 |
| Gravel | (> 2 mm): 0,07 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,51 | 0,97 |
| 16% | 84% | 0,32 | 1,65 |
| 25% | 75% | 0,24 | 2,05 |
| 40% | 60% | 0,13 | 2,90 |
| Median 50% | 50% | 0,08 | 3,72 |
| 75% | 25% | ----- | ----- |
| 84% | 16% | ----- | ----- |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,68 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

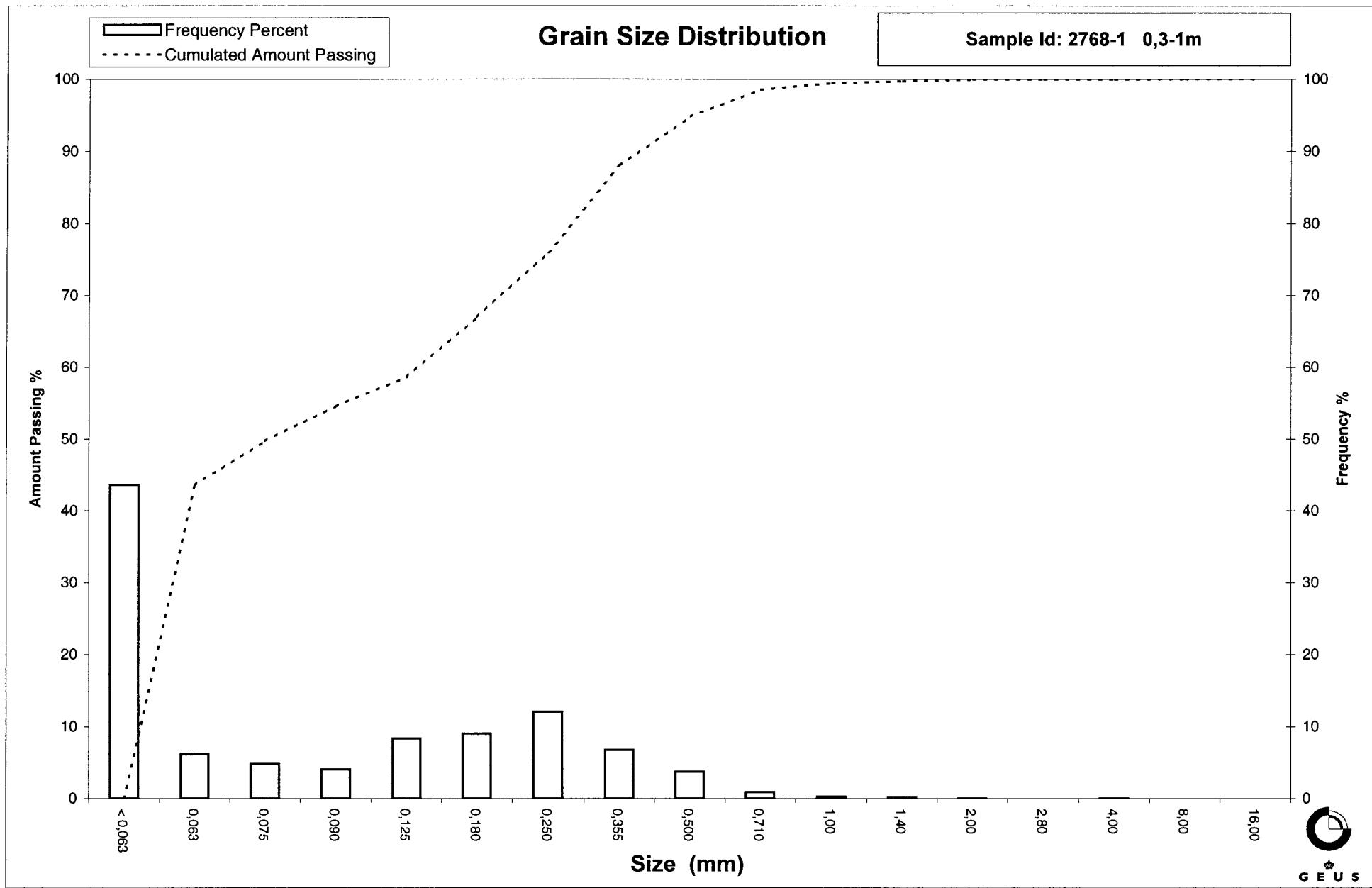
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2768-2 1-1,4m
Lab. Id: 20631
SE: 42
Subject: 94. 2768
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 1040,36 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 244,32 | 23,48 | 76,52 |
| 8,00 | -3,00 | 149,07 | 14,33 | 62,19 |
| 4,00 | -2,00 | 81,83 | 7,87 | 54,32 |
| 2,80 | -1,49 | 34,45 | 3,31 | 51,01 |
| 2,00 | -1,00 | 33,40 | 3,21 | 47,80 |
| 1,40 | -0,49 | 40,86 | 3,93 | 43,87 |
| 1,00 | 0,00 | 42,96 | 4,13 | 39,74 |
| 0,710 | 0,49 | 64,76 | 6,22 | 33,52 |
| 0,500 | 1,00 | 92,29 | 8,87 | 24,65 |
| 0,355 | 1,49 | 80,75 | 7,76 | 16,89 |
| 0,250 | 2,00 | 76,30 | 7,33 | 9,55 |
| 0,180 | 2,47 | 29,84 | 2,87 | 6,68 |
| 0,125 | 3,00 | 23,08 | 2,22 | 4,47 |
| 0,090 | 3,47 | 9,19 | 0,88 | 3,58 |
| 0,075 | 3,74 | 4,19 | 0,40 | 3,18 |
| 0,063 | 3,99 | 2,44 | 0,23 | 2,94 |
| < 0,063 | > 3,99 | 30,64 | 2,94 | 0,00 |

Sieve Analysis

| |
|--------|
| Gravel |
| Sand |
| |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,94 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,56 |
| Sand, medium | (0,2 mm - 0,6 mm): 21,37 |
| Sand, coarse | (0,6 mm - 2 mm): 18,93 |
| Gravel | (> 2 mm): 52,20 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | 15,15 | -3,92 |
| 40% | 60% | 6,89 | -2,78 |
| Median 50% | 50% | 2,55 | -1,35 |
| 75% | 25% | 0,51 | 0,98 |
| 84% | 16% | 0,34 | 1,55 |
| 90% | 10% | 0,26 | 1,96 |
| 95% | 5% | 0,14 | 2,85 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,10 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 26,86 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

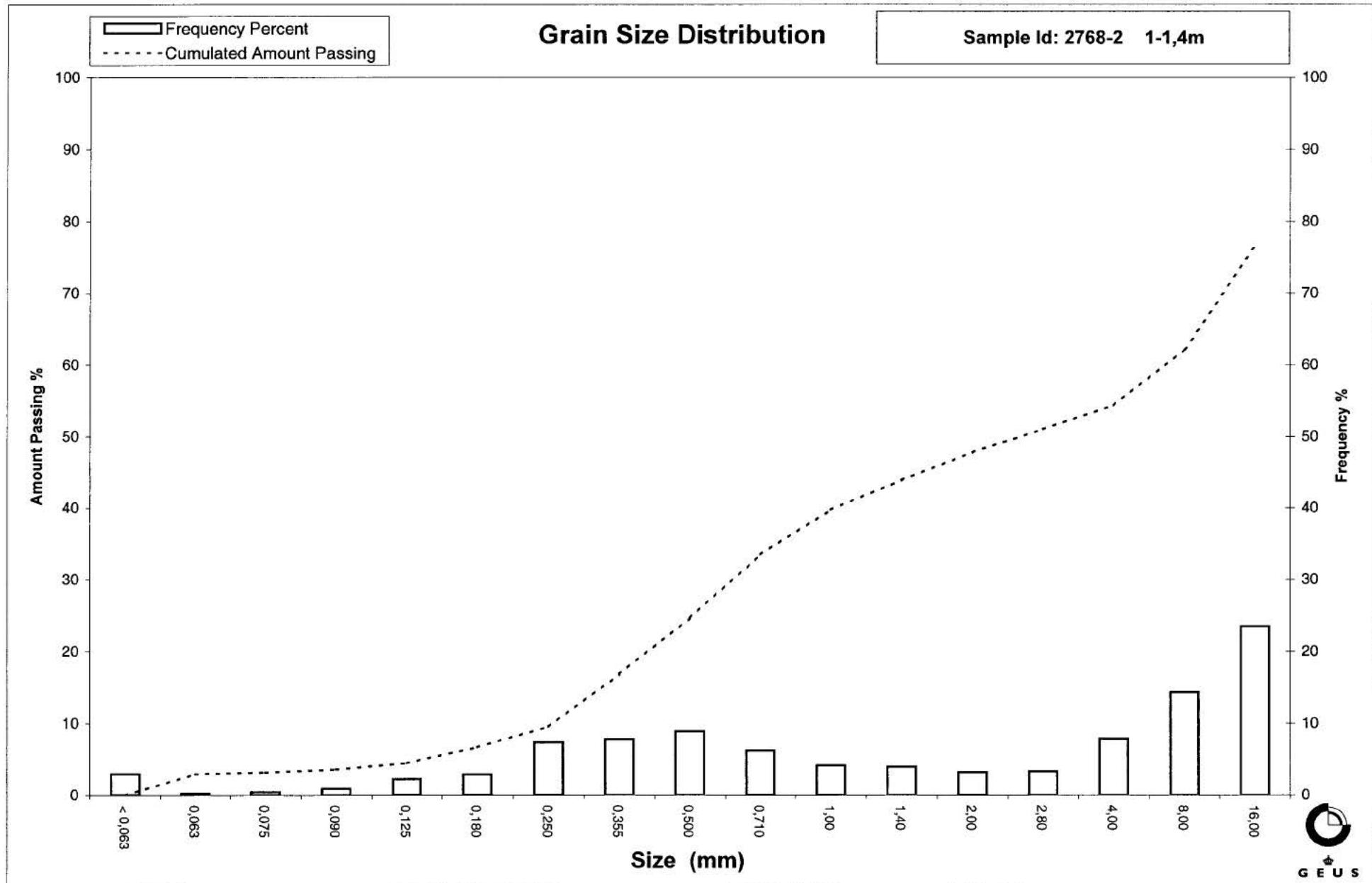
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2768-3-4 1,4-3m
Lab. Id: 20632
SE: 80
Subject: 94. 2768
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 697,575 g

Size Fractions

Sieve Analysis

Gravel

Sand

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 2,16 | 0,31 | 99,69 |
| 4,00 | -2,00 | 0,95 | 0,14 | 99,55 |
| 2,80 | -1,49 | 1,13 | 0,16 | 99,39 |
| 2,00 | -1,00 | 1,20 | 0,17 | 99,22 |
| 1,40 | -0,49 | 2,11 | 0,30 | 98,92 |
| 1,00 | 0,00 | 7,17 | 1,03 | 97,89 |
| 0,710 | 0,49 | 18,85 | 2,70 | 95,19 |
| 0,500 | 1,00 | 86,72 | 12,43 | 82,76 |
| 0,355 | 1,49 | 297,48 | 42,65 | 40,11 |
| 0,250 | 2,00 | 210,83 | 30,22 | 9,89 |
| 0,180 | 2,47 | 31,07 | 4,45 | 5,44 |
| 0,125 | 3,00 | 7,83 | 1,12 | 4,31 |
| 0,090 | 3,47 | 4,82 | 0,69 | 3,62 |
| 0,075 | 3,74 | 2,53 | 0,36 | 3,26 |
| 0,063 | 3,99 | 2,17 | 0,31 | 2,95 |
| < 0,063 | > 3,99 | 20,58 | 2,95 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,95 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,76 |
| Sand, medium | (0,2 mm - 0,6 mm): 81,97 |
| Sand, coarse | (0,6 mm - 2 mm): 10,54 |
| Gravel | (> 2 mm): 0,78 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,71 | 0,50 |
| 16% | 84% | 0,52 | 0,94 |
| 25% | 75% | 0,47 | 1,08 |
| 40% | 60% | 0,42 | 1,24 |
| Median 50% | 50% | 0,39 | 1,36 |
| 75% | 25% | 0,30 | 1,73 |
| 84% | 16% | 0,27 | 1,88 |
| 90% | 10% | 0,25 | 2,00 |
| 95% | 5% | 0,16 | 2,66 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,40 |
| Sorting | 0,56 |
| Skewness | 0,15 |
| Kurtosis | 1,37 |
| Uniformity Coefficient | 1,69 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

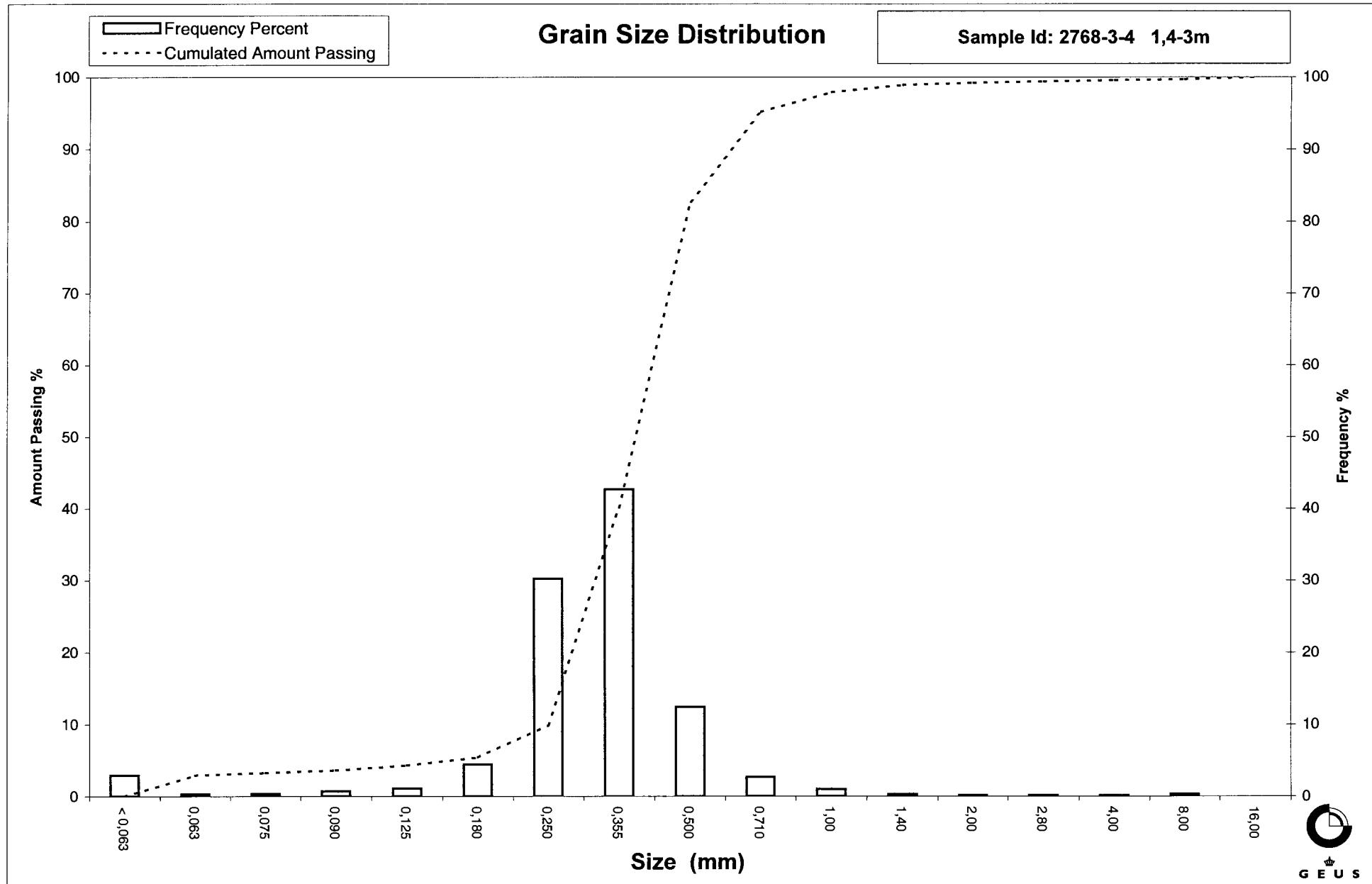
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

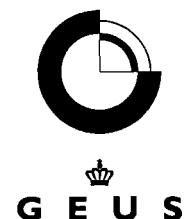
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Grain Size Distribution

Geotechnical

Sample Id: 2768-5 3,0-4m
Lab. Id: 20633
SE: 84
Subject: 94. 2768
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 828,86 g

Size Fractions

Sieve Analysis

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 12,26 | 1,48 | 98,52 | |
| 8,00 | -3,00 | 5,76 | 0,69 | 97,83 | |
| 4,00 | -2,00 | 11,44 | 1,38 | 96,45 | |
| 2,80 | -1,49 | 9,40 | 1,13 | 95,31 | |
| 2,00 | -1,00 | 14,78 | 1,78 | 93,53 | |
| 1,40 | -0,49 | 34,32 | 4,14 | 89,39 | |
| 1,00 | 0,00 | 84,98 | 10,25 | 79,14 | |
| 0,710 | 0,49 | 168,80 | 20,36 | 58,77 | |
| 0,500 | 1,00 | 194,06 | 23,41 | 35,36 | |
| 0,355 | 1,49 | 158,36 | 19,11 | 16,25 | |
| 0,250 | 2,00 | 91,73 | 11,07 | 5,19 | |
| 0,180 | 2,47 | 15,70 | 1,89 | 3,29 | |
| 0,125 | 3,00 | 6,57 | 0,79 | 2,50 | |
| 0,090 | 3,47 | 3,13 | 0,38 | 2,12 | |
| 0,075 | 3,74 | 1,57 | 0,19 | 1,93 | |
| 0,063 | 3,99 | 1,09 | 0,13 | 1,80 | |
| < 0,063 | > 3,99 | 14,92 | 1,80 | 0,00 | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,80 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,03 |
| Sand, medium | (0,2 mm - 0,6 mm): 42,67 |
| Sand, coarse | (0,6 mm - 2 mm): 47,02 |
| Gravel | (> 2 mm): 6,47 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 2,66 | -1,41 |
| 16% | 84% | 1,19 | -0,25 |
| 25% | 75% | 0,94 | 0,09 |
| 40% | 60% | 0,73 | 0,46 |
| Median 50% | 50% | 0,63 | 0,66 |
| 75% | 25% | 0,42 | 1,25 |
| 84% | 16% | 0,35 | 1,50 |
| 90% | 10% | 0,30 | 1,76 |
| 95% | 5% | 0,24 | 2,04 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,64 |
| Sorting | 0,96 |
| Skewness | -0,12 |
| Kurtosis | 1,22 |
| Uniformity Coefficient | 2,46 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

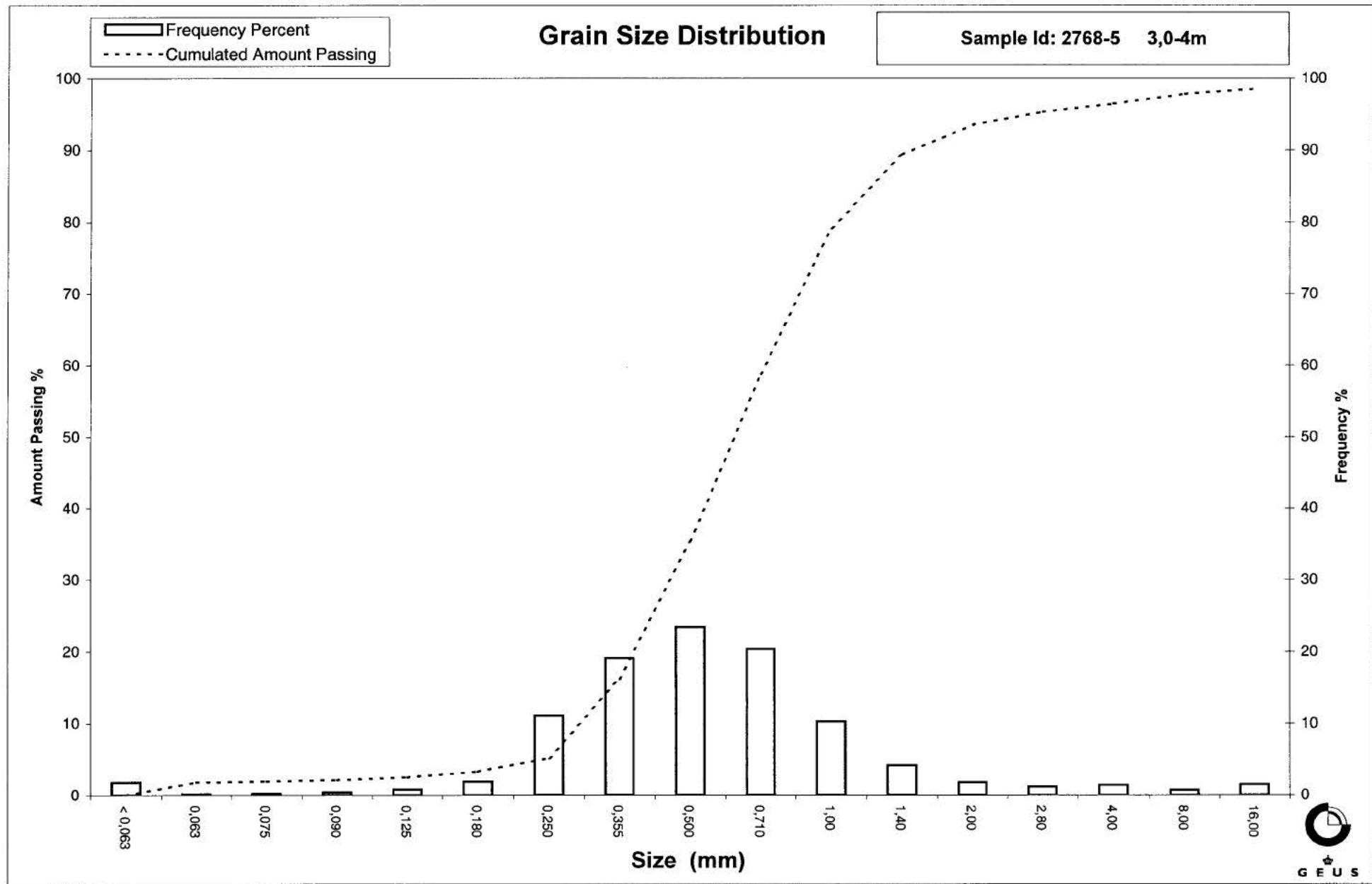
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2769-1-3 0,5-6m
Lab. Id: 20634
SE: 39
Subject: 94. 2769
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 782,625 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 9,13 | 1,17 | 98,83 |
| 4,00 | -2,00 | 3,23 | 0,41 | 98,42 |
| 2,80 | -1,49 | 2,65 | 0,34 | 98,08 |
| 2,00 | -1,00 | 3,63 | 0,46 | 97,62 |
| 1,40 | -0,49 | 9,65 | 1,23 | 96,39 |
| 1,00 | 0,00 | 34,66 | 4,43 | 91,96 |
| 0,710 | 0,49 | 86,05 | 11,00 | 80,96 |
| 0,500 | 1,00 | 147,10 | 18,80 | 62,17 |
| 0,355 | 1,49 | 141,85 | 18,12 | 44,04 |
| 0,250 | 2,00 | 132,85 | 16,98 | 27,07 |
| 0,180 | 2,47 | 91,37 | 11,67 | 15,39 |
| 0,125 | 3,00 | 55,92 | 7,15 | 8,25 |
| 0,090 | 3,47 | 24,22 | 3,09 | 5,15 |
| 0,075 | 3,74 | 7,15 | 0,91 | 4,24 |
| 0,063 | 3,99 | 4,53 | 0,58 | 3,66 |
| < 0,063 | > 3,99 | 28,64 | 3,66 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,66 |
| Sand, fine | (0,063 mm - 0,200 mm): 15,07 |
| Sand, medium | (0,2 mm - 0,6 mm): 52,39 |
| Sand, coarse | (0,6 mm - 2 mm): 26,50 |
| Gravel | (> 2 mm): 2,38 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,27 | -0,35 |
| 16% | 84% | 0,79 | 0,34 |
| 25% | 75% | 0,64 | 0,64 |
| 40% | 60% | 0,48 | 1,05 |
| Median 50% | 50% | 0,40 | 1,31 |
| 75% | 25% | 0,24 | 2,07 |
| 84% | 16% | 0,18 | 2,45 |
| 90% | 10% | 0,14 | 2,85 |
| 95% | 5% | 0,09 | 3,51 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,37 |
| Sorting | 1,11 |
| Skewness | 0,11 |
| Kurtosis | 1,10 |
| Uniformity Coefficient | 3,49 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

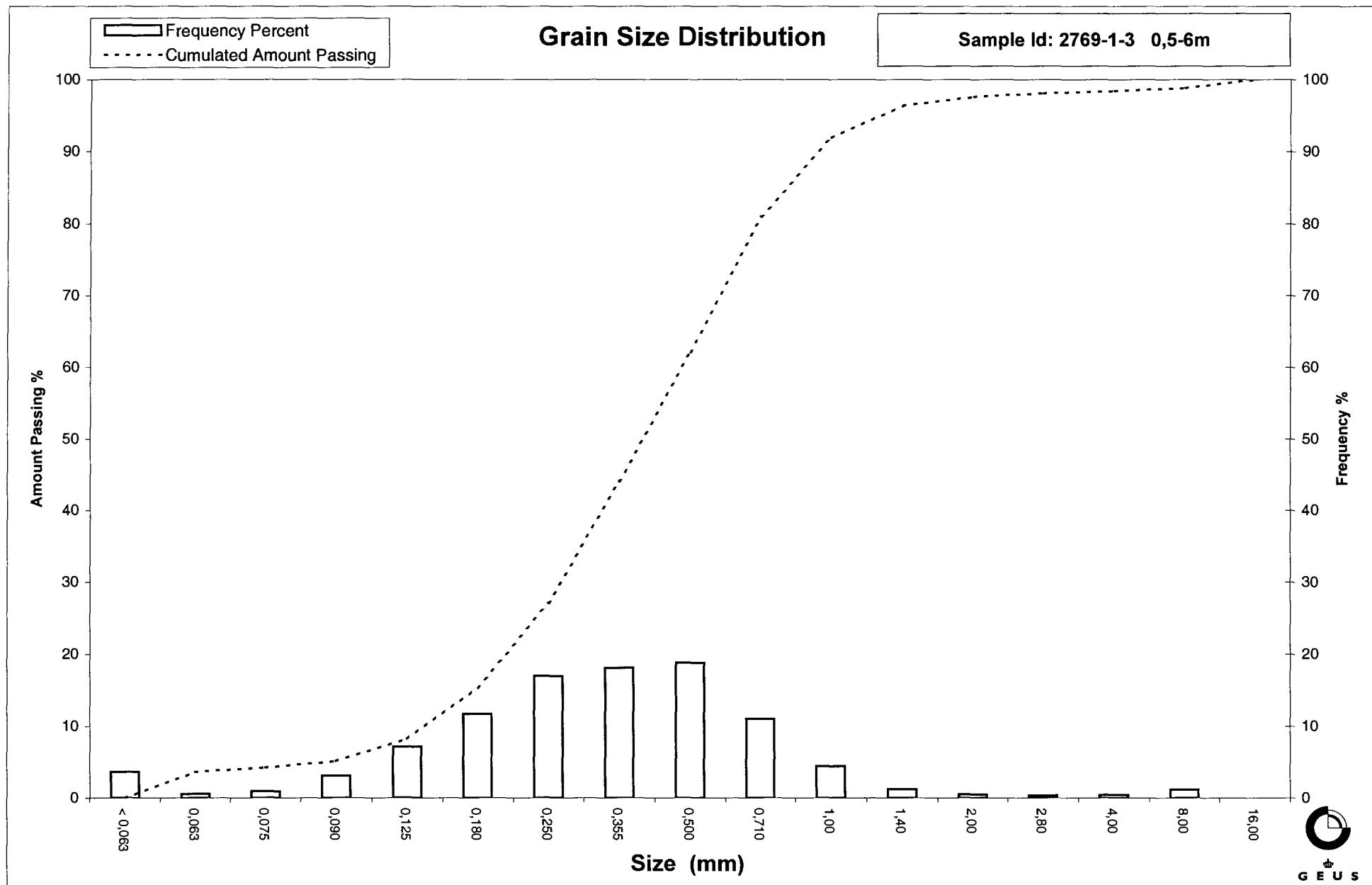
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

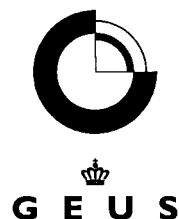
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Grain Size Distribution

Geotechnical

Sample Id: 2770-1-2 0,5-2m
Lab. Id: 20635
SE: 82
Subject: 94. 2770
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 942,195 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 89,46 | 9,49 | 90,51 |
| 8,00 | -3,00 | 41,81 | 4,44 | 86,07 |
| 4,00 | -2,00 | 38,82 | 4,12 | 81,95 |
| 2,80 | -1,49 | 20,51 | 2,18 | 79,77 |
| 2,00 | -1,00 | 20,16 | 2,14 | 77,63 |
| 1,40 | -0,49 | 62,27 | 6,61 | 71,02 |
| 1,00 | 0,00 | 91,30 | 9,69 | 61,33 |
| 0,710 | 0,49 | 115,08 | 12,21 | 49,12 |
| 0,500 | 1,00 | 163,43 | 17,35 | 31,77 |
| 0,355 | 1,49 | 139,06 | 14,76 | 17,01 |
| 0,250 | 2,00 | 81,38 | 8,64 | 8,38 |
| 0,180 | 2,47 | 41,84 | 4,44 | 3,94 |
| 0,125 | 3,00 | 13,40 | 1,42 | 2,51 |
| 0,090 | 3,47 | 4,53 | 0,48 | 2,03 |
| 0,075 | 3,74 | 1,97 | 0,21 | 1,82 |
| 0,063 | 3,99 | 1,58 | 0,17 | 1,66 |
| < 0,063 | > 3,99 | 15,61 | 1,66 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,66 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,55 |
| Sand, medium | (0,2 mm - 0,6 mm): 34,83 |
| Sand, coarse | (0,6 mm - 2 mm): 37,60 |
| Gravel | (> 2 mm): 22,37 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 5,99 | -2,58 |
| 25% | 75% | 1,76 | -0,82 |
| 40% | 60% | 0,97 | 0,05 |
| Median 50% | 50% | 0,73 | 0,45 |
| 75% | 25% | 0,43 | 1,21 |
| 84% | 16% | 0,34 | 1,55 |
| 90% | 10% | 0,27 | 1,89 |
| 95% | 5% | 0,20 | 2,35 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,20 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,59 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

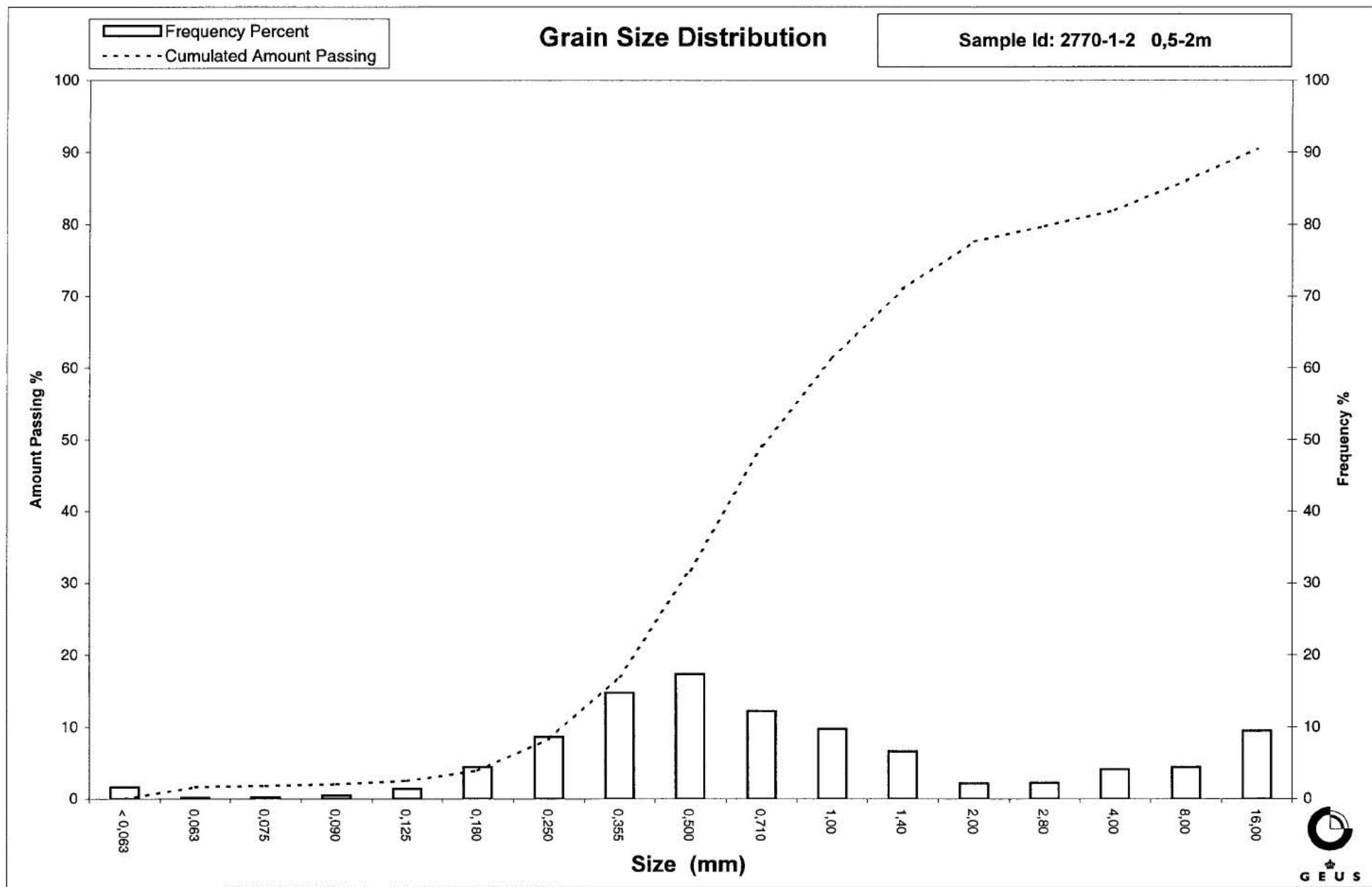
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2770-3 2-3,8m
Lab. Id: 20636
SE: 89
Subject: 94. 2770
Date: November 2002
Executed: K.F/I.N
Remarks: top om



Total Weight 1421,67 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 43,64 | 3,07 | 96,93 | |
| 8,00 | -3,00 | 79,66 | 5,60 | 91,33 | |
| 4,00 | -2,00 | 65,90 | 4,64 | 86,69 | |
| 2,80 | -1,49 | 39,80 | 2,80 | 83,89 | |
| 2,00 | -1,00 | 47,36 | 3,33 | 80,56 | |
| 1,40 | -0,49 | 81,54 | 5,74 | 74,83 | |
| 1,00 | 0,00 | 142,90 | 10,05 | 64,77 | |
| 0,710 | 0,49 | 221,19 | 15,56 | 49,22 | |
| 0,500 | 1,00 | 321,15 | 22,59 | 26,63 | |
| 0,355 | 1,49 | 210,56 | 14,81 | 11,81 | |
| 0,250 | 2,00 | 112,09 | 7,88 | 3,93 | |
| 0,180 | 2,47 | 29,52 | 2,08 | 1,85 | |
| 0,125 | 3,00 | 12,44 | 0,87 | 0,98 | |
| 0,090 | 3,47 | 2,84 | 0,20 | 0,78 | |
| 0,075 | 3,74 | 1,45 | 0,10 | 0,68 | |
| 0,063 | 3,99 | 0,62 | 0,04 | 0,63 | |
| < 0,063 | > 3,99 | 9,01 | 0,63 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,63 |
| Sand, fine | (0,063 mm - 0,200 mm): 1,81 |
| Sand, medium | (0,2 mm - 0,6 mm): 34,94 |
| Sand, coarse | (0,6 mm - 2 mm): 43,18 |
| Gravel | (> 2 mm): 19,44 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 13,24 | -3,73 |
| 16% | 84% | 2,85 | -1,51 |
| 25% | 75% | 1,42 | -0,50 |
| 40% | 60% | 0,91 | 0,13 |
| Median 50% | 50% | 0,72 | 0,46 |
| 75% | 25% | 0,48 | 1,05 |
| 84% | 16% | 0,40 | 1,34 |
| 90% | 10% | 0,33 | 1,60 |
| 95% | 5% | 0,26 | 1,92 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,10 |
| Sorting | 1,57 |
| Skewness | -0,44 |
| Kurtosis | 1,49 |
| Uniformity Coefficient | 2,75 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

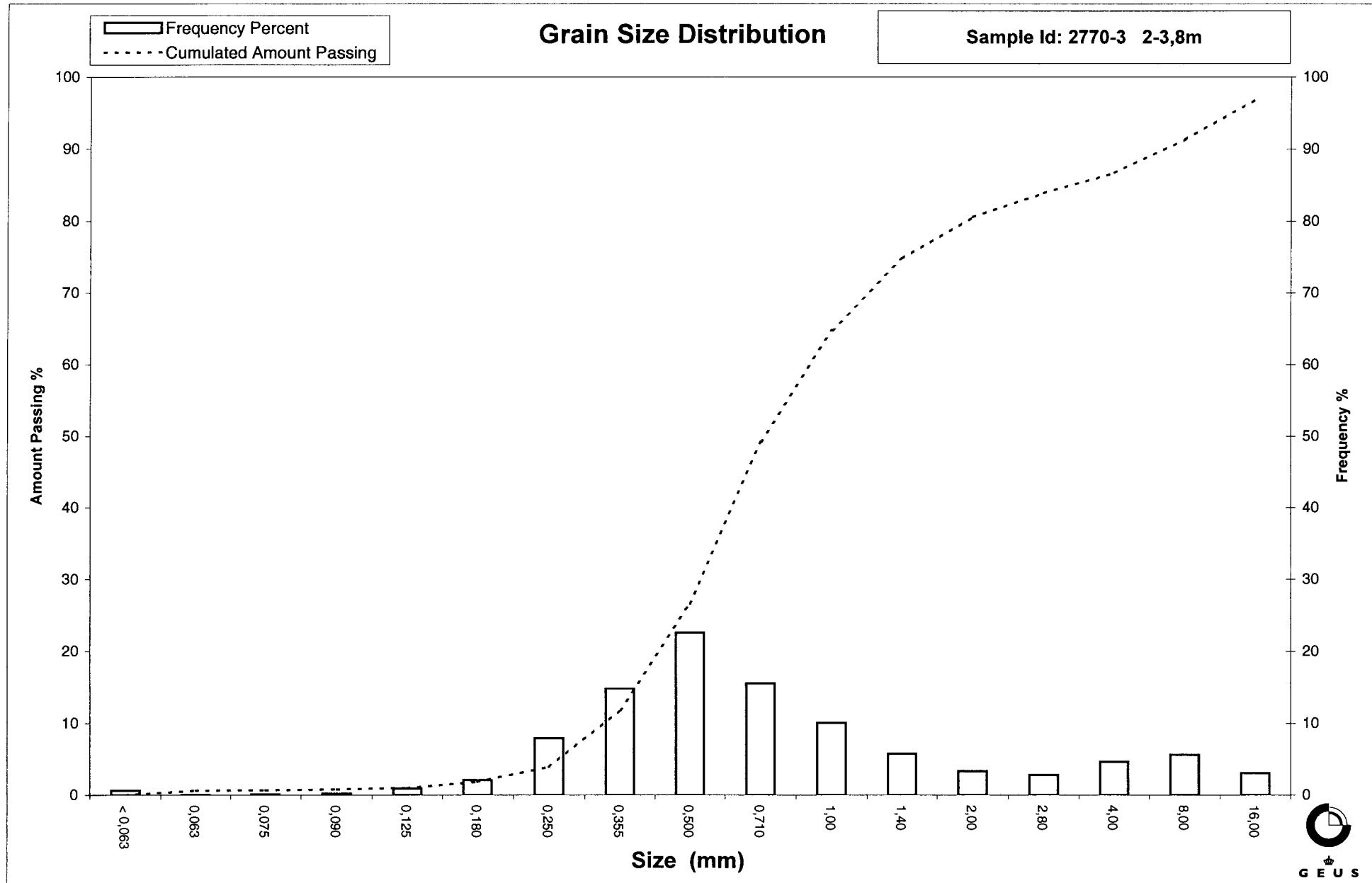
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2770-4 4,0-5,0m
Lab. Id: 20637
SE: 86
Subject: 94. 2770
Date: November 2002
Executed: K.F.I.N
Remarks:



Total Weight 656,16 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 2,22 | 0,34 | 99,66 | |
| 4,00 | -2,00 | 4,68 | 0,71 | 98,95 | |
| 2,80 | -1,49 | 3,48 | 0,53 | 98,42 | |
| 2,00 | -1,00 | 4,86 | 0,74 | 97,68 | |
| 1,40 | -0,49 | 4,49 | 0,68 | 96,99 | |
| 1,00 | 0,00 | 15,20 | 2,32 | 94,68 | |
| 0,710 | 0,49 | 29,75 | 4,53 | 90,14 | |
| 0,500 | 1,00 | 75,40 | 11,49 | 78,65 | |
| 0,355 | 1,49 | 184,99 | 28,19 | 50,46 | |
| 0,250 | 2,00 | 205,82 | 31,37 | 19,09 | |
| 0,180 | 2,47 | 67,13 | 10,23 | 8,86 | |
| 0,125 | 3,00 | 26,40 | 4,02 | 4,84 | |
| 0,090 | 3,47 | 9,41 | 1,43 | 3,40 | |
| 0,075 | 3,74 | 3,25 | 0,49 | 2,91 | |
| 0,063 | 3,99 | 2,27 | 0,35 | 2,56 | |
| < 0,063 | > 3,99 | 16,81 | 2,56 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,56 |
| Sand, fine | (0,063 mm - 0,200 mm): 9,22 |
| Sand, medium | (0,2 mm - 0,6 mm): 72,34 |
| Sand, coarse | (0,6 mm - 2 mm): 13,55 |
| Gravel | (> 2 mm): 2,32 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 1,06 | -0,08 |
| 16% | 84% | 0,60 | 0,74 |
| 25% | 75% | 0,48 | 1,06 |
| 40% | 60% | 0,40 | 1,31 |
| Median 50% | 50% | 0,35 | 1,50 |
| 75% | 25% | 0,27 | 1,89 |
| 84% | 16% | 0,23 | 2,13 |
| 90% | 10% | 0,19 | 2,41 |
| 95% | 5% | 0,13 | 2,97 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,46 |
| Sorting | 0,81 |
| Skewness | -0,06 |
| Kurtosis | 1,50 |
| Uniformity Coefficient | 2,15 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

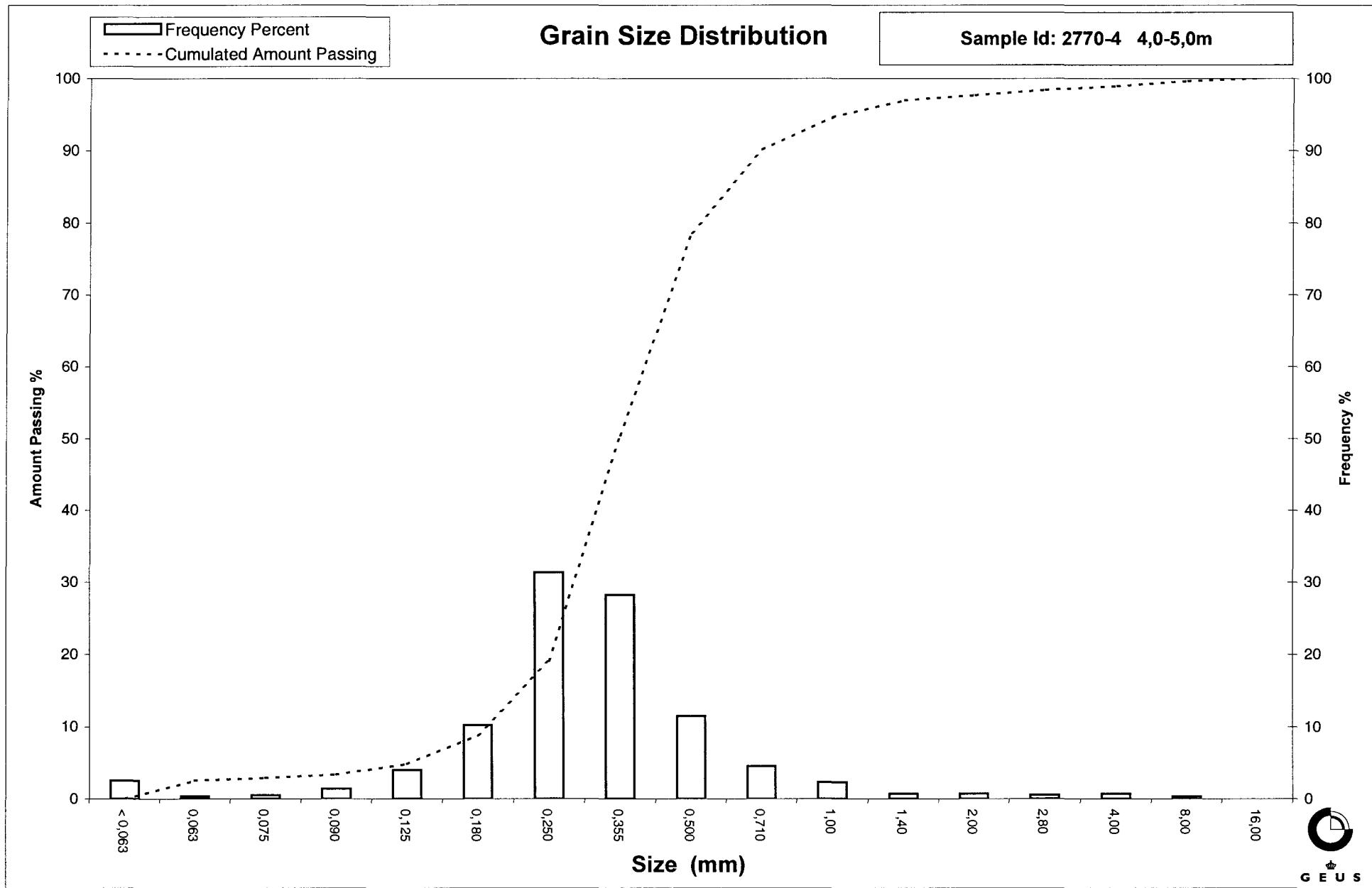
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

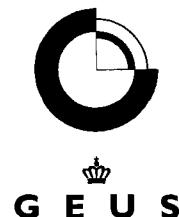
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 Email: GEUS@geus.dk
 www.geus.dk



Grain Size Distribution

Geotechnical

Sample Id: 2771-1-3 1,0-6m
Lab. Id: 20638
SE: 86
Subject: 94. 2771
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 652,59 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 3,24 | 0,50 | 99,50 |
| 4,00 | -2,00 | 9,30 | 1,43 | 98,08 |
| 2,80 | -1,49 | 3,00 | 0,46 | 97,62 |
| 2,00 | -1,00 | 6,12 | 0,94 | 96,68 |
| 1,40 | -0,49 | 5,96 | 0,91 | 95,77 |
| 1,00 | 0,00 | 15,03 | 2,30 | 93,46 |
| 0,710 | 0,49 | 26,90 | 4,12 | 89,34 |
| 0,500 | 1,00 | 82,83 | 12,69 | 76,65 |
| 0,355 | 1,49 | 155,90 | 23,89 | 52,76 |
| 0,250 | 2,00 | 180,70 | 27,69 | 25,07 |
| 0,180 | 2,47 | 117,51 | 18,01 | 7,06 |
| 0,125 | 3,00 | 29,36 | 4,50 | 2,57 |
| 0,090 | 3,47 | 6,98 | 1,07 | 1,50 |
| 0,075 | 3,74 | 1,93 | 0,30 | 1,20 |
| 0,063 | 3,99 | 1,45 | 0,22 | 0,98 |
| < 0,063 | > 3,99 | 6,38 | 0,98 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,98 |
| Sand, fine | (0,063 mm - 0,200 mm): 11,23 |
| Sand, medium | (0,2 mm - 0,6 mm): 70,48 |
| Sand, coarse | (0,6 mm - 2 mm): 13,99 |
| Gravel | (> 2 mm): 3,32 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,27 | -0,34 |
| 16% | 84% | 0,62 | 0,69 |
| 25% | 75% | 0,49 | 1,03 |
| 40% | 60% | 0,40 | 1,33 |
| Median 50% | 50% | 0,34 | 1,54 |
| 75% | 25% | 0,25 | 2,00 |
| 84% | 16% | 0,21 | 2,22 |
| 90% | 10% | 0,19 | 2,39 |
| 95% | 5% | 0,15 | 2,69 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,48 |
| Sorting | 0,84 |
| Skewness | -0,17 |
| Kurtosis | 1,28 |
| Uniformity Coefficient | 2,08 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

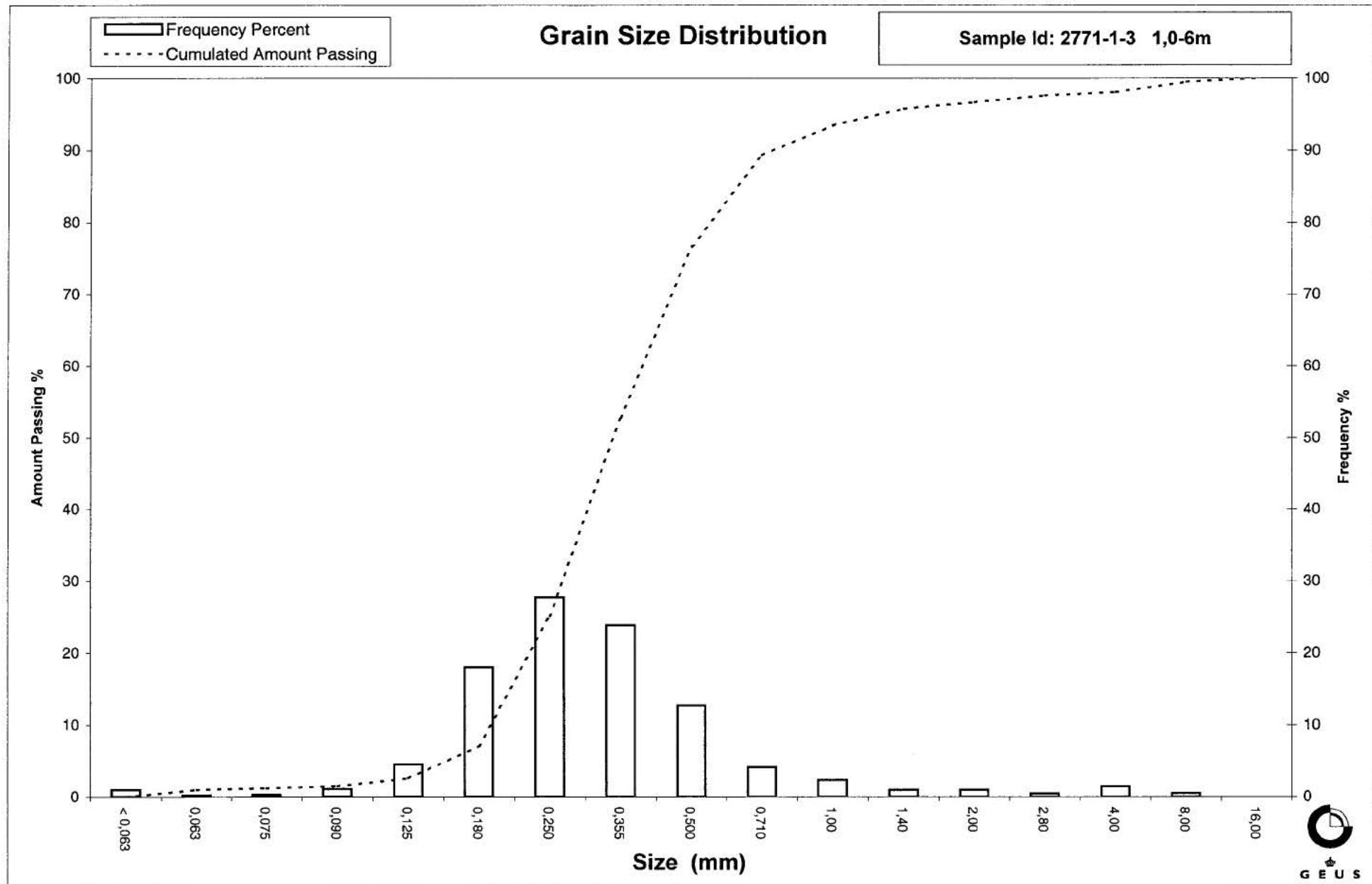
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

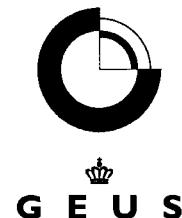
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Grain Size Distribution

Geotechnical

Sample Id: 2772-1 1-1,9m
Lab. Id: 20639
SE: 42
Subject: 94. 2772
Date: November 2002
Executed: K.F.I.N
Remarks:



Total Weight 896,76 g

Size Fractions

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 10,50 | 1,17 | 98,83 |
| 4,00 | -2,00 | 3,18 | 0,35 | 98,47 |
| 2,80 | -1,49 | 3,72 | 0,41 | 98,06 |
| 2,00 | -1,00 | 3,78 | 0,42 | 97,64 |
| 1,40 | -0,49 | 5,83 | 0,65 | 96,99 |
| 1,00 | 0,00 | 9,17 | 1,02 | 95,97 |
| 0,710 | 0,49 | 21,67 | 2,42 | 93,55 |
| 0,500 | 1,00 | 74,17 | 8,27 | 85,28 |
| 0,355 | 1,49 | 149,43 | 16,66 | 68,61 |
| 0,250 | 2,00 | 211,10 | 23,54 | 45,07 |
| 0,180 | 2,47 | 135,43 | 15,10 | 29,97 |
| 0,125 | 3,00 | 73,51 | 8,20 | 21,77 |
| 0,090 | 3,47 | 51,92 | 5,79 | 15,98 |
| 0,075 | 3,74 | 28,34 | 3,16 | 12,83 |
| 0,063 | 3,99 | 23,92 | 2,67 | 10,16 |
| < 0,063 | > 3,99 | 91,09 | 10,16 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 10,16 |
| Sand, fine | (0,063 mm - 0,200 mm): 24,13 |
| Sand, medium | (0,2 mm - 0,6 mm): 54,93 |
| Sand, coarse | (0,6 mm - 2 mm): 8,42 |
| Gravel | (> 2 mm): 2,36 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,88 | 0,18 |
| 16% | 84% | 0,49 | 1,03 |
| 25% | 75% | 0,41 | 1,28 |
| 40% | 60% | 0,32 | 1,66 |
| Median 50% | 50% | 0,27 | 1,88 |
| 75% | 25% | 0,15 | 2,77 |
| 84% | 16% | 0,09 | 3,47 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,13 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

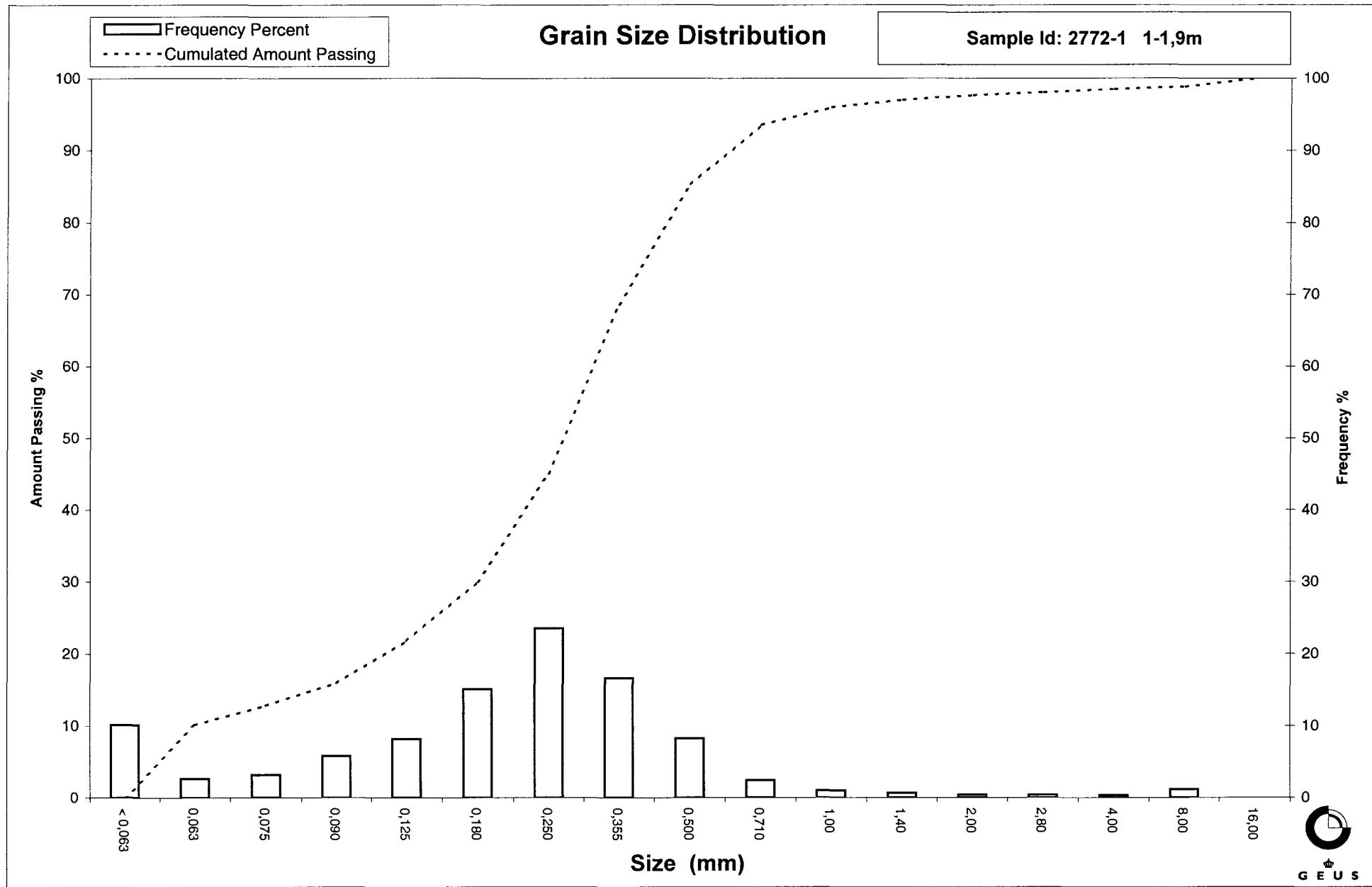
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

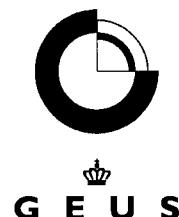
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Grain Size Distribution

Geotechnical

Sample Id: 2772-2 2-2,4m
Lab. Id: 20640
SE: 77
Subject: 94. 2772
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 839,025 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 26,48 | 3,16 | 96,84 |
| 8,00 | -3,00 | 5,45 | 0,65 | 96,19 |
| 4,00 | -2,00 | 7,13 | 0,85 | 95,35 |
| 2,80 | -1,49 | 3,55 | 0,42 | 94,92 |
| 2,00 | -1,00 | 4,10 | 0,49 | 94,43 |
| 1,40 | -0,49 | 10,93 | 1,30 | 93,13 |
| 1,00 | 0,00 | 22,87 | 2,73 | 90,41 |
| 0,710 | 0,49 | 67,93 | 8,10 | 82,31 |
| 0,500 | 1,00 | 168,77 | 20,12 | 62,19 |
| 0,355 | 1,49 | 216,85 | 25,85 | 36,35 |
| 0,250 | 2,00 | 190,86 | 22,75 | 13,60 |
| 0,180 | 2,47 | 60,24 | 7,18 | 6,42 |
| 0,125 | 3,00 | 24,43 | 2,91 | 3,51 |
| 0,090 | 3,47 | 9,26 | 1,10 | 2,41 |
| 0,075 | 3,74 | 3,35 | 0,40 | 2,01 |
| 0,063 | 3,99 | 2,12 | 0,25 | 1,76 |
| < 0,063 | > 3,99 | 14,73 | 1,76 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,76 |
| Sand, fine | (0,063 mm - 0,200 mm): 6,72 |
| Sand, medium | (0,2 mm - 0,6 mm): 63,30 |
| Sand, coarse | (0,6 mm - 2 mm): 22,66 |
| Gravel | (> 2 mm): 5,57 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 3,02 | -1,59 |
| 16% | 84% | 0,77 | 0,38 |
| 25% | 75% | 0,63 | 0,66 |
| 40% | 60% | 0,49 | 1,04 |
| Median 50% | 50% | 0,43 | 1,21 |
| 75% | 25% | 0,30 | 1,72 |
| 84% | 16% | 0,26 | 1,94 |
| 90% | 10% | 0,21 | 2,22 |
| 95% | 5% | 0,15 | 2,71 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,18 |
| Sorting | 1,04 |
| Skewness | -0,19 |
| Kurtosis | 1,65 |
| Uniformity Coefficient | 2,27 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

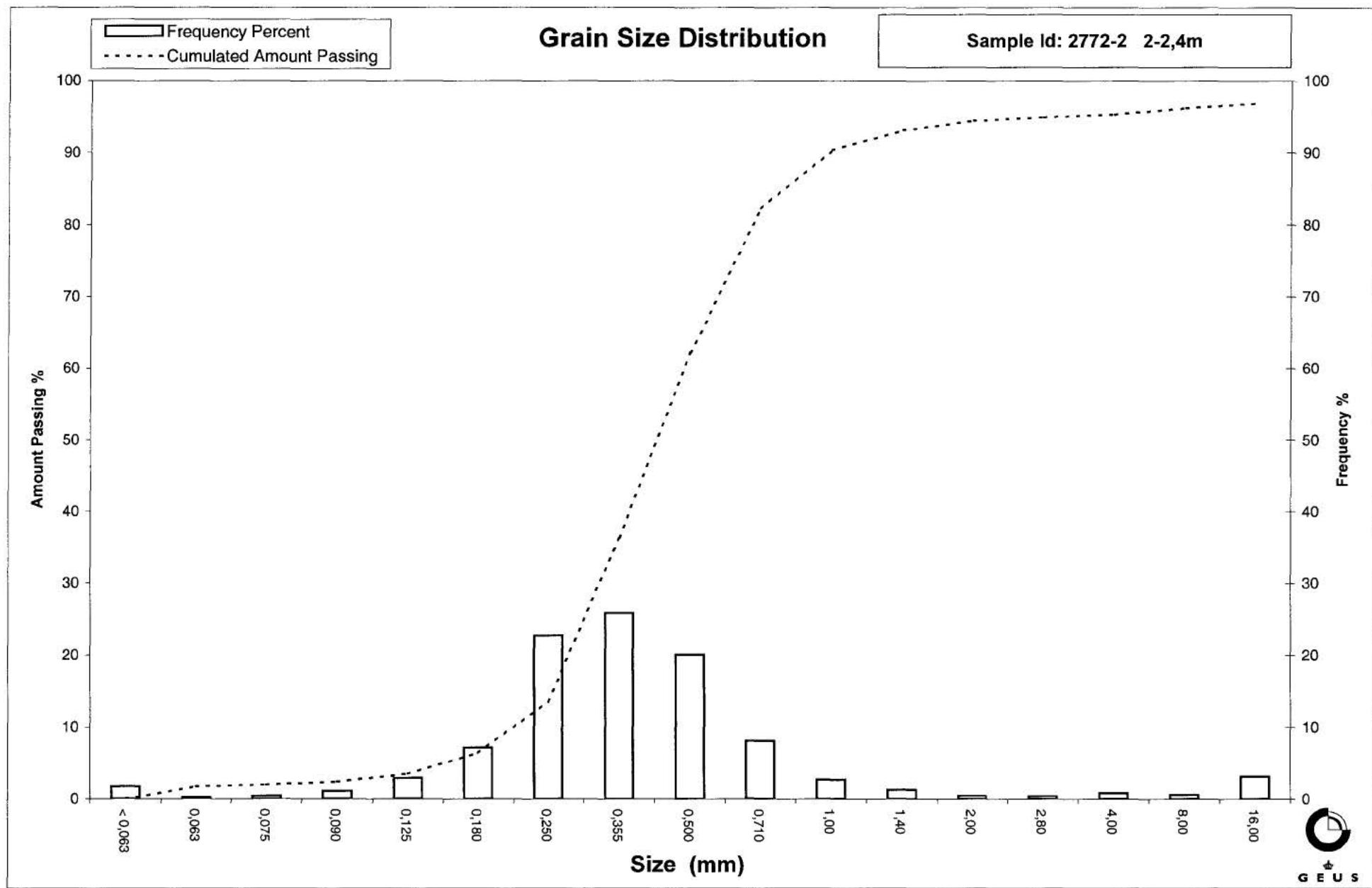
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2772-3 4-5,2m
Lab. Id: 20641
SE: 75
Subject: 94. 2772
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 620,04 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 4,99 | 0,80 | 99,20 |
| 4,00 | -2,00 | 1,76 | 0,28 | 98,91 |
| 2,80 | -1,49 | 0,48 | 0,08 | 98,83 |
| 2,00 | -1,00 | 0,69 | 0,11 | 98,72 |
| 1,40 | -0,49 | 4,36 | 0,70 | 98,02 |
| 1,00 | 0,00 | 16,48 | 2,66 | 95,36 |
| 0,710 | 0,49 | 51,39 | 8,29 | 87,07 |
| 0,500 | 1,00 | 199,24 | 32,13 | 54,94 |
| 0,355 | 1,49 | 245,63 | 39,61 | 15,33 |
| 0,250 | 2,00 | 73,96 | 11,93 | 3,40 |
| 0,180 | 2,47 | 13,36 | 2,15 | 1,24 |
| 0,125 | 3,00 | 2,32 | 0,37 | 0,87 |
| 0,090 | 3,47 | 1,02 | 0,16 | 0,70 |
| 0,075 | 3,74 | 0,29 | 0,05 | 0,66 |
| 0,063 | 3,99 | 0,29 | 0,05 | 0,61 |
| < 0,063 | > 3,99 | 3,79 | 0,61 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,61 |
| Sand, fine | (0,063 mm - 0,200 mm): 1,25 |
| Sand, medium | (0,2 mm - 0,6 mm): 68,38 |
| Sand, coarse | (0,6 mm - 2 mm): 28,48 |
| Gravel | (> 2 mm): 1,28 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,99 | 0,02 |
| 16% | 84% | 0,69 | 0,54 |
| 25% | 75% | 0,63 | 0,66 |
| 40% | 60% | 0,53 | 0,91 |
| Median 50% | 50% | 0,48 | 1,05 |
| 75% | 25% | 0,39 | 1,36 |
| 84% | 16% | 0,36 | 1,48 |
| 90% | 10% | 0,31 | 1,70 |
| 95% | 5% | 0,26 | 1,92 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,02 |
| Sorting | 0,53 |
| Skewness | -0,09 |
| Kurtosis | 1,13 |
| Uniformity Coefficient | 1,73 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

$$\text{Mean } (\phi 16\% + \phi 84\% + \phi 50\%) / 3 \text{ (Folk and Ward 1957)}$$

$$\text{Sorting } (\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6 \text{ (Folk and Ward 1957)}$$

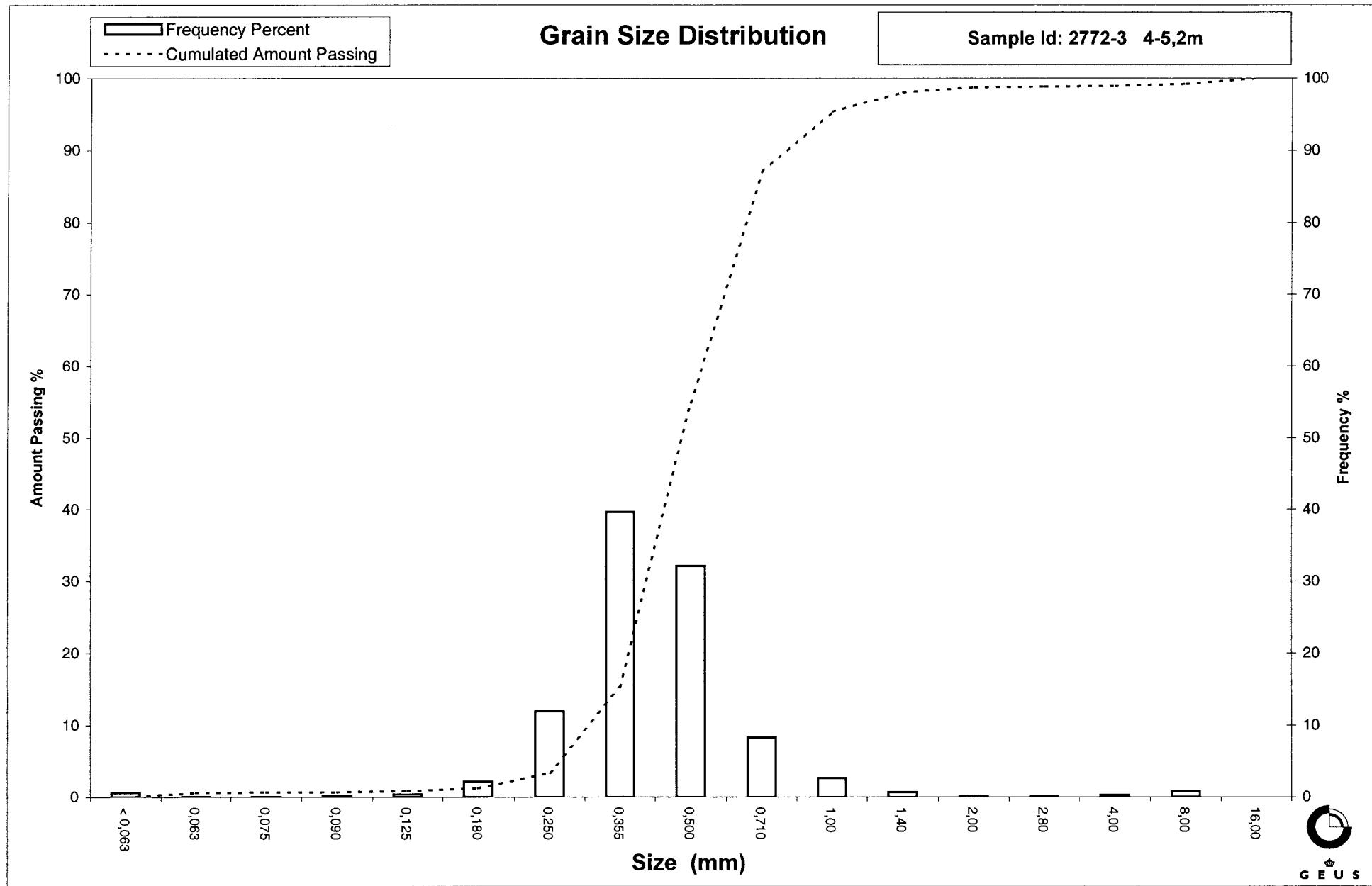
$$\text{Kurtosis } (\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Skewness } (\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Uniformity Coefficient } (d_{60\%} / d_{10\%}) \text{ (dgt-Bulletin 1988)}$$

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2772-4 5,2-6m
Lab. Id: 20642
SE: 78
Subject: 94. 2772
Date: November 2002
Executed: K.F/I.N
Remarks: For mat <16mm mat>32mm



Total Weight 1145,75 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 115,23 | 10,06 | 89,94 |
| 8,00 | -3,00 | 30,55 | 2,67 | 87,28 |
| 4,00 | -2,00 | 33,70 | 2,94 | 84,34 |
| 2,80 | -1,49 | 32,12 | 2,80 | 81,53 |
| 2,00 | -1,00 | 42,88 | 3,74 | 77,79 |
| 1,40 | -0,49 | 120,26 | 10,50 | 67,29 |
| 1,00 | 0,00 | 145,76 | 12,72 | 54,57 |
| 0,710 | 0,49 | 149,82 | 13,08 | 41,50 |
| 0,500 | 1,00 | 138,68 | 12,10 | 29,39 |
| 0,355 | 1,49 | 106,81 | 9,32 | 20,07 |
| 0,250 | 2,00 | 169,40 | 14,78 | 5,28 |
| 0,180 | 2,47 | 31,57 | 2,76 | 2,53 |
| 0,125 | 3,00 | 7,63 | 0,67 | 1,86 |
| 0,090 | 3,47 | 2,71 | 0,24 | 1,63 |
| 0,075 | 3,74 | 1,76 | 0,15 | 1,47 |
| 0,063 | 3,99 | 1,25 | 0,11 | 1,36 |
| < 0,063 | > 3,99 | 15,62 | 1,36 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,36 |
| Sand, fine | (0,063 mm - 0,200 mm): 1,95 |
| Sand, medium | (0,2 mm - 0,6 mm): 31,84 |
| Sand, coarse | (0,6 mm - 2 mm): 42,63 |
| Gravel | (> 2 mm): 22,21 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 3,86 | -1,95 |
| 25% | 75% | 1,84 | -0,88 |
| 40% | 60% | 1,17 | -0,23 |
| Median 50% | 50% | 0,90 | 0,15 |
| 75% | 25% | 0,43 | 1,21 |
| 84% | 16% | 0,33 | 1,62 |
| 90% | 10% | 0,28 | 1,82 |
| 95% | 5% | 0,24 | 2,04 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,06 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 4,13 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

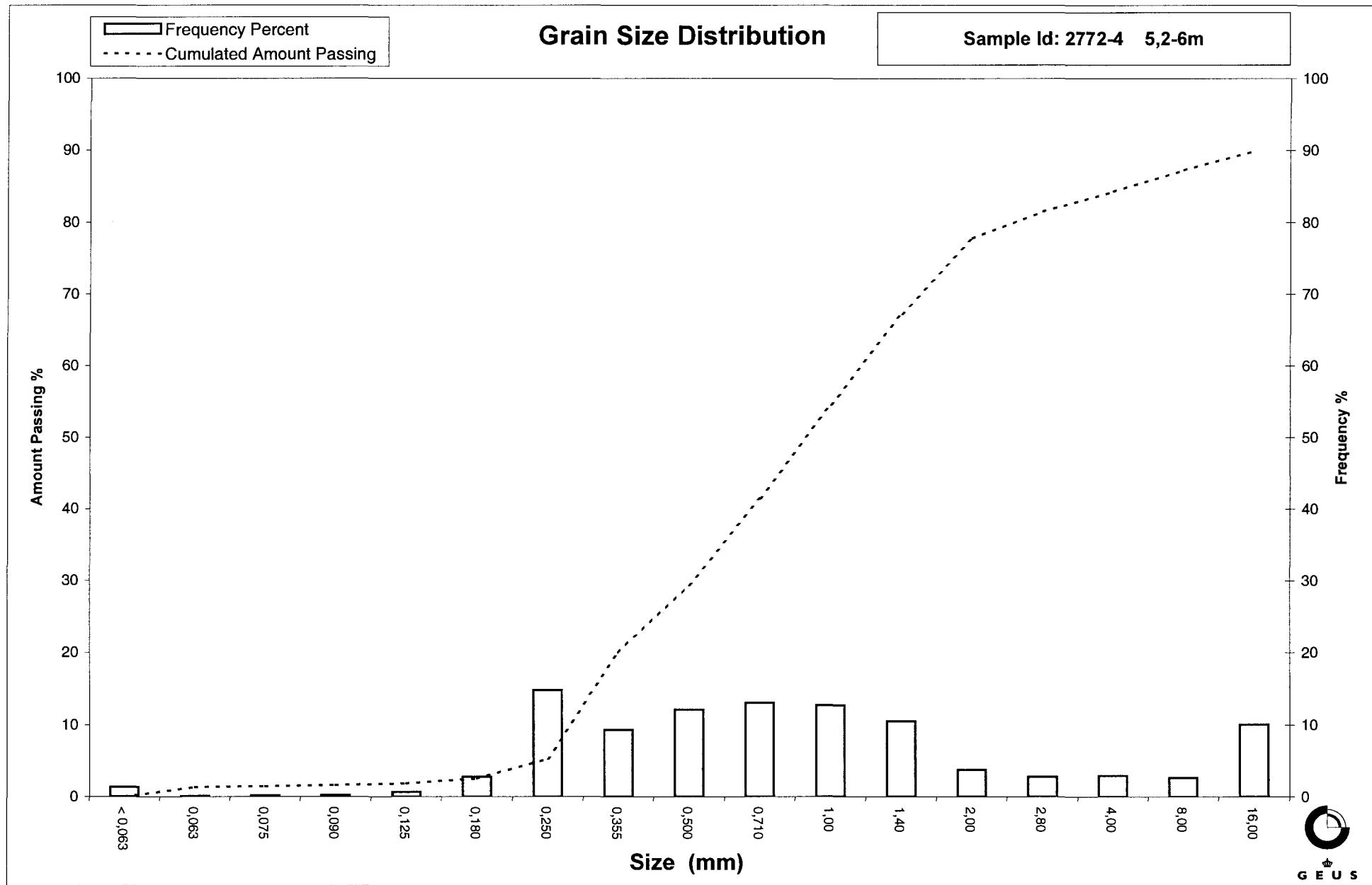
Size Classes and Percentiles are found by linear interpolation

Formulas

- Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2773-1-3 0,5-3,6 m
Lab. Id: 20643
SE: 64
Subject: 94. 2773
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 902,835 g

Size Fractions

| Sieve Analysis | |
|----------------|--|
| Gravel | |
| Sand | |

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 69,50 | 7,70 | 92,30 |
| 8,00 | -3,00 | 8,16 | 0,90 | 91,40 |
| 4,00 | -2,00 | 4,13 | 0,46 | 90,94 |
| 2,80 | -1,49 | 2,37 | 0,26 | 90,68 |
| 2,00 | -1,00 | 4,10 | 0,45 | 90,23 |
| 1,40 | -0,49 | 2,59 | 0,29 | 89,94 |
| 1,00 | 0,00 | 5,78 | 0,64 | 89,30 |
| 0,710 | 0,49 | 8,75 | 0,97 | 88,33 |
| 0,500 | 1,00 | 22,53 | 2,50 | 85,83 |
| 0,355 | 1,49 | 80,75 | 8,94 | 76,89 |
| 0,250 | 2,00 | 319,94 | 35,44 | 41,45 |
| 0,180 | 2,47 | 176,71 | 19,57 | 21,88 |
| 0,125 | 3,00 | 118,04 | 13,07 | 8,81 |
| 0,090 | 3,47 | 40,26 | 4,46 | 4,35 |
| 0,075 | 3,74 | 9,36 | 1,04 | 3,31 |
| 0,063 | 3,99 | 7,23 | 0,80 | 2,51 |
| < 0,063 | > 3,99 | 22,65 | 2,51 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,51 |
| Sand, fine | (0,063 mm - 0,200 mm): 24,96 |
| Sand, medium | (0,2 mm - 0,6 mm): 59,55 |
| Sand, coarse | (0,6 mm - 2 mm): 3,20 |
| Gravel | (> 2 mm): 9,77 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 0,47 | 1,09 |
| 25% | 75% | 0,35 | 1,52 |
| 40% | 60% | 0,30 | 1,71 |
| Median 50% | 50% | 0,28 | 1,86 |
| 75% | 25% | 0,19 | 2,39 |
| 84% | 16% | 0,16 | 2,69 |
| 90% | 10% | 0,13 | 2,94 |
| 95% | 5% | 0,10 | 3,39 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,88 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,35 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

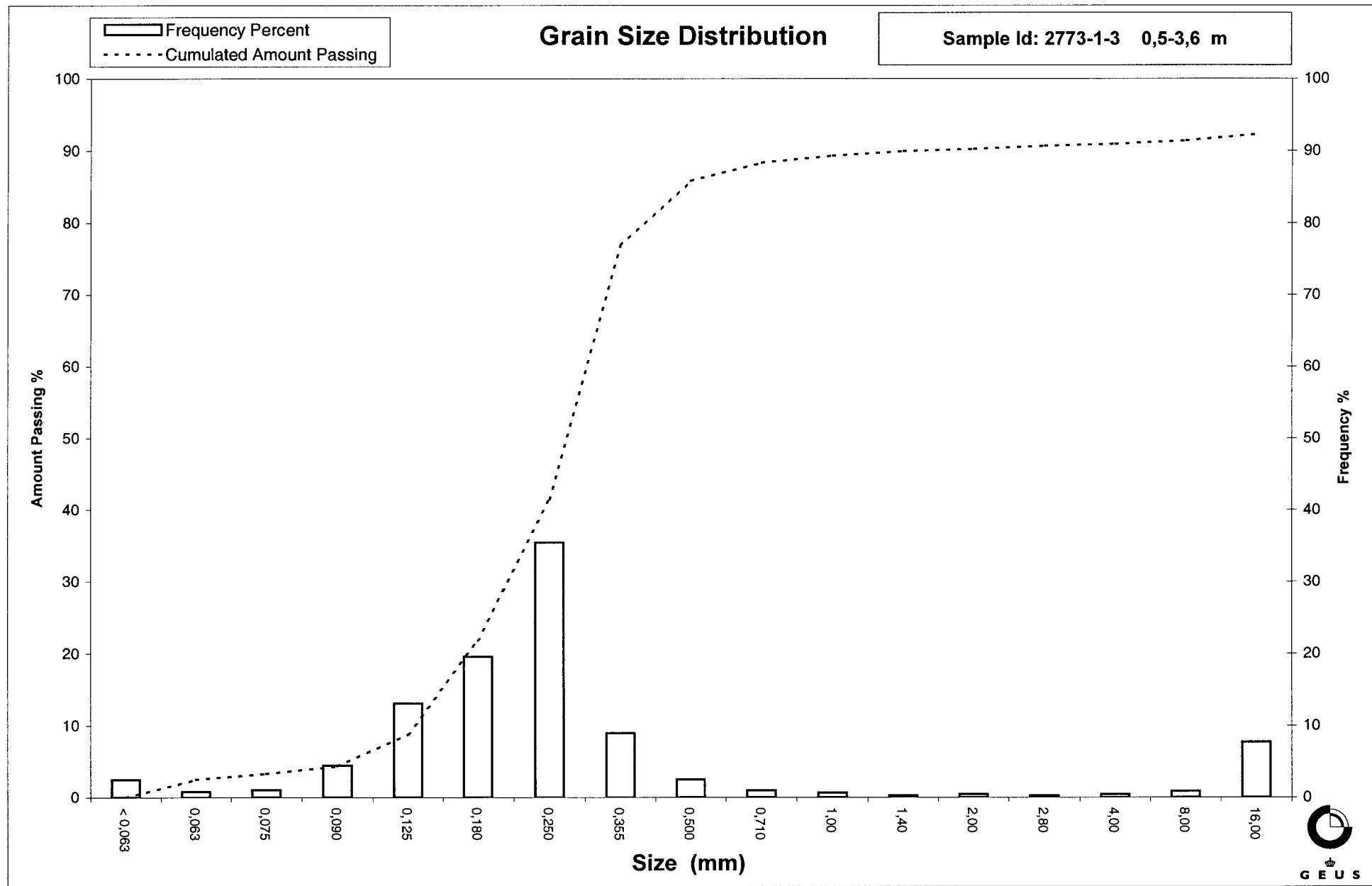
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2773-4-5 3,6-6m
Lab. Id: 20644
SE: 84
Subject: 94. 2773
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 680,89 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 68,02 | 9,99 | 90,01 |
| 8,00 | -3,00 | 2,08 | 0,31 | 89,70 |
| 4,00 | -2,00 | 13,64 | 2,00 | 87,70 |
| 2,80 | -1,49 | 9,89 | 1,45 | 86,25 |
| 2,00 | -1,00 | 12,07 | 1,77 | 84,48 |
| 1,40 | -0,49 | 22,71 | 3,34 | 81,14 |
| 1,00 | 0,00 | 30,69 | 4,51 | 76,63 |
| 0,710 | 0,49 | 40,97 | 6,02 | 70,62 |
| 0,500 | 1,00 | 81,83 | 12,02 | 58,60 |
| 0,355 | 1,49 | 172,90 | 25,39 | 33,21 |
| 0,250 | 2,00 | 185,91 | 27,30 | 5,90 |
| 0,180 | 2,47 | 24,13 | 3,54 | 2,36 |
| 0,125 | 3,00 | 4,77 | 0,70 | 1,66 |
| 0,090 | 3,47 | 2,05 | 0,30 | 1,36 |
| 0,075 | 3,74 | 1,00 | 0,15 | 1,21 |
| 0,063 | 3,99 | 0,79 | 0,12 | 1,09 |
| < 0,063 | > 3,99 | 7,45 | 1,09 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,09 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,28 |
| Sand, medium | (0,2 mm - 0,6 mm): 60,95 |
| Sand, coarse | (0,6 mm - 2 mm): 20,16 |
| Gravel | (> 2 mm): 15,52 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 1,91 | -0,94 |
| 25% | 75% | 0,92 | 0,12 |
| 40% | 60% | 0,52 | 0,93 |
| Median 50% | 50% | 0,45 | 1,15 |
| 75% | 25% | 0,32 | 1,63 |
| 84% | 16% | 0,29 | 1,79 |
| 90% | 10% | 0,27 | 1,91 |
| 95% | 5% | 0,23 | 2,11 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,67 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,97 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

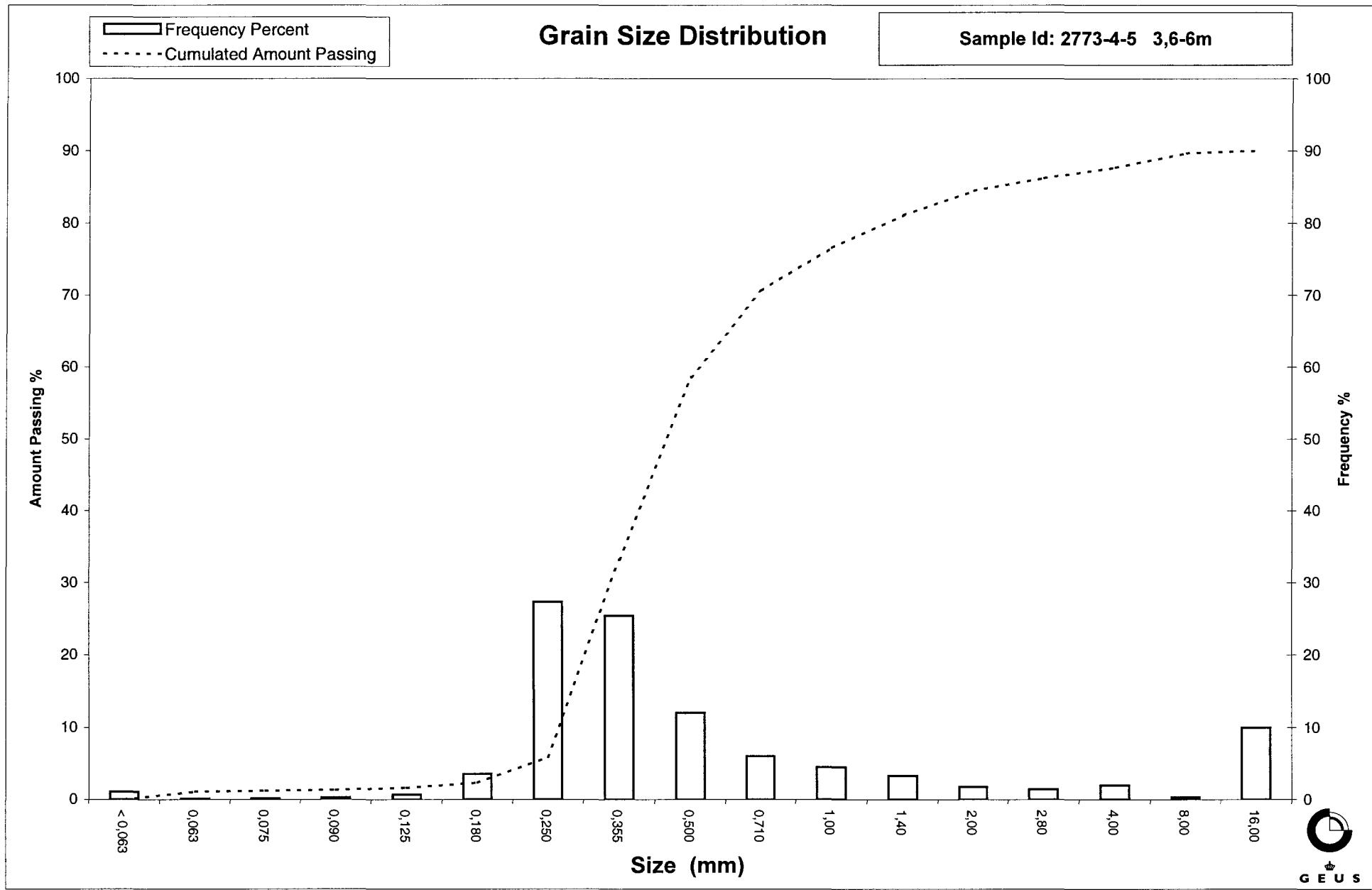
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

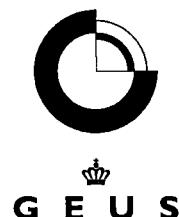
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Grain Size Distribution

Geotechnical

Sample Id: 2774-1-4 1,0-6 m
Lab. Id: 20645
SE: 81
Subject: 94. 2774
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 746,37 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 31,76 | 4,26 | 95,74 |
| 8,00 | -3,00 | 24,42 | 3,27 | 92,47 |
| 4,00 | -2,00 | 14,56 | 1,95 | 90,52 |
| 2,80 | -1,49 | 6,52 | 0,87 | 89,65 |
| 2,00 | -1,00 | 3,28 | 0,44 | 89,21 |
| 1,40 | -0,49 | 4,71 | 0,63 | 88,58 |
| 1,00 | 0,00 | 7,54 | 1,01 | 87,57 |
| 0,710 | 0,49 | 23,36 | 3,13 | 84,44 |
| 0,500 | 1,00 | 84,70 | 11,35 | 73,09 |
| 0,355 | 1,49 | 141,32 | 18,93 | 54,16 |
| 0,250 | 2,00 | 218,10 | 29,22 | 24,93 |
| 0,180 | 2,47 | 100,81 | 13,51 | 11,43 |
| 0,125 | 3,00 | 61,14 | 8,19 | 3,24 |
| 0,090 | 3,47 | 11,78 | 1,58 | 1,66 |
| 0,075 | 3,74 | 3,77 | 0,50 | 1,15 |
| 0,063 | 3,99 | 2,17 | 0,29 | 0,86 |
| < 0,063 | > 3,99 | 6,44 | 0,86 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,86 |
| Sand, fine | (0,063 mm - 0,200 mm): 14,42 |
| Sand, medium | (0,2 mm - 0,6 mm): 63,21 |
| Sand, coarse | (0,6 mm - 2 mm): 10,72 |
| Gravel | (> 2 mm): 10,79 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 14,18 | -3,83 |
| 16% | 84% | 0,70 | 0,51 |
| 25% | 75% | 0,54 | 0,90 |
| 40% | 60% | 0,40 | 1,32 |
| Median 50% | 50% | 0,34 | 1,56 |
| 75% | 25% | 0,25 | 2,00 |
| 84% | 16% | 0,20 | 2,30 |
| 90% | 10% | 0,17 | 2,55 |
| 95% | 5% | 0,14 | 2,87 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,45 |
| Sorting | 1,46 |
| Skewness | -0,39 |
| Kurtosis | 2,50 |
| Uniformity Coefficient | 2,35 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

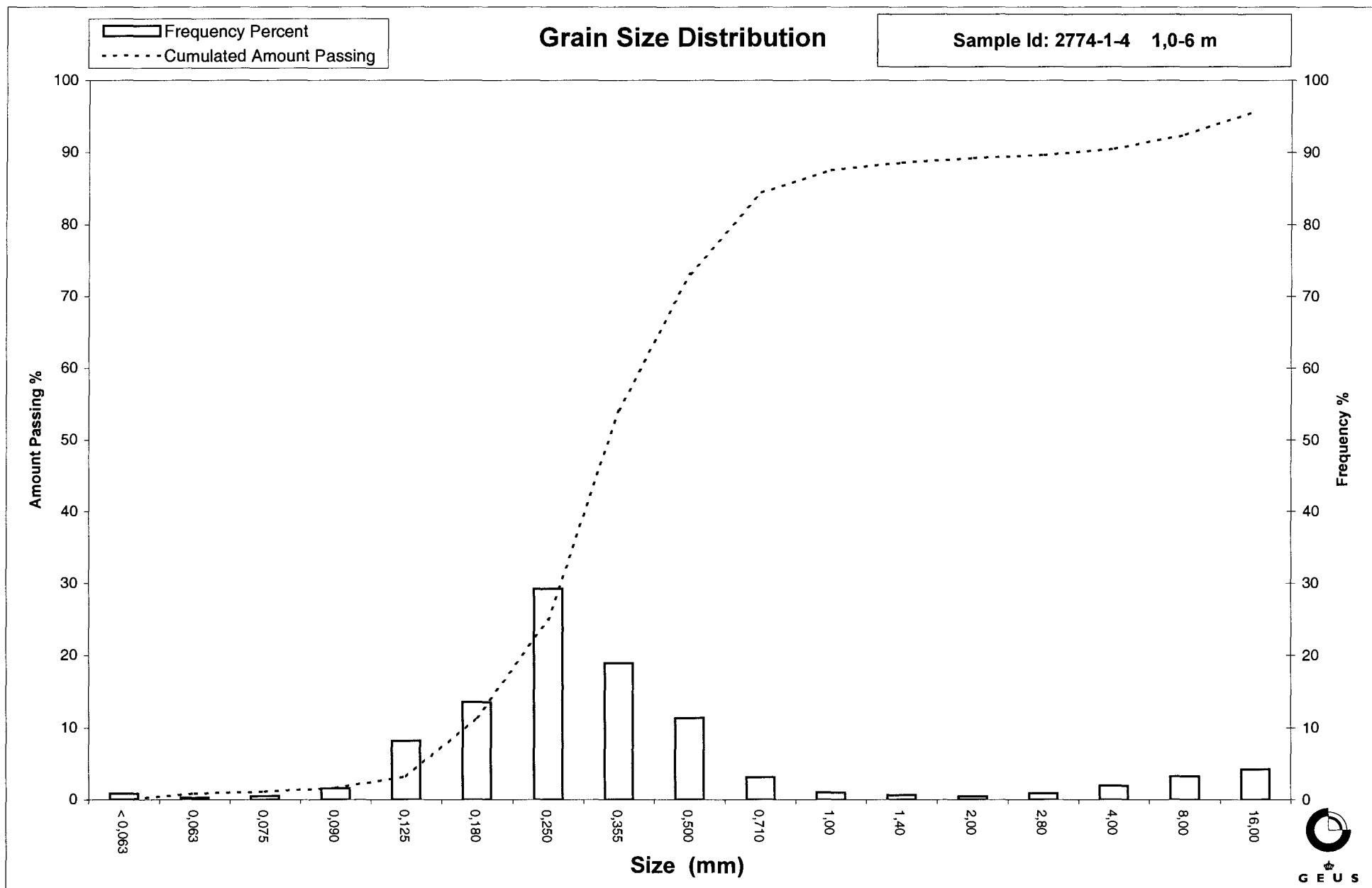
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2775-1-2 0,2-2 m
Lab. Id: 20646
SE: 82
Subject: 94. 2775
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 803,03 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 109,83 | 13,68 | 86,32 |
| 8,00 | -3,00 | 13,57 | 1,69 | 84,63 |
| 4,00 | -2,00 | 10,68 | 1,33 | 83,30 |
| 2,80 | -1,49 | 7,50 | 0,93 | 82,37 |
| 2,00 | -1,00 | 9,58 | 1,19 | 81,18 |
| 1,40 | -0,49 | 9,42 | 1,17 | 80,00 |
| 1,00 | 0,00 | 15,57 | 1,94 | 78,06 |
| 0,710 | 0,49 | 37,18 | 4,63 | 73,43 |
| 0,500 | 1,00 | 82,84 | 10,32 | 63,12 |
| 0,355 | 1,49 | 153,54 | 19,12 | 44,00 |
| 0,250 | 2,00 | 205,00 | 25,53 | 18,47 |
| 0,180 | 2,47 | 89,19 | 11,11 | 7,36 |
| 0,125 | 3,00 | 41,69 | 5,19 | 2,17 |
| 0,090 | 3,47 | 11,40 | 1,42 | 0,75 |
| 0,075 | 3,74 | 2,33 | 0,29 | 0,46 |
| 0,063 | 3,99 | 1,09 | 0,14 | 0,33 |
| < 0,063 | > 3,99 | 2,63 | 0,33 | 0,00 |

Sieve Analysis

| |
|--------|
| Gravel |
| Sand |
| |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,33 |
| Sand, fine | (0,063 mm - 0,200 mm): 10,21 |
| Sand, medium | (0,2 mm - 0,6 mm): 57,49 |
| Sand, coarse | (0,6 mm - 2 mm): 13,15 |
| Gravel | (> 2 mm): 18,82 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 6,10 | -2,61 |
| 25% | 75% | 0,81 | 0,31 |
| 40% | 60% | 0,48 | 1,07 |
| Median 50% | 50% | 0,40 | 1,32 |
| 75% | 25% | 0,28 | 1,85 |
| 84% | 16% | 0,23 | 2,09 |
| 90% | 10% | 0,20 | 2,35 |
| 95% | 5% | 0,15 | 2,69 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,27 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,42 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

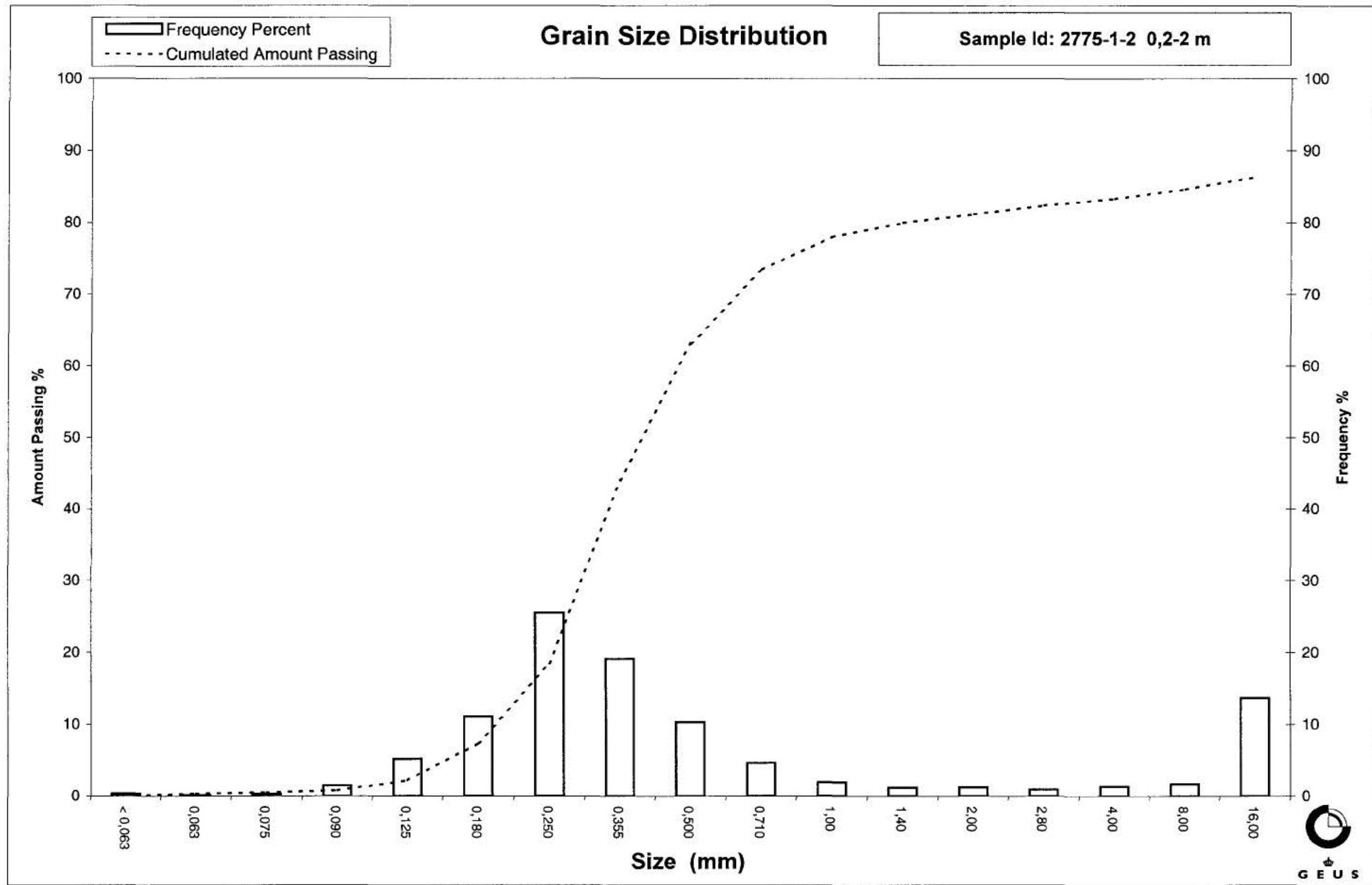
Size Classes and Percentiles are found by linear interpolation

Formulas

- Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2775-3-4 2,7-4 m
Lab. Id: 20647
SE: 57
Subject: 94. 2775
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 640,6 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 11,56 | 1,80 | 98,20 |
| 4,00 | -2,00 | 24,81 | 3,87 | 94,32 |
| 2,80 | -1,49 | 9,76 | 1,52 | 92,80 |
| 2,00 | -1,00 | 6,75 | 1,05 | 91,75 |
| 1,40 | -0,49 | 4,15 | 0,65 | 91,10 |
| 1,00 | 0,00 | 4,47 | 0,70 | 90,40 |
| 0,710 | 0,49 | 12,46 | 1,95 | 88,45 |
| 0,500 | 1,00 | 53,75 | 8,39 | 80,06 |
| 0,355 | 1,49 | 100,72 | 15,72 | 64,34 |
| 0,250 | 2,00 | 137,91 | 21,53 | 42,81 |
| 0,180 | 2,47 | 56,43 | 8,81 | 34,00 |
| 0,125 | 3,00 | 44,54 | 6,95 | 27,05 |
| 0,090 | 3,47 | 38,66 | 6,04 | 21,01 |
| 0,075 | 3,74 | 30,48 | 4,76 | 16,26 |
| 0,063 | 3,99 | 28,82 | 4,50 | 11,76 |
| < 0,063 | > 3,99 | 75,31 | 11,76 | 0,00 |

Sieve Analysis

Gravel Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 11,76 |
| Sand, fine | (0,063 mm - 0,200 mm): 24,76 |
| Sand, medium | (0,2 mm - 0,6 mm): 47,54 |
| Sand, coarse | (0,6 mm - 2 mm): 7,69 |
| Gravel | (> 2 mm): 8,25 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 4,70 | -2,23 |
| 16% | 84% | 0,60 | 0,74 |
| 25% | 75% | 0,45 | 1,14 |
| 40% | 60% | 0,33 | 1,58 |
| Median 50% | 50% | 0,29 | 1,81 |
| 75% | 25% | 0,11 | 3,14 |
| 84% | 16% | 0,07 | 3,75 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,10 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

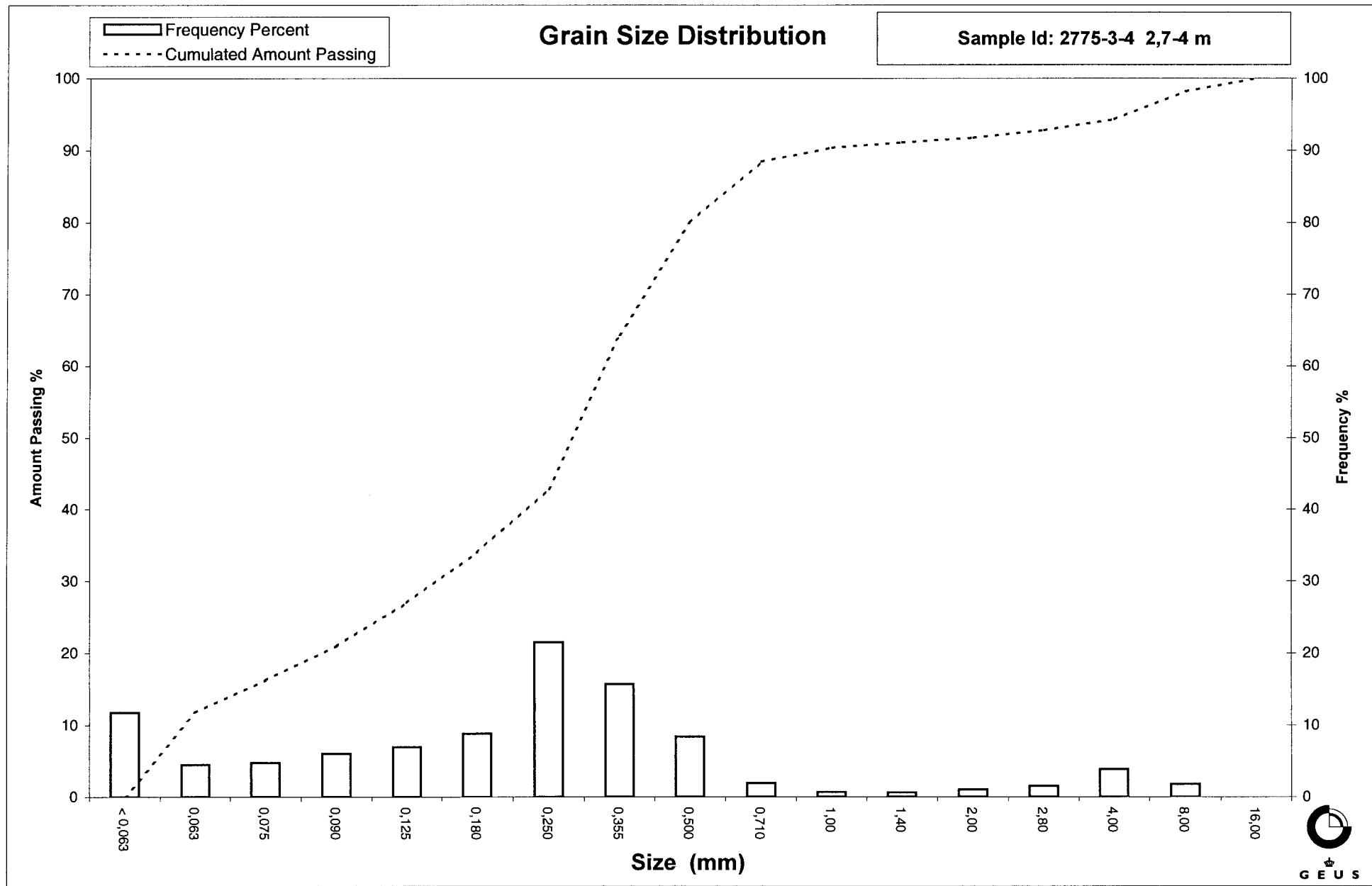
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2775-5-6 4-6 m
Lab. Id: 20648
SE: 71
Subject: 94. 2775
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm mat>32mm



Total Weight 730,58 g

Size Fractions

| Sieve Analysis | |
|----------------|--|
| Gravel | |
| Sand | |
| | |

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 120,10 | 16,44 | 83,56 |
| 8,00 | -3,00 | 18,99 | 2,60 | 80,96 |
| 4,00 | -2,00 | 24,69 | 3,38 | 77,58 |
| 2,80 | -1,49 | 12,35 | 1,69 | 75,89 |
| 2,00 | -1,00 | 8,21 | 1,12 | 74,77 |
| 1,40 | -0,49 | 8,65 | 1,18 | 73,58 |
| 1,00 | 0,00 | 15,36 | 2,10 | 71,48 |
| 0,710 | 0,49 | 30,88 | 4,23 | 67,25 |
| 0,500 | 1,00 | 70,93 | 9,71 | 57,55 |
| 0,355 | 1,49 | 112,56 | 15,41 | 42,14 |
| 0,250 | 2,00 | 122,62 | 16,78 | 25,36 |
| 0,180 | 2,47 | 63,17 | 8,65 | 16,71 |
| 0,125 | 3,00 | 77,85 | 10,66 | 6,05 |
| 0,090 | 3,47 | 28,26 | 3,87 | 2,18 |
| 0,075 | 3,74 | 4,30 | 0,59 | 1,60 |
| 0,063 | 3,99 | 2,41 | 0,33 | 1,27 |
| < 0,063 | > 3,99 | 9,25 | 1,27 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 1,27 |
| Sand, fine | (0,063 mm - 0,200 mm): 17,91 |
| Sand, medium | (0,2 mm - 0,6 mm): 42,99 |
| Sand, coarse | (0,6 mm - 2 mm): 12,60 |
| Gravel | (> 2 mm): 25,23 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | 2,17 | -1,11 |
| 40% | 60% | 0,55 | 0,85 |
| Median 50% | 50% | 0,43 | 1,22 |
| 75% | 25% | 0,25 | 2,02 |
| 84% | 16% | 0,18 | 2,50 |
| 90% | 10% | 0,15 | 2,78 |
| 95% | 5% | 0,12 | 3,11 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,86 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,80 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

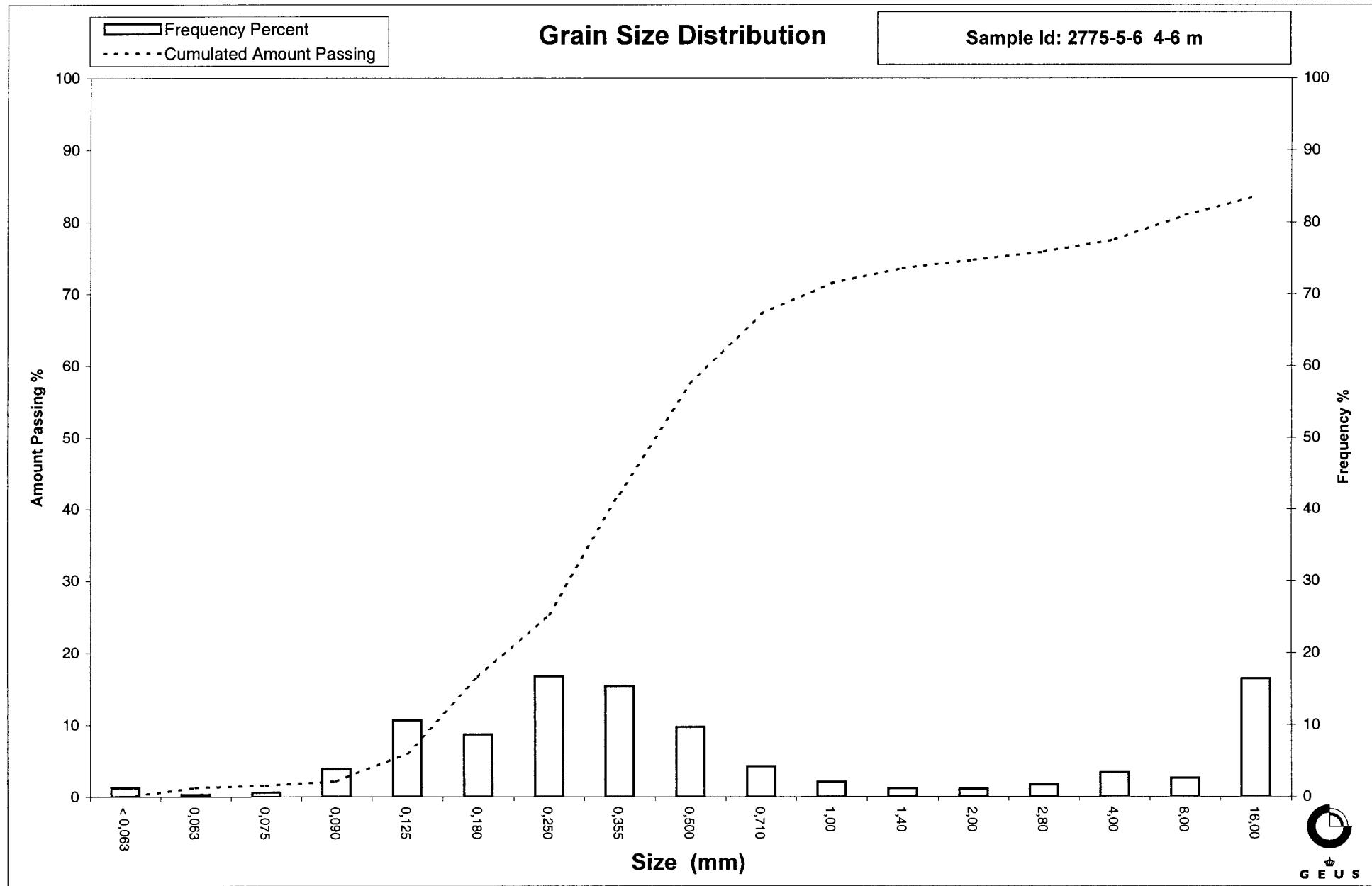
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2776-1-3 0,2-4 m
Lab. Id: 20649
SE: 76
Subject: 94. 2776
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 654,18 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 24,96 | 3,82 | 96,18 | |
| 8,00 | -3,00 | 17,01 | 2,60 | 93,58 | |
| 4,00 | -2,00 | 1,50 | 0,23 | 93,36 | |
| 2,80 | -1,49 | 1,35 | 0,21 | 93,15 | |
| 2,00 | -1,00 | 0,84 | 0,13 | 93,02 | |
| 1,40 | -0,49 | 2,40 | 0,37 | 92,65 | |
| 1,00 | 0,00 | 3,43 | 0,52 | 92,13 | |
| 0,710 | 0,49 | 12,25 | 1,87 | 90,26 | |
| 0,500 | 1,00 | 47,49 | 7,26 | 83,00 | |
| 0,355 | 1,49 | 99,62 | 15,23 | 67,77 | |
| 0,250 | 2,00 | 180,81 | 27,64 | 40,13 | |
| 0,180 | 2,47 | 123,59 | 18,89 | 21,24 | |
| 0,125 | 3,00 | 94,47 | 14,44 | 6,79 | |
| 0,090 | 3,47 | 26,21 | 4,01 | 2,79 | |
| 0,075 | 3,74 | 8,41 | 1,29 | 1,50 | |
| 0,063 | 3,99 | 4,06 | 0,62 | 0,88 | |
| < 0,063 | > 3,99 | 5,77 | 0,88 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,88 |
| Sand, fine | (0,063 mm - 0,200 mm): 25,75 |
| Sand, medium | (0,2 mm - 0,6 mm): 59,82 |
| Sand, coarse | (0,6 mm - 2 mm): 6,57 |
| Gravel | (> 2 mm): 6,98 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 12,36 | -3,63 |
| 16% | 84% | 0,53 | 0,92 |
| 25% | 75% | 0,42 | 1,24 |
| 40% | 60% | 0,33 | 1,62 |
| Median 50% | 50% | 0,29 | 1,80 |
| 75% | 25% | 0,19 | 2,37 |
| 84% | 16% | 0,16 | 2,64 |
| 90% | 10% | 0,14 | 2,87 |
| 95% | 5% | 0,11 | 3,19 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,79 |
| Sorting | 1,46 |
| Skewness | -0,31 |
| Kurtosis | 2,48 |
| Uniformity Coefficient | 2,37 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

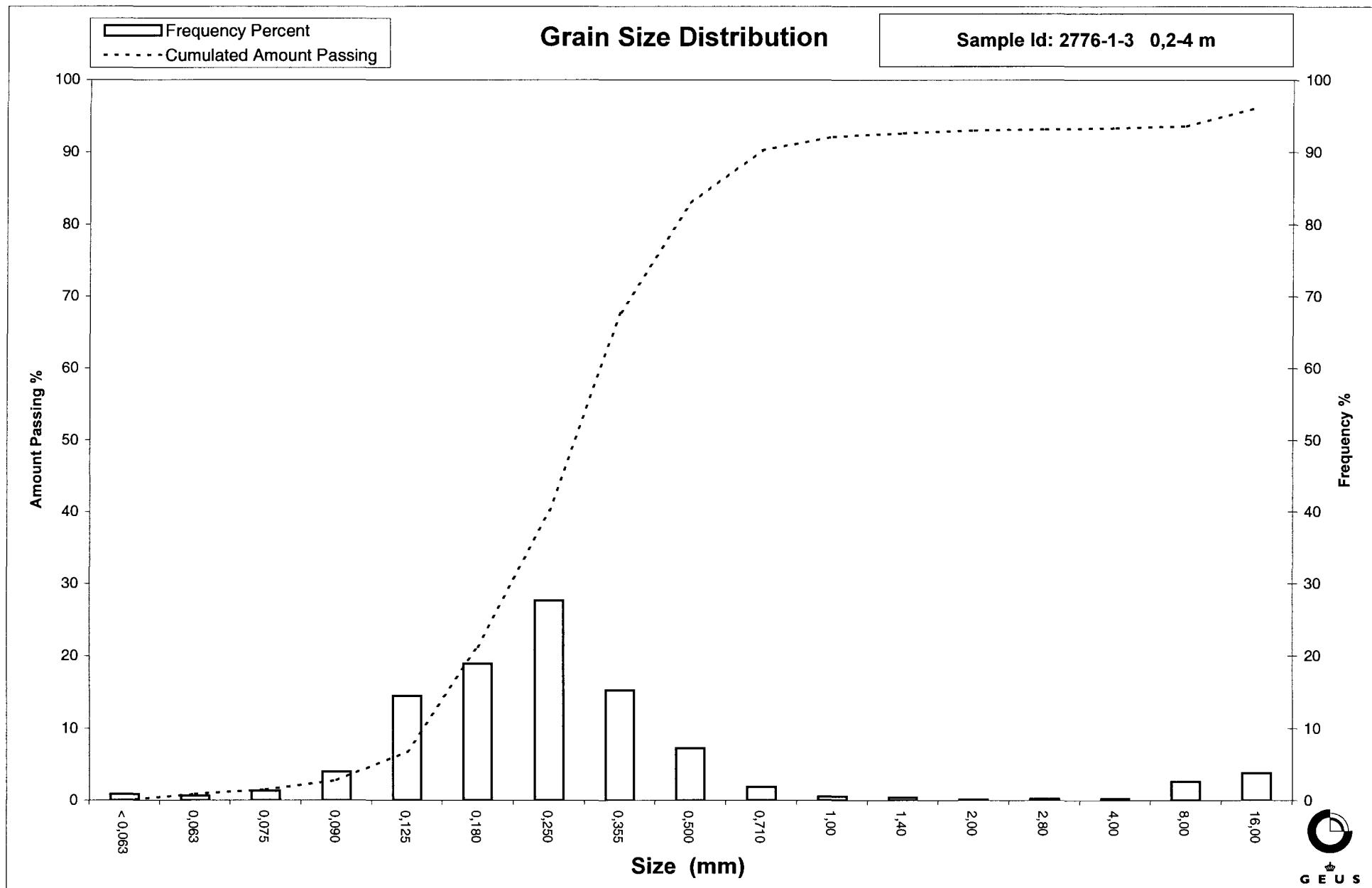
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

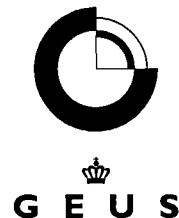
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Grain Size Distribution

Geotechnical

Sample Id: 2776-4-5 4,7-6 m
Lab. Id: 20650
SE: 78
Subject: 94. 2776
Date: November 2002
Executed: K.F.I.N
Remarks: For mat < 16 mm



Total Weight 813,825 g

Size Fractions

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 119,97 | 14,74 | 85,26 |
| 8,00 | -3,00 | 62,60 | 7,69 | 77,57 |
| 4,00 | -2,00 | 25,98 | 3,19 | 74,37 |
| 2,80 | -1,49 | 11,31 | 1,39 | 72,98 |
| 2,00 | -1,00 | 9,08 | 1,12 | 71,87 |
| 1,40 | -0,49 | 6,24 | 0,77 | 71,10 |
| 1,00 | 0,00 | 14,87 | 1,83 | 69,28 |
| 0,710 | 0,49 | 32,47 | 3,99 | 65,29 |
| 0,500 | 1,00 | 67,74 | 8,32 | 56,96 |
| 0,355 | 1,49 | 97,12 | 11,93 | 45,03 |
| 0,250 | 2,00 | 167,17 | 20,54 | 24,49 |
| 0,180 | 2,47 | 151,06 | 18,56 | 5,93 |
| 0,125 | 3,00 | 29,68 | 3,65 | 2,28 |
| 0,090 | 3,47 | 8,21 | 1,01 | 1,27 |
| 0,075 | 3,74 | 2,02 | 0,25 | 1,02 |
| 0,063 | 3,99 | 1,19 | 0,15 | 0,88 |
| < 0,063 | > 3,99 | 7,14 | 0,88 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,88 |
| Sand, fine | (0,063 mm - 0,200 mm): 10,35 |
| Sand, medium | (0,2 mm - 0,6 mm): 49,70 |
| Sand, coarse | (0,6 mm - 2 mm): 10,94 |
| Gravel | (> 2 mm): 28,13 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 14,69 | -3,88 |
| 25% | 75% | 4,78 | -2,26 |
| 40% | 60% | 0,58 | 0,79 |
| Median 50% | 50% | 0,42 | 1,27 |
| 75% | 25% | 0,25 | 1,98 |
| 84% | 16% | 0,22 | 2,20 |
| 90% | 10% | 0,20 | 2,36 |
| 95% | 5% | 0,17 | 2,59 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,14 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,95 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

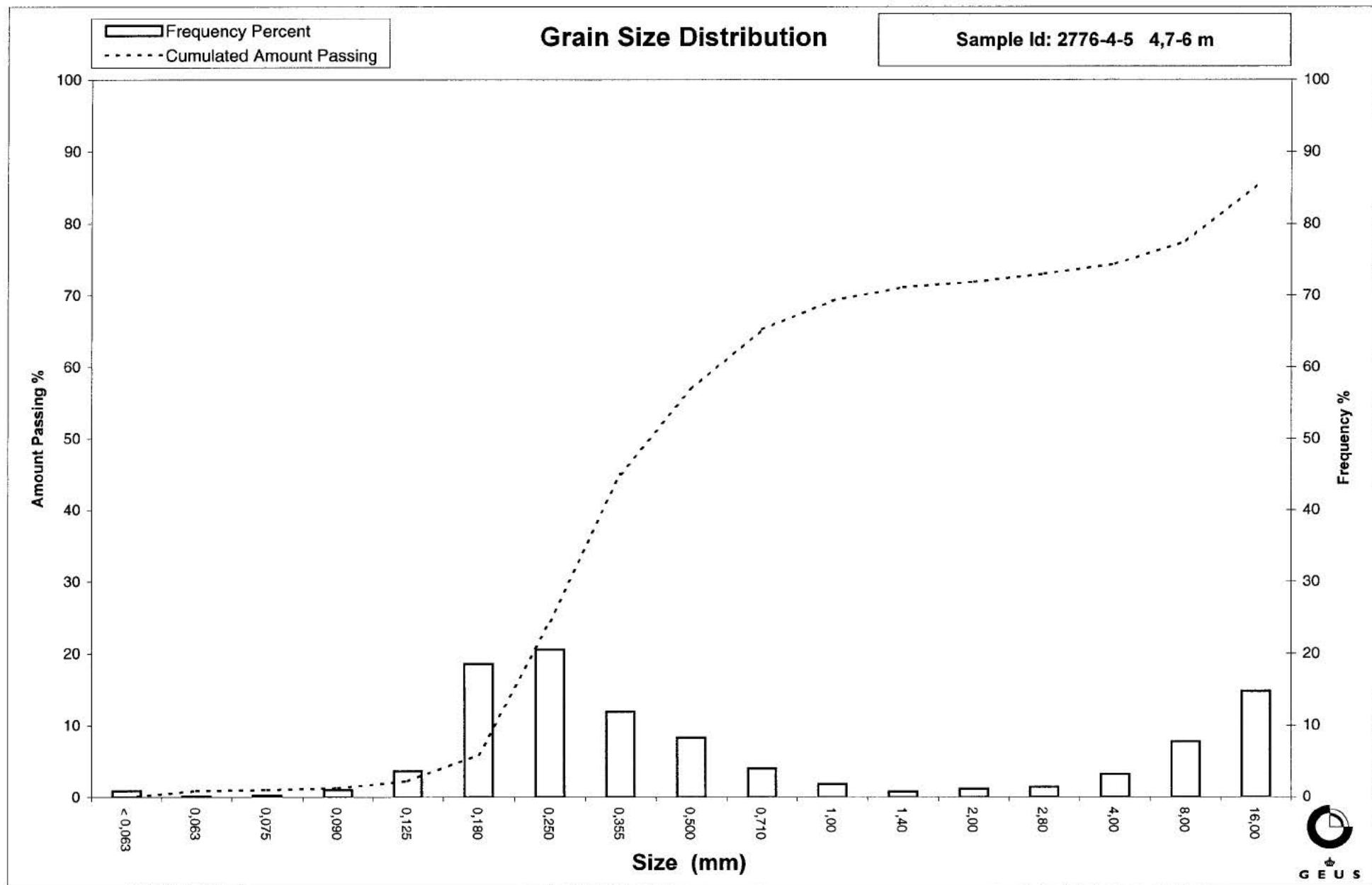
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

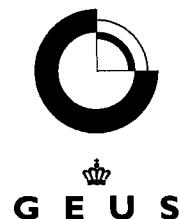
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Grain Size Distribution

Geotechnical

Sample Id: 2777-1-3 0,5-4 m
Lab. Id: 20651
SE: 86
Subject: 94. 2777
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 609,96 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 25,11 | 4,12 | 95,88 |
| 4,00 | -2,00 | 9,99 | 1,64 | 94,25 |
| 2,80 | -1,49 | 7,14 | 1,17 | 93,07 |
| 2,00 | -1,00 | 6,33 | 1,04 | 92,04 |
| 1,40 | -0,49 | 9,27 | 1,52 | 90,52 |
| 1,00 | 0,00 | 16,53 | 2,71 | 87,81 |
| 0,710 | 0,49 | 38,97 | 6,39 | 81,42 |
| 0,500 | 1,00 | 97,29 | 15,95 | 65,47 |
| 0,355 | 1,49 | 125,19 | 20,52 | 44,94 |
| 0,250 | 2,00 | 155,97 | 25,57 | 19,37 |
| 0,180 | 2,47 | 65,79 | 10,79 | 8,59 |
| 0,125 | 3,00 | 36,87 | 6,04 | 2,54 |
| 0,090 | 3,47 | 7,29 | 1,20 | 1,35 |
| 0,075 | 3,74 | 1,86 | 0,30 | 1,04 |
| 0,063 | 3,99 | 1,05 | 0,17 | 0,87 |
| < 0,063 | > 3,99 | 5,31 | 0,87 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,87 |
| Sand, fine | (0,063 mm - 0,200 mm): 10,80 |
| Sand, medium | (0,2 mm - 0,6 mm): 61,39 |
| Sand, coarse | (0,6 mm - 2 mm): 18,97 |
| Gravel | (> 2 mm): 7,96 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 5,84 | -2,55 |
| 16% | 84% | 0,83 | 0,27 |
| 25% | 75% | 0,63 | 0,68 |
| 40% | 60% | 0,46 | 1,12 |
| Median 50% | 50% | 0,39 | 1,36 |
| 75% | 25% | 0,27 | 1,87 |
| 84% | 16% | 0,23 | 2,13 |
| 90% | 10% | 0,19 | 2,40 |
| 95% | 5% | 0,15 | 2,76 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,25 |
| Sorting | 1,27 |
| Skewness | -0,32 |
| Kurtosis | 1,82 |
| Uniformity Coefficient | 2,44 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

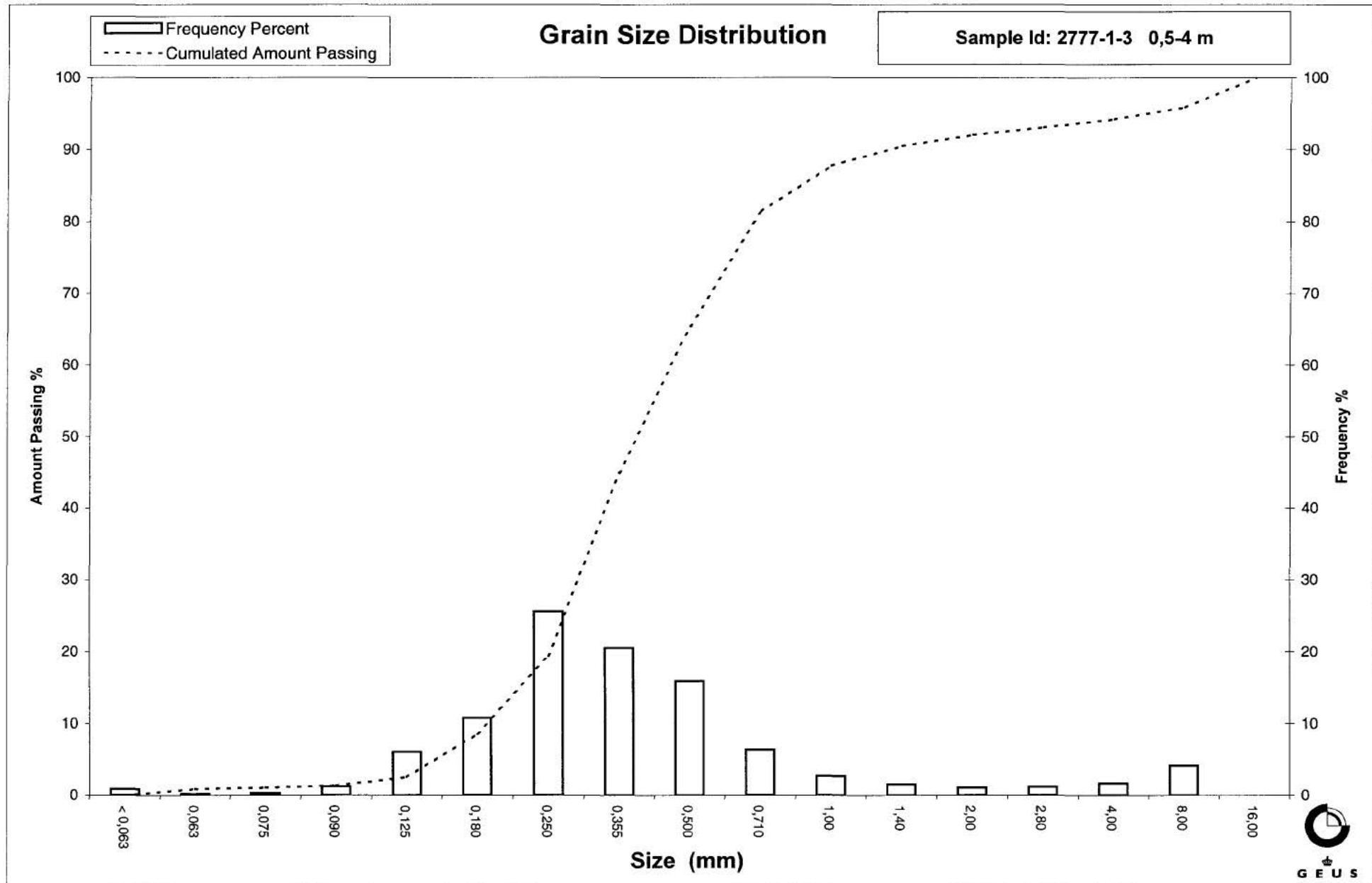
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

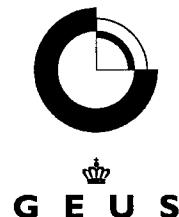
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Grain Size Distribution

Geotechnical

Sample Id: 2777-4-5 4,1-6 m
Lab. Id: 20652
SE: 84
Subject: 94. 2777
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 786,52 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 21,25 | 2,70 | 97,30 |
| 8,00 | -3,00 | 3,47 | 0,44 | 96,86 |
| 4,00 | -2,00 | 0,84 | 0,11 | 96,75 |
| 2,80 | -1,49 | 0,67 | 0,08 | 96,67 |
| 2,00 | -1,00 | 1,40 | 0,18 | 96,49 |
| 1,40 | -0,49 | 3,41 | 0,43 | 96,06 |
| 1,00 | 0,00 | 19,31 | 2,46 | 93,60 |
| 0,710 | 0,49 | 78,87 | 10,03 | 83,57 |
| 0,500 | 1,00 | 252,45 | 32,10 | 51,48 |
| 0,355 | 1,49 | 284,12 | 36,12 | 15,35 |
| 0,250 | 2,00 | 76,42 | 9,72 | 5,63 |
| 0,180 | 2,47 | 28,01 | 3,56 | 2,07 |
| 0,125 | 3,00 | 6,12 | 0,78 | 1,30 |
| 0,090 | 3,47 | 2,06 | 0,26 | 1,03 |
| 0,075 | 3,74 | 0,58 | 0,07 | 0,96 |
| 0,063 | 3,99 | 0,39 | 0,05 | 0,91 |
| < 0,063 | > 3,99 | 7,17 | 0,91 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,91 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,18 |
| Sand, medium | (0,2 mm - 0,6 mm): 63,67 |
| Sand, coarse | (0,6 mm - 2 mm): 29,73 |
| Gravel | (> 2 mm): 3,51 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,23 | -0,30 |
| 16% | 84% | 0,72 | 0,47 |
| 25% | 75% | 0,65 | 0,61 |
| 40% | 60% | 0,56 | 0,85 |
| Median 50% | 50% | 0,49 | 1,02 |
| 75% | 25% | 0,39 | 1,34 |
| 84% | 16% | 0,36 | 1,48 |
| 90% | 10% | 0,30 | 1,75 |
| 95% | 5% | 0,24 | 2,07 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,99 |
| Sorting | 0,61 |
| Skewness | -0,09 |
| Kurtosis | 1,33 |
| Uniformity Coefficient | 1,87 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

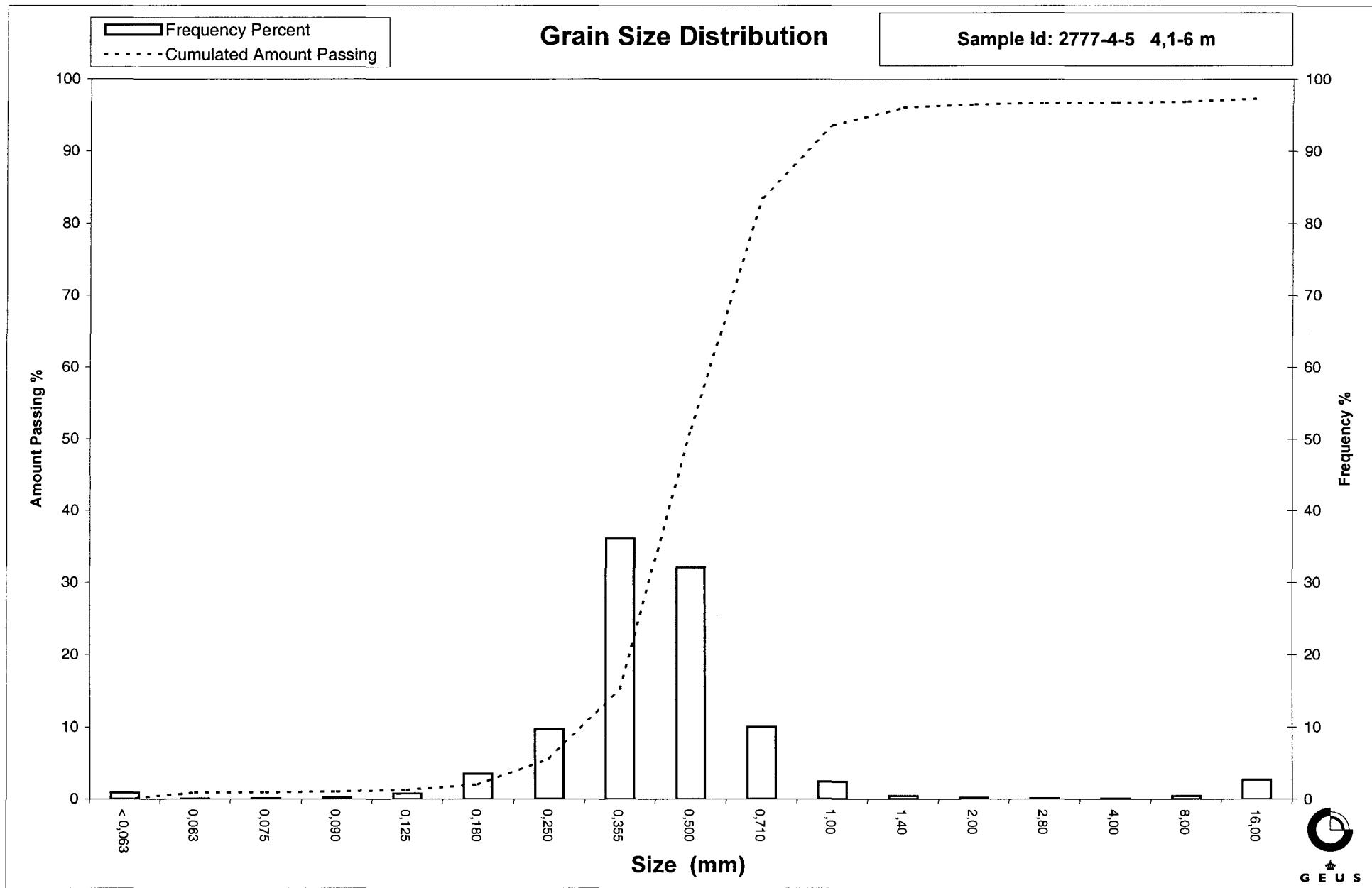
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2778-1-3 0,2-4 m
Lab. Id: 20653
SE: 79
Subject: 94. 2778
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 704,655 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 10,61 | 1,50 | 98,50 |
| 4,00 | -2,00 | 10,01 | 1,42 | 97,07 |
| 2,80 | -1,49 | 9,14 | 1,30 | 95,78 |
| 2,00 | -1,00 | 12,11 | 1,72 | 94,06 |
| 1,40 | -0,49 | 25,91 | 3,68 | 90,38 |
| 1,00 | 0,00 | 60,93 | 8,65 | 81,74 |
| 0,710 | 0,49 | 106,32 | 15,09 | 66,65 |
| 0,500 | 1,00 | 167,31 | 23,74 | 42,90 |
| 0,355 | 1,49 | 122,99 | 17,45 | 25,45 |
| 0,250 | 2,00 | 128,96 | 18,30 | 7,15 |
| 0,180 | 2,47 | 29,45 | 4,18 | 2,97 |
| 0,125 | 3,00 | 7,83 | 1,11 | 1,86 |
| 0,090 | 3,47 | 2,82 | 0,40 | 1,46 |
| 0,075 | 3,74 | 1,13 | 0,16 | 1,30 |
| 0,063 | 3,99 | 1,01 | 0,14 | 1,15 |
| < 0,063 | > 3,99 | 8,12 | 1,15 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | | Weight % |
|---------------|------------------------|----------|
| Silt and clay | (< 0,063 mm): | 1,15 |
| Sand, fine | (0,063 mm - 0,200 mm): | 3,01 |
| Sand, medium | (0,2 mm - 0,6 mm): | 50,05 |
| Sand, coarse | (0,6 mm - 2 mm): | 39,85 |
| Gravel | (> 2 mm): | 5,94 |
| Sum: | | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 2,44 | -1,29 |
| 16% | 84% | 1,10 | -0,14 |
| 25% | 75% | 0,87 | 0,20 |
| 40% | 60% | 0,65 | 0,62 |
| Median 50% | 50% | 0,56 | 0,83 |
| 75% | 25% | 0,35 | 1,50 |
| 84% | 16% | 0,30 | 1,73 |
| 90% | 10% | 0,27 | 1,91 |
| 95% | 5% | 0,21 | 2,22 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,81 |
| Sorting | 1,00 |
| Skewness | -0,12 |
| Kurtosis | 1,10 |
| Uniformity Coefficient | 2,44 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

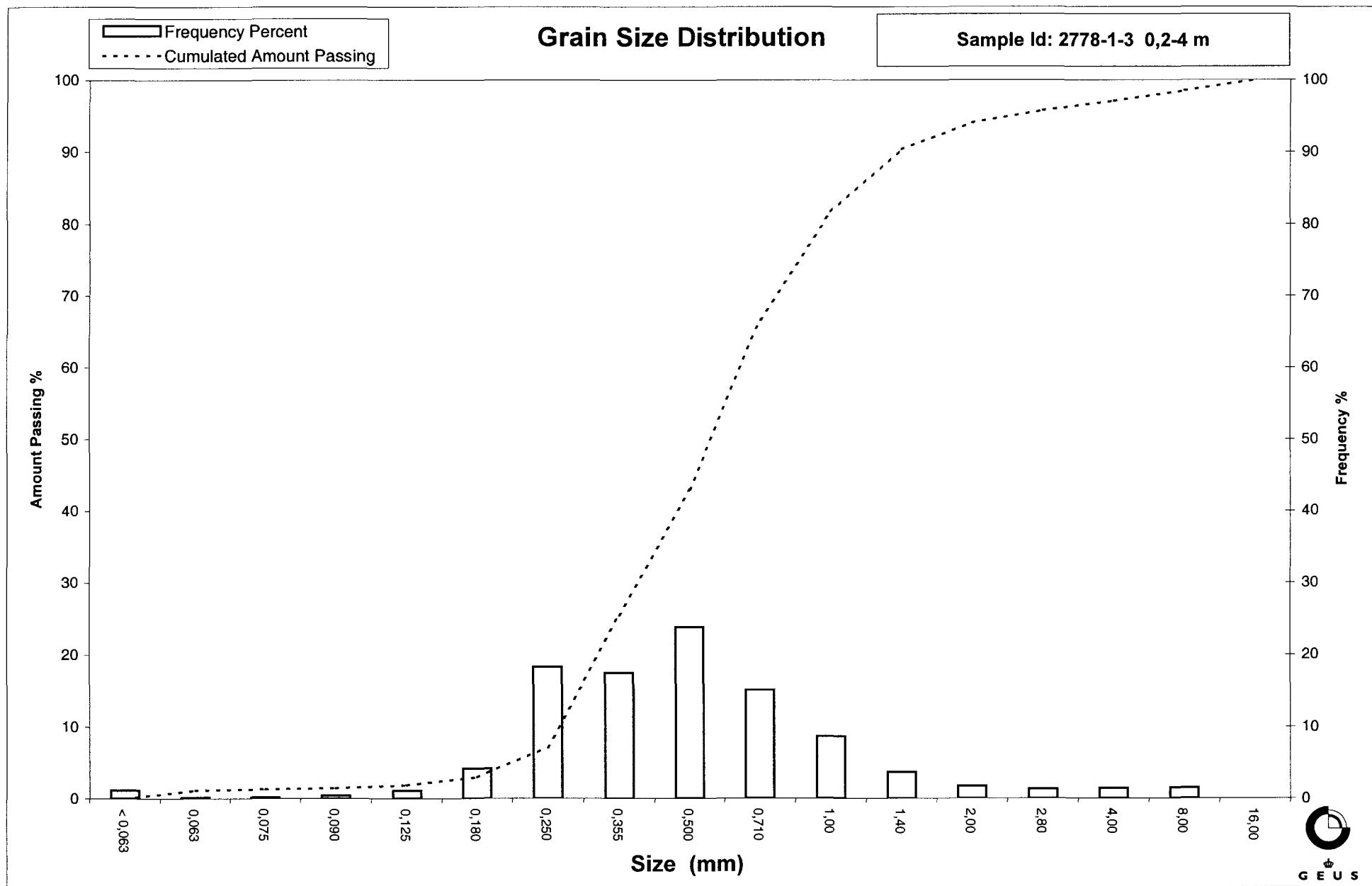
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2779-1-3 0,2-3 m
Lab. Id: 20654
SE: 36
Subject: 94. 2779
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 214,4 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,85 | 0,40 | 99,60 |
| 2,80 | -1,49 | 0,56 | 0,26 | 99,34 |
| 2,00 | -1,00 | 0,55 | 0,26 | 99,09 |
| 1,40 | -0,49 | 1,30 | 0,60 | 98,48 |
| 1,00 | 0,00 | 3,29 | 1,53 | 96,95 |
| 0,710 | 0,49 | 7,24 | 3,38 | 93,57 |
| 0,500 | 1,00 | 19,60 | 9,14 | 84,43 |
| 0,355 | 1,49 | 40,26 | 18,78 | 65,65 |
| 0,250 | 2,00 | 55,21 | 25,75 | 39,90 |
| 0,180 | 2,47 | 40,66 | 18,96 | 20,94 |
| 0,125 | 3,00 | 23,73 | 11,07 | 9,87 |
| 0,090 | 3,47 | 10,73 | 5,00 | 4,87 |
| 0,075 | 3,74 | 3,05 | 1,42 | 3,44 |
| 0,063 | 3,99 | 1,65 | 0,77 | 2,67 |
| < 0,063 | > 3,99 | 5,73 | 2,67 | 0,00 |

Sieve Analysis

Gravel Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,67 |
| Sand, fine | (0,063 mm - 0,200 mm): 23,68 |
| Sand, medium | (0,2 mm - 0,6 mm): 62,43 |
| Sand, coarse | (0,6 mm - 2 mm): 10,30 |
| Gravel | (> 2 mm): 0,91 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 0,83 | 0,26 |
| 16% | 84% | 0,50 | 1,01 |
| 25% | 75% | 0,43 | 1,23 |
| 40% | 60% | 0,33 | 1,59 |
| Median 50% | 50% | 0,29 | 1,78 |
| 75% | 25% | 0,19 | 2,36 |
| 84% | 16% | 0,16 | 2,69 |
| 90% | 10% | 0,13 | 2,99 |
| 95% | 5% | 0,09 | 3,46 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,82 |
| Sorting | 0,90 |
| Skewness | 0,07 |
| Kurtosis | 1,16 |
| Uniformity Coefficient | 2,64 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

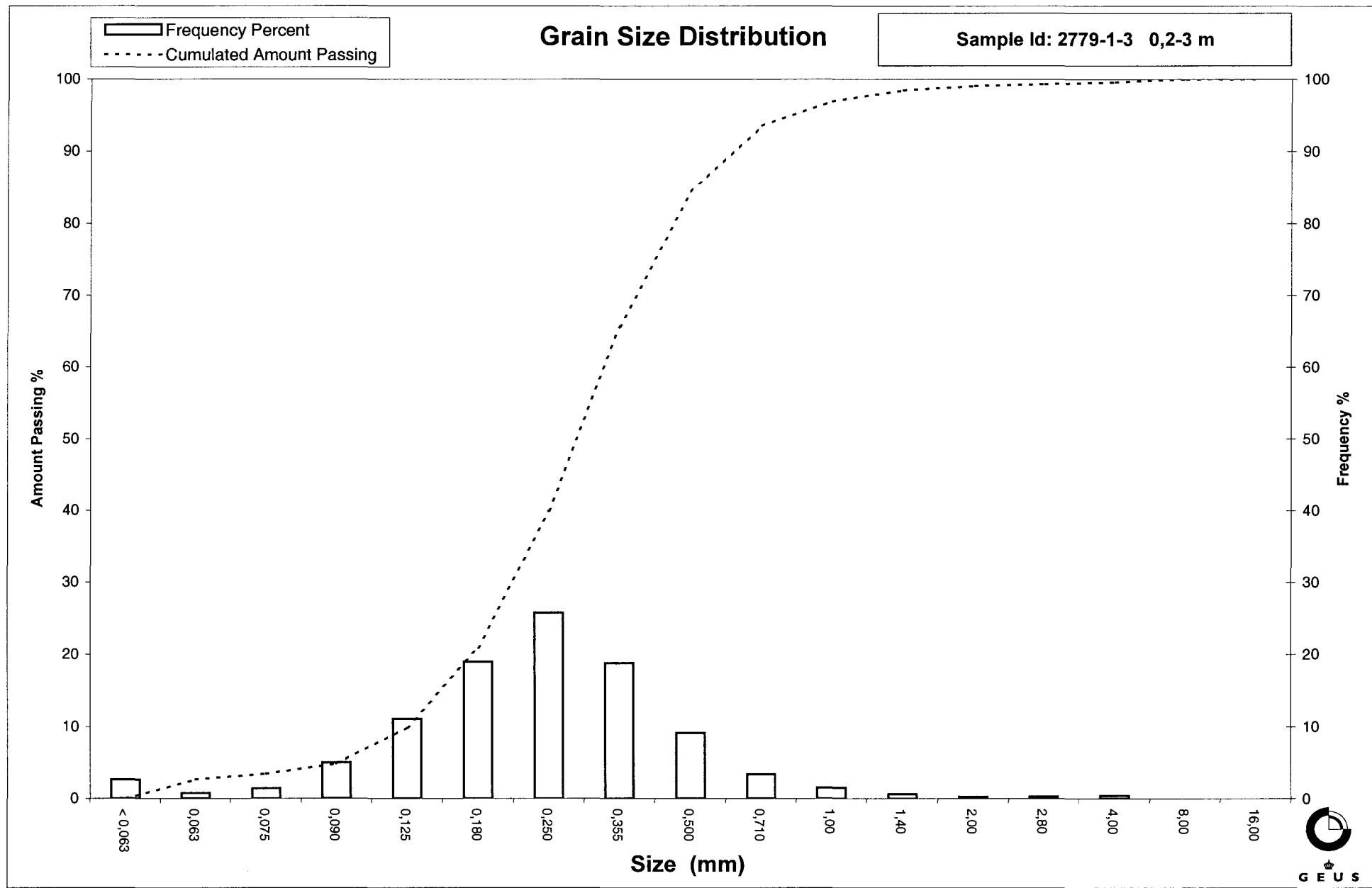
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2779-4 3-4 m
Lab. Id: 20655
SE: 31
Subject: 94. 2779
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 1065,95 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 49,31 | 4,63 | 95,37 |
| 8,00 | -3,00 | 79,63 | 7,47 | 87,90 |
| 4,00 | -2,00 | 58,59 | 5,50 | 82,41 |
| 2,80 | -1,49 | 33,99 | 3,19 | 79,22 |
| 2,00 | -1,00 | 45,95 | 4,31 | 74,91 |
| 1,40 | -0,49 | 71,54 | 6,71 | 68,20 |
| 1,00 | 0,00 | 123,94 | 11,63 | 56,57 |
| 0,710 | 0,49 | 149,15 | 13,99 | 42,58 |
| 0,500 | 1,00 | 150,97 | 14,16 | 28,42 |
| 0,355 | 1,49 | 113,76 | 10,67 | 17,74 |
| 0,250 | 2,00 | 71,23 | 6,68 | 11,06 |
| 0,180 | 2,47 | 40,25 | 3,78 | 7,28 |
| 0,125 | 3,00 | 21,26 | 1,99 | 5,29 |
| 0,090 | 3,47 | 12,15 | 1,14 | 4,15 |
| 0,075 | 3,74 | 4,56 | 0,43 | 3,72 |
| 0,063 | 3,99 | 3,87 | 0,36 | 3,36 |
| < 0,063 | > 3,99 | 35,81 | 3,36 | 0,00 |

Sieve Analysis

| |
|--------|
| Gravel |
| Sand |
| |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 3,36 |
| Sand, fine | (0,063 mm - 0,200 mm): 5,00 |
| Sand, medium | (0,2 mm - 0,6 mm): 26,80 |
| Sand, coarse | (0,6 mm - 2 mm): 39,75 |
| Gravel | (> 2 mm): 25,09 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 15,60 | -3,96 |
| 16% | 84% | 5,16 | -2,37 |
| 25% | 75% | 2,02 | -1,01 |
| 40% | 60% | 1,12 | -0,16 |
| Median 50% | 50% | 0,86 | 0,21 |
| 75% | 25% | 0,45 | 1,14 |
| 84% | 16% | 0,33 | 1,61 |
| 90% | 10% | 0,23 | 2,12 |
| 95% | 5% | 0,12 | 3,11 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,18 |
| Sorting | 2,07 |
| Skewness | -0,24 |
| Kurtosis | 1,35 |
| Uniformity Coefficient | 4,85 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

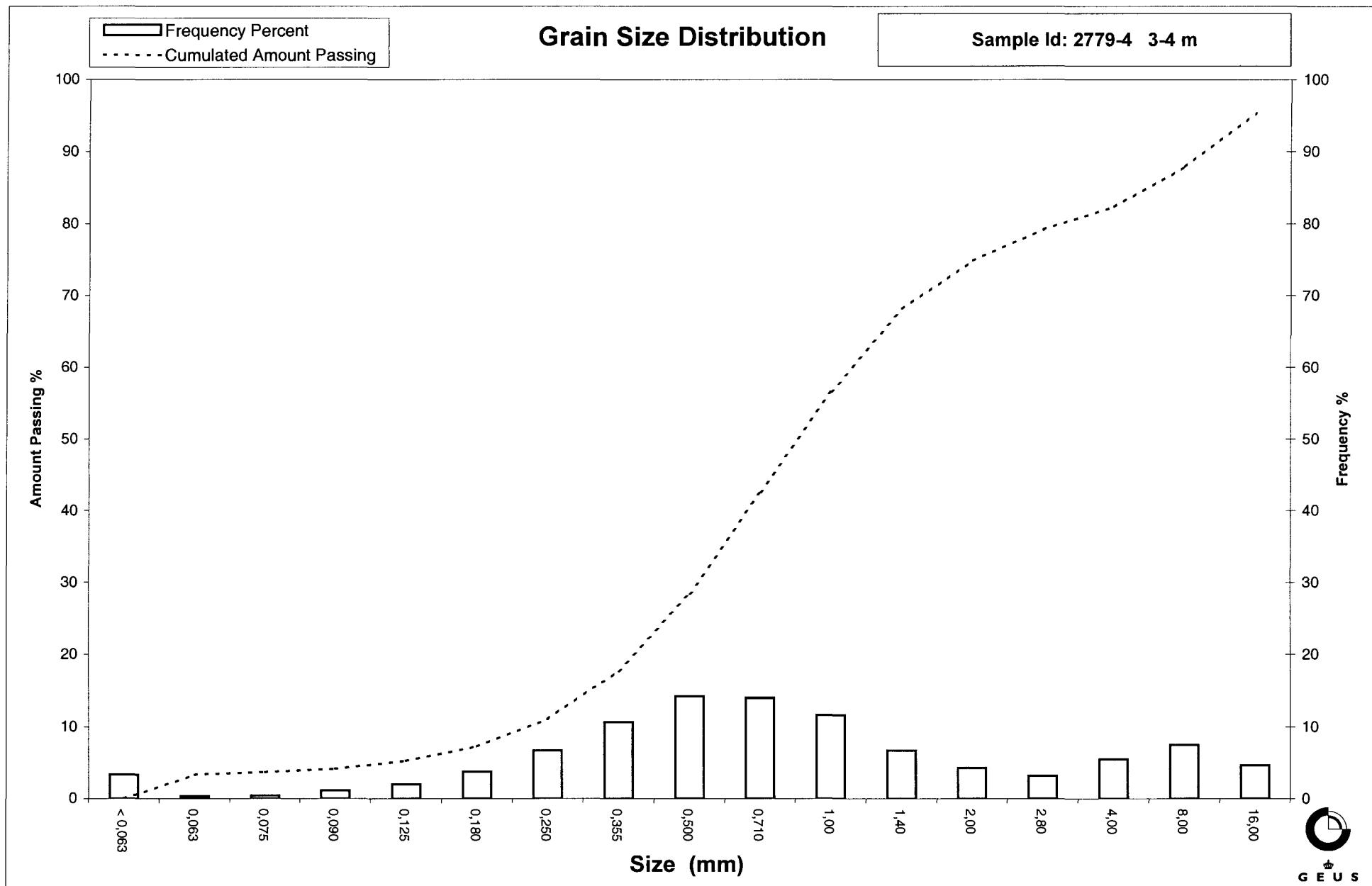
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

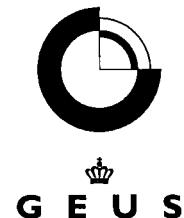
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2780-1-3 0,2-6 m
Lab. Id: 20656
SE: 73
Subject: 94. 2780
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 244,14 g

Size Fractions

| Size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,08 | 0,03 | 99,97 |
| 2,00 | -1,00 | 0,06 | 0,02 | 99,94 |
| 1,40 | -0,49 | 0,31 | 0,13 | 99,82 |
| 1,00 | 0,00 | 0,70 | 0,29 | 99,53 |
| 0,710 | 0,49 | 6,33 | 2,59 | 96,94 |
| 0,500 | 1,00 | 33,01 | 13,52 | 83,42 |
| 0,355 | 1,49 | 30,16 | 12,36 | 71,07 |
| 0,250 | 2,00 | 44,47 | 18,21 | 52,85 |
| 0,180 | 2,47 | 52,17 | 21,37 | 31,48 |
| 0,125 | 3,00 | 56,54 | 23,16 | 8,33 |
| 0,090 | 3,47 | 10,91 | 4,47 | 3,86 |
| 0,075 | 3,74 | 1,89 | 0,78 | 3,08 |
| 0,063 | 3,99 | 1,01 | 0,41 | 2,67 |
| < 0,063 | > 3,99 | 6,52 | 2,67 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,67 |
| Sand, fine | (0,063 mm - 0,200 mm): 34,92 |
| Sand, medium | (0,2 mm - 0,6 mm): 52,27 |
| Sand, coarse | (0,6 mm - 2 mm): 10,09 |
| Gravel | (> 2 mm): 0,06 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,68 | 0,56 |
| 16% | 84% | 0,51 | 0,97 |
| 25% | 75% | 0,40 | 1,32 |
| 40% | 60% | 0,29 | 1,78 |
| Median 50% | 50% | 0,24 | 2,05 |
| 75% | 25% | 0,16 | 2,60 |
| 84% | 16% | 0,14 | 2,80 |
| 90% | 10% | 0,13 | 2,95 |
| 95% | 5% | 0,10 | 3,34 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,94 |
| Sorting | 0,88 |
| Skewness | -0,13 |
| Kurtosis | 0,89 |
| Uniformity Coefficient | 2,26 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

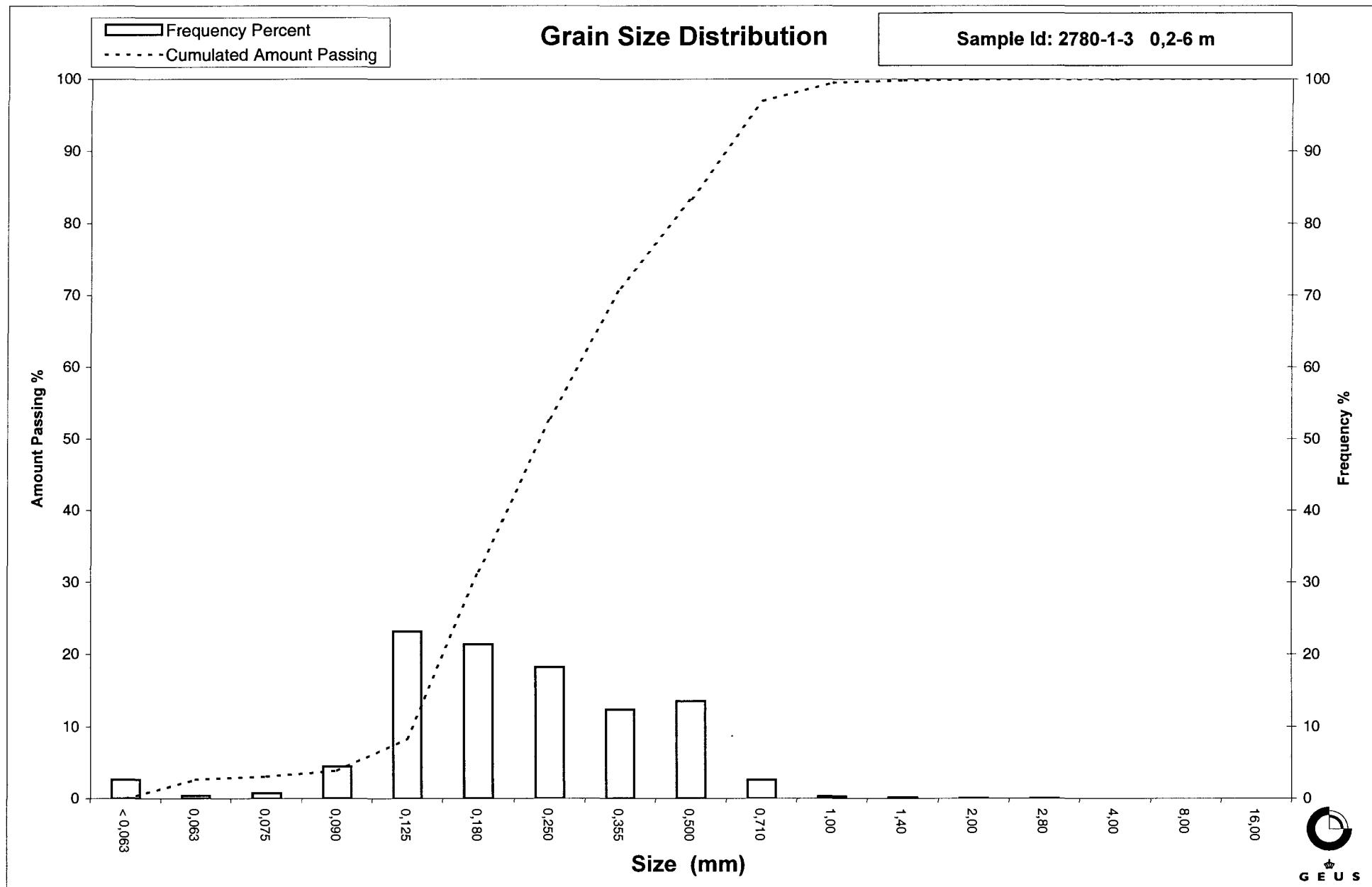
Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2*\phi_{50\%}) / (2*(\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2*\phi_{50\%}) / (2*(\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on
"Amount in sieve". Uniformity coefficient is based on
"Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2781-1 0,2-2 m
Lab. Id: 20657
SE: 83
Subject: 94. 2781
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 686,475 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 14,35 | 2,09 | 97,91 |
| 4,00 | -2,00 | 6,55 | 0,95 | 96,96 |
| 2,80 | -1,49 | 2,43 | 0,35 | 96,60 |
| 2,00 | -1,00 | 2,80 | 0,41 | 96,19 |
| 1,40 | -0,49 | 5,31 | 0,77 | 95,42 |
| 1,00 | 0,00 | 13,64 | 1,99 | 93,43 |
| 0,710 | 0,49 | 34,46 | 5,02 | 88,41 |
| 0,500 | 1,00 | 86,46 | 12,59 | 75,82 |
| 0,355 | 1,49 | 133,88 | 19,50 | 56,32 |
| 0,250 | 2,00 | 143,49 | 20,90 | 35,41 |
| 0,180 | 2,47 | 131,67 | 19,18 | 16,23 |
| 0,125 | 3,00 | 75,71 | 11,03 | 5,21 |
| 0,090 | 3,47 | 22,84 | 3,33 | 1,88 |
| 0,075 | 3,74 | 5,84 | 0,85 | 1,03 |
| 0,063 | 3,99 | 3,16 | 0,46 | 0,57 |
| < 0,063 | > 3,99 | 3,90 | 0,57 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,57 |
| Sand, fine | (0,063 mm - 0,200 mm): 21,15 |
| Sand, medium | (0,2 mm - 0,6 mm): 60,10 |
| Sand, coarse | (0,6 mm - 2 mm): 14,38 |
| Gravel | (> 2 mm): 3,81 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,32 | -0,40 |
| 16% | 84% | 0,64 | 0,65 |
| 25% | 75% | 0,49 | 1,02 |
| 40% | 60% | 0,38 | 1,39 |
| Median 50% | 50% | 0,32 | 1,63 |
| 75% | 25% | 0,21 | 2,24 |
| 84% | 16% | 0,18 | 2,48 |
| 90% | 10% | 0,15 | 2,75 |
| 95% | 5% | 0,12 | 3,03 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,59 |
| Sorting | 0,98 |
| Skewness | -0,13 |
| Kurtosis | 1,15 |
| Uniformity Coefficient | 2,57 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

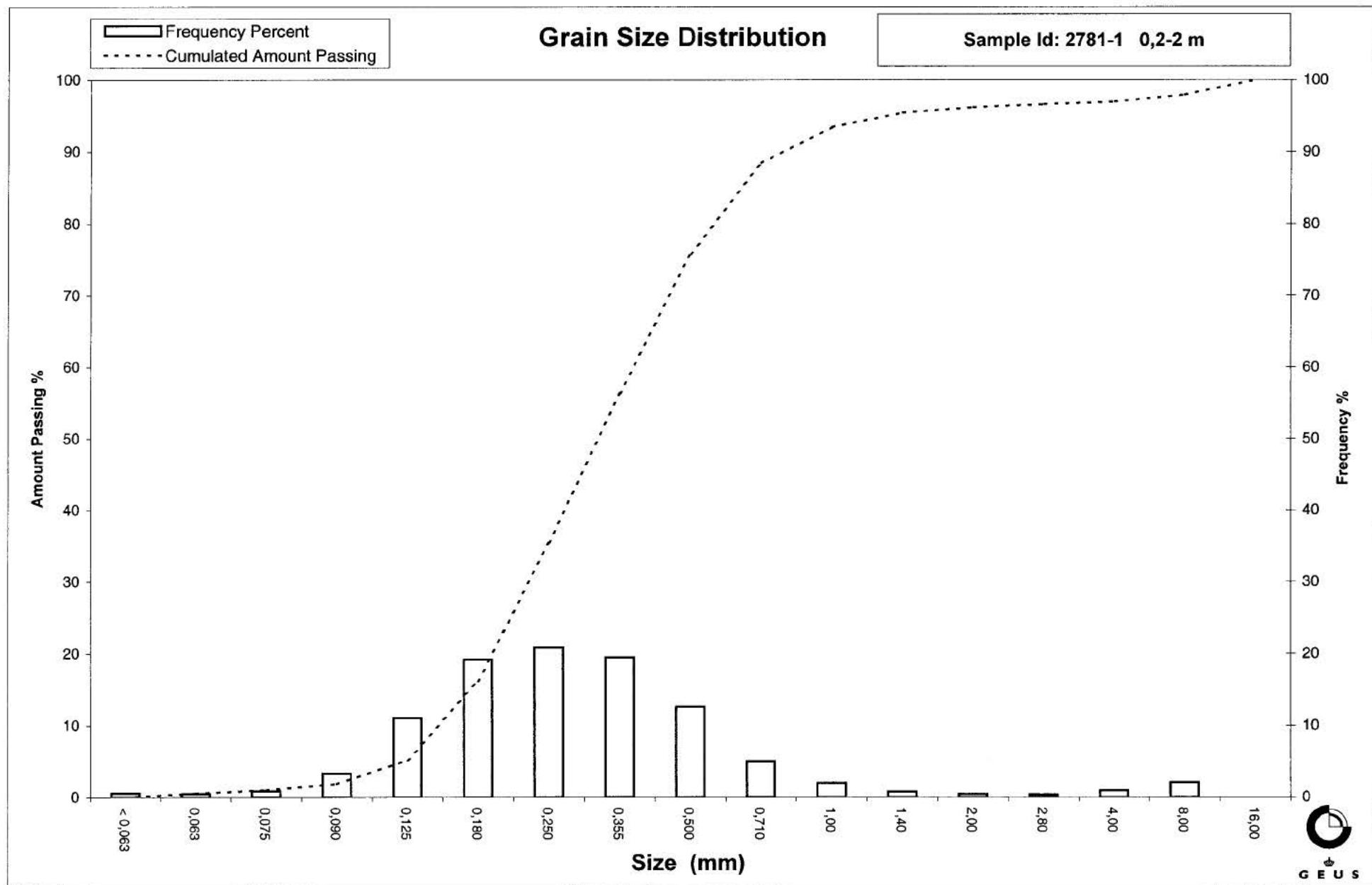
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

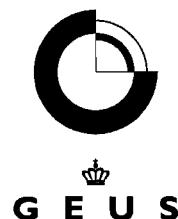
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Grain Size Distribution

Geotechnical

Sample Id: 2781-2-3 2,2-4 m
Lab. Id: 20658
SE: 88
Subject: 94. 2781
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 965,92 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 23,46 | 2,43 | 97,57 |
| 8,00 | -3,00 | 47,06 | 4,87 | 92,70 |
| 4,00 | -2,00 | 41,85 | 4,33 | 88,37 |
| 2,80 | -1,49 | 14,46 | 1,50 | 86,87 |
| 2,00 | -1,00 | 11,65 | 1,21 | 85,66 |
| 1,40 | -0,49 | 16,22 | 1,68 | 83,98 |
| 1,00 | 0,00 | 29,39 | 3,04 | 80,94 |
| 0,710 | 0,49 | 68,63 | 7,11 | 73,84 |
| 0,500 | 1,00 | 182,22 | 18,86 | 54,97 |
| 0,355 | 1,49 | 191,88 | 19,87 | 35,11 |
| 0,250 | 2,00 | 235,15 | 24,34 | 10,76 |
| 0,180 | 2,47 | 67,98 | 7,04 | 3,72 |
| 0,125 | 3,00 | 22,38 | 2,32 | 1,41 |
| 0,090 | 3,47 | 5,12 | 0,53 | 0,88 |
| 0,075 | 3,74 | 1,95 | 0,20 | 0,68 |
| 0,063 | 3,99 | 1,17 | 0,12 | 0,55 |
| < 0,063 | > 3,99 | 5,35 | 0,55 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,55 |
| Sand, fine | (0,063 mm - 0,200 mm): 5,18 |
| Sand, medium | (0,2 mm - 0,6 mm): 58,22 |
| Sand, coarse | (0,6 mm - 2 mm): 21,71 |
| Gravel | (> 2 mm): 14,34 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 11,78 | -3,56 |
| 16% | 84% | 1,41 | -0,49 |
| 25% | 75% | 0,76 | 0,40 |
| 40% | 60% | 0,56 | 0,85 |
| Median 50% | 50% | 0,46 | 1,11 |
| 75% | 25% | 0,31 | 1,68 |
| 84% | 16% | 0,27 | 1,88 |
| 90% | 10% | 0,24 | 2,04 |
| 95% | 5% | 0,19 | 2,38 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,83 |
| Sorting | 1,49 |
| Skewness | -0,46 |
| Kurtosis | 1,90 |
| Uniformity Coefficient | 2,29 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

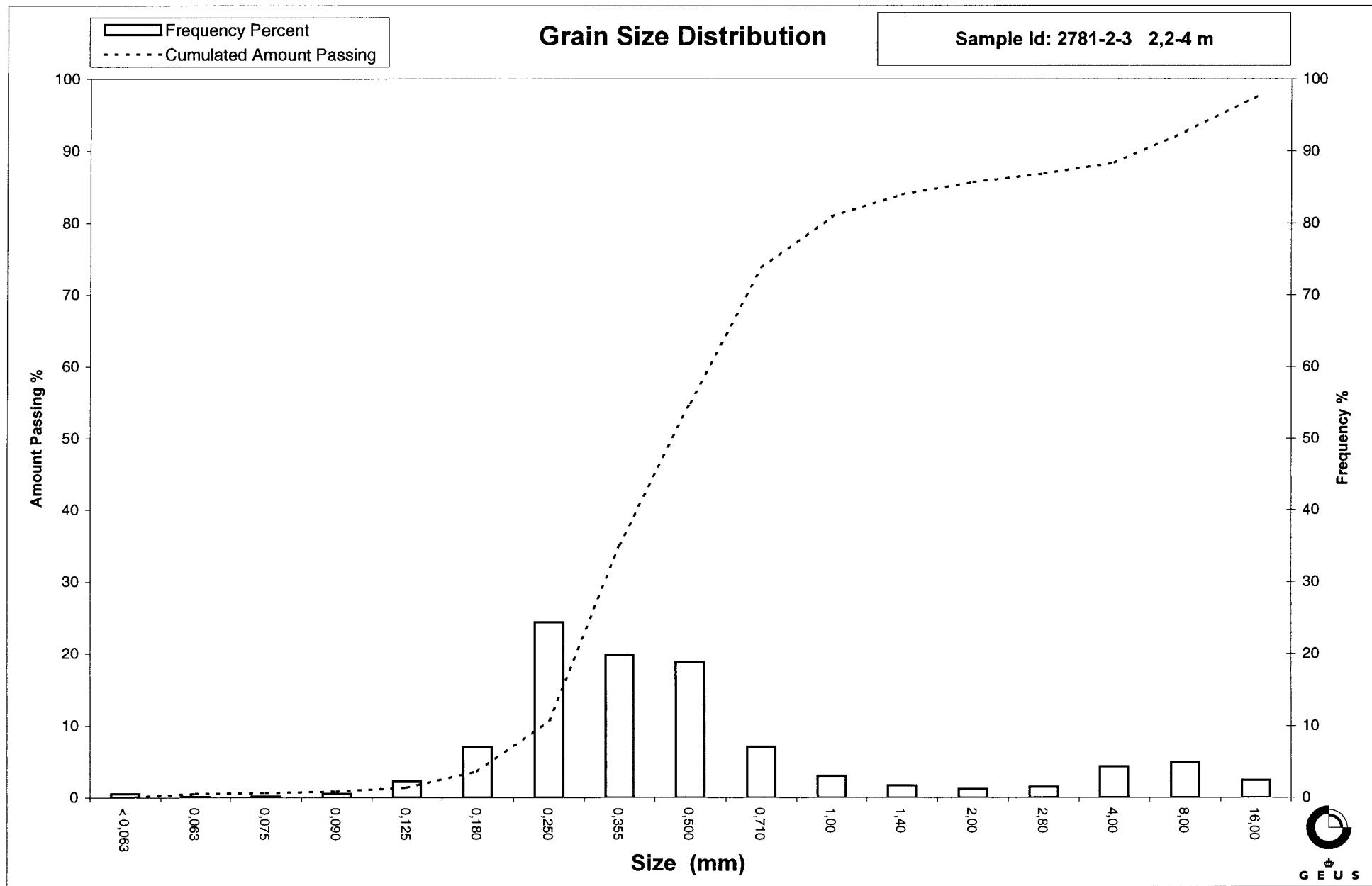
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

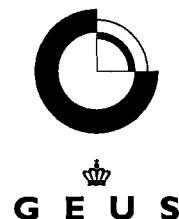
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Grain Size Distribution

Geotechnical

Sample Id: 2781-4 4-6 m
Lab. Id: 20659
SE: 89
Subject: 94. 2781
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 203,37 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,02 | 0,01 | 99,99 |
| 1,40 | -0,49 | 0,07 | 0,03 | 99,96 |
| 1,00 | 0,00 | 0,05 | 0,03 | 99,93 |
| 0,710 | 0,49 | 0,37 | 0,18 | 99,75 |
| 0,500 | 1,00 | 3,64 | 1,79 | 97,96 |
| 0,355 | 1,49 | 55,85 | 27,46 | 70,50 |
| 0,250 | 2,00 | 111,91 | 55,03 | 15,47 |
| 0,180 | 2,47 | 25,11 | 12,34 | 3,12 |
| 0,125 | 3,00 | 3,20 | 1,57 | 1,55 |
| 0,090 | 3,47 | 0,97 | 0,48 | 1,08 |
| 0,075 | 3,74 | 0,26 | 0,13 | 0,95 |
| 0,063 | 3,99 | 0,19 | 0,10 | 0,85 |
| < 0,063 | > 3,99 | 1,73 | 0,85 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,85 |
| Sand, fine | (0,063 mm - 0,200 mm): 5,80 |
| Sand, medium | (0,2 mm - 0,6 mm): 92,16 |
| Sand, coarse | (0,6 mm - 2 mm): 1,18 |
| Gravel | (> 2 mm): 0,01 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,48 | 1,05 |
| 16% | 84% | 0,43 | 1,23 |
| 25% | 75% | 0,38 | 1,40 |
| 40% | 60% | 0,33 | 1,58 |
| Median 50% | 50% | 0,32 | 1,66 |
| 75% | 25% | 0,27 | 1,90 |
| 84% | 16% | 0,25 | 1,99 |
| 90% | 10% | 0,22 | 2,19 |
| 95% | 5% | 0,19 | 2,39 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,63 |
| Sorting | 0,39 |
| Skewness | -0,02 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 1,53 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

$$\text{Mean } (\phi 16\% + \phi 84\% + \phi 50\%) / 3 \text{ (Folk and Ward 1957)}$$

$$\text{Sorting } (\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6 \text{ (Folk and Ward 1957)}$$

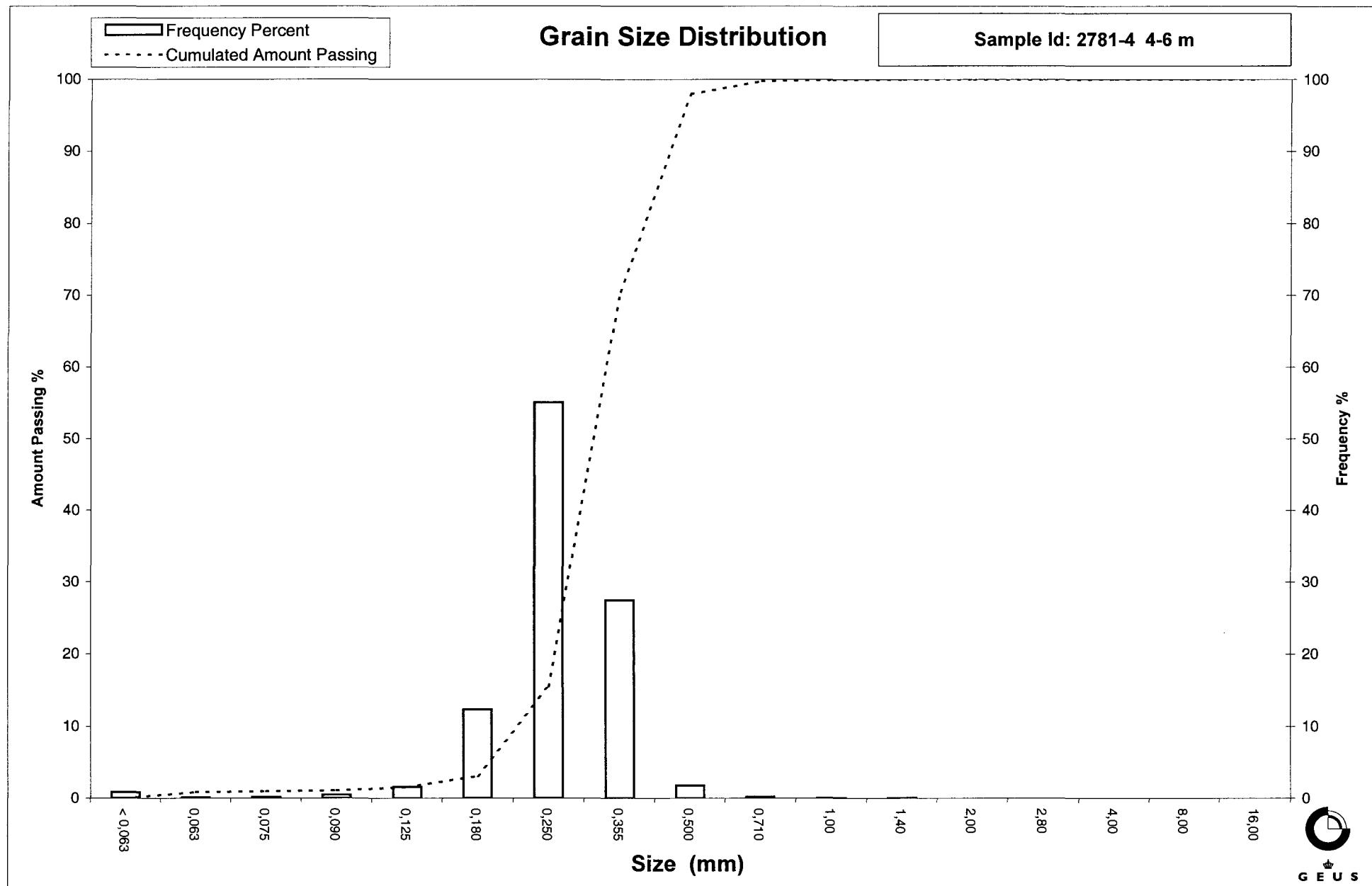
$$\text{Kurtosis } (\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Skewness } (\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Uniformity Coefficient } (d60\% / d10\%) \text{ (dgf-Bulletin 1988)}$$

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

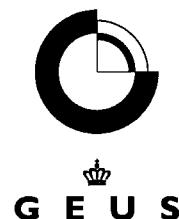
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Grain Size Distribution

Geotechnical

Sample Id: 2782-1 0,2-2 m
Lab. Id: 20660
SE: 74
Subject: 94. 2782
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 251,9 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,60 | 0,24 | 99,76 |
| 2,00 | -1,00 | 0,22 | 0,09 | 99,67 |
| 1,40 | -0,49 | 0,30 | 0,12 | 99,56 |
| 1,00 | 0,00 | 1,18 | 0,47 | 99,09 |
| 0,710 | 0,49 | 6,50 | 2,58 | 96,51 |
| 0,500 | 1,00 | 29,26 | 11,62 | 84,89 |
| 0,355 | 1,49 | 69,14 | 27,45 | 57,44 |
| 0,250 | 2,00 | 84,70 | 33,62 | 23,82 |
| 0,180 | 2,47 | 40,88 | 16,23 | 7,59 |
| 0,125 | 3,00 | 10,84 | 4,30 | 3,29 |
| 0,090 | 3,47 | 3,70 | 1,47 | 1,82 |
| 0,075 | 3,74 | 1,70 | 0,67 | 1,14 |
| 0,063 | 3,99 | 1,24 | 0,49 | 0,65 |
| < 0,063 | > 3,99 | 1,64 | 0,65 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,65 |
| Sand, fine | (0,063 mm - 0,200 mm): 11,58 |
| Sand, medium | (0,2 mm - 0,6 mm): 78,20 |
| Sand, coarse | (0,6 mm - 2 mm): 9,25 |
| Gravel | (> 2 mm): 0,33 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,68 | 0,55 |
| 16% | 84% | 0,50 | 1,01 |
| 25% | 75% | 0,45 | 1,16 |
| 40% | 60% | 0,37 | 1,44 |
| Median 50% | 50% | 0,33 | 1,59 |
| 75% | 25% | 0,25 | 1,98 |
| 84% | 16% | 0,22 | 2,21 |
| 90% | 10% | 0,19 | 2,39 |
| 95% | 5% | 0,15 | 2,77 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,60 |
| Sorting | 0,63 |
| Skewness | 0,05 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 1,94 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

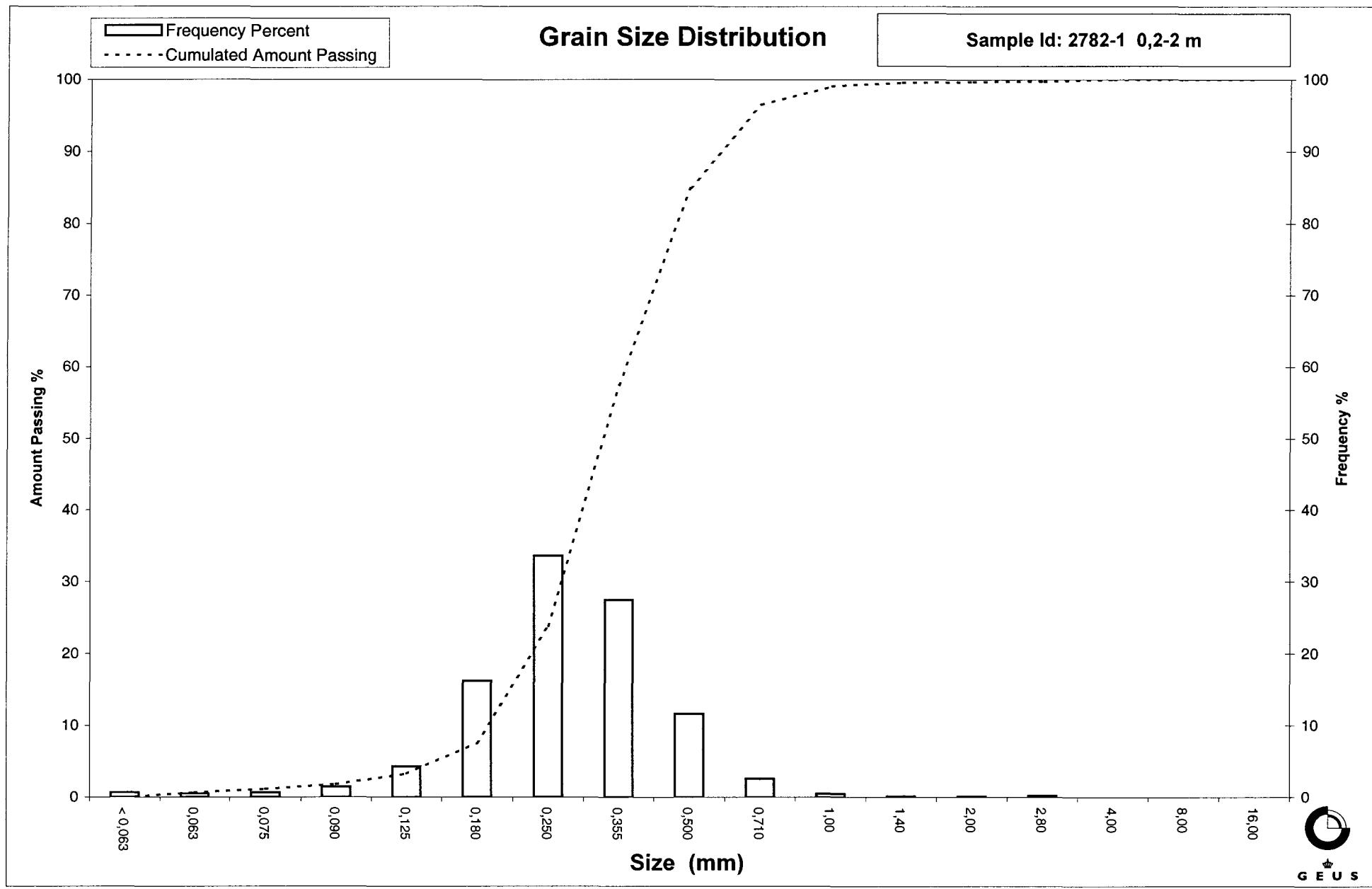
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2782-2 2,3-3,1 m
Lab. Id: 20661
SE: 74
Subject: 94. 2782
Date: November 2002
Executed: K.F/I.N
Remarks: For mat<16mm mat>32mm



Total Weight 1244,28 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 385,37 | 30,97 | 69,03 |
| 8,00 | -3,00 | 133,79 | 10,75 | 58,28 |
| 4,00 | -2,00 | 85,89 | 6,90 | 51,37 |
| 2,80 | -1,49 | 39,13 | 3,14 | 48,23 |
| 2,00 | -1,00 | 26,34 | 2,12 | 46,11 |
| 1,40 | -0,49 | 16,24 | 1,31 | 44,81 |
| 1,00 | 0,00 | 18,40 | 1,48 | 43,33 |
| 0,710 | 0,49 | 40,61 | 3,26 | 40,06 |
| 0,500 | 1,00 | 102,96 | 8,27 | 31,79 |
| 0,355 | 1,49 | 132,10 | 10,62 | 21,17 |
| 0,250 | 2,00 | 145,20 | 11,67 | 9,50 |
| 0,180 | 2,47 | 58,75 | 4,72 | 4,78 |
| 0,125 | 3,00 | 33,34 | 2,68 | 2,10 |
| 0,090 | 3,47 | 10,94 | 0,88 | 1,22 |
| 0,075 | 3,74 | 3,73 | 0,30 | 0,92 |
| 0,063 | 3,99 | 2,10 | 0,17 | 0,76 |
| < 0,063 | > 3,99 | 9,40 | 0,76 | 0,00 |

Sieve Analysis

| |
|--------|
| Gravel |
| Sand |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,76 |
| Sand, fine | (0,063 mm - 0,200 mm): 5,38 |
| Sand, medium | (0,2 mm - 0,6 mm): 29,60 |
| Sand, coarse | (0,6 mm - 2 mm): 10,38 |
| Gravel | (> 2 mm): 53,89 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | ----- | ----- |
| 40% | 60% | 9,28 | -3,21 |
| Median 50% | 50% | 3,48 | -1,80 |
| 75% | 25% | 0,41 | 1,30 |
| 84% | 16% | 0,31 | 1,70 |
| 90% | 10% | 0,25 | 1,97 |
| 95% | 5% | 0,18 | 2,45 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,05 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 36,48 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

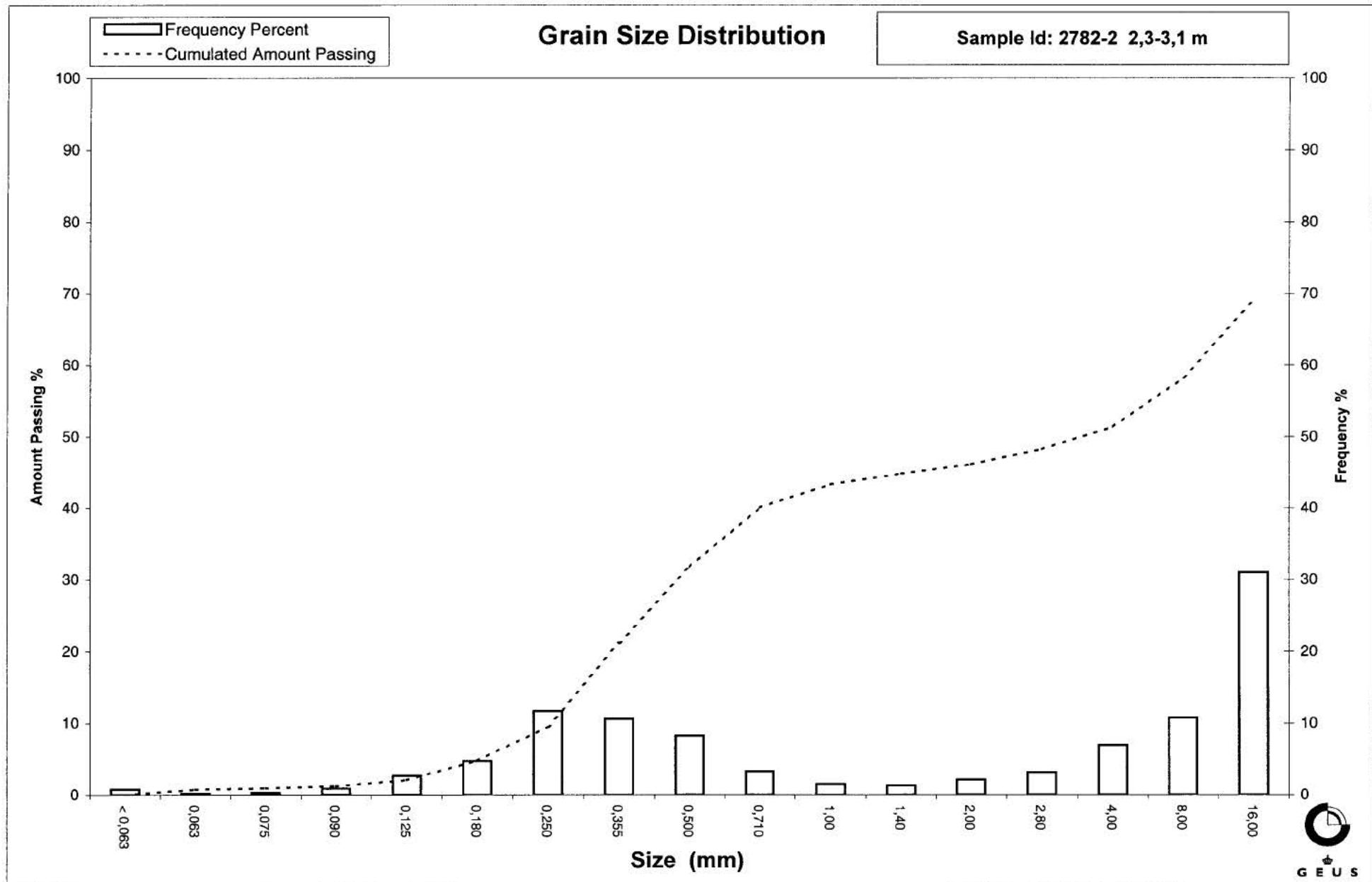
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2782-3-6 3,1-6 m
Lab. Id: 20662
SE: 82
Subject: 94. 2782
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 835,875 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 45,62 | 5,46 | 94,54 |
| 8,00 | -3,00 | 16,65 | 1,99 | 92,55 |
| 4,00 | -2,00 | 15,20 | 1,82 | 90,73 |
| 2,80 | -1,49 | 4,95 | 0,59 | 90,14 |
| 2,00 | -1,00 | 5,37 | 0,64 | 89,50 |
| 1,40 | -0,49 | 9,43 | 1,13 | 88,37 |
| 1,00 | 0,00 | 29,06 | 3,48 | 84,89 |
| 0,710 | 0,49 | 56,13 | 6,71 | 78,18 |
| 0,500 | 1,00 | 141,04 | 16,87 | 61,30 |
| 0,355 | 1,49 | 219,83 | 26,30 | 35,01 |
| 0,250 | 2,00 | 179,68 | 21,50 | 13,51 |
| 0,180 | 2,47 | 76,86 | 9,19 | 4,32 |
| 0,125 | 3,00 | 19,28 | 2,31 | 2,01 |
| 0,090 | 3,47 | 6,68 | 0,80 | 1,21 |
| 0,075 | 3,74 | 2,07 | 0,25 | 0,96 |
| 0,063 | 3,99 | 1,10 | 0,13 | 0,83 |
| < 0,063 | > 3,99 | 6,94 | 0,83 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,83 |
| Sand, fine | (0,063 mm - 0,200 mm): 6,11 |
| Sand, medium | (0,2 mm - 0,6 mm): 62,40 |
| Sand, coarse | (0,6 mm - 2 mm): 20,16 |
| Gravel | (> 2 mm): 10,50 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 0,96 | 0,06 |
| 25% | 75% | 0,67 | 0,58 |
| 40% | 60% | 0,49 | 1,02 |
| Median 50% | 50% | 0,44 | 1,19 |
| 75% | 25% | 0,31 | 1,71 |
| 84% | 16% | 0,26 | 1,93 |
| 90% | 10% | 0,22 | 2,16 |
| 95% | 5% | 0,19 | 2,43 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,06 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,21 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

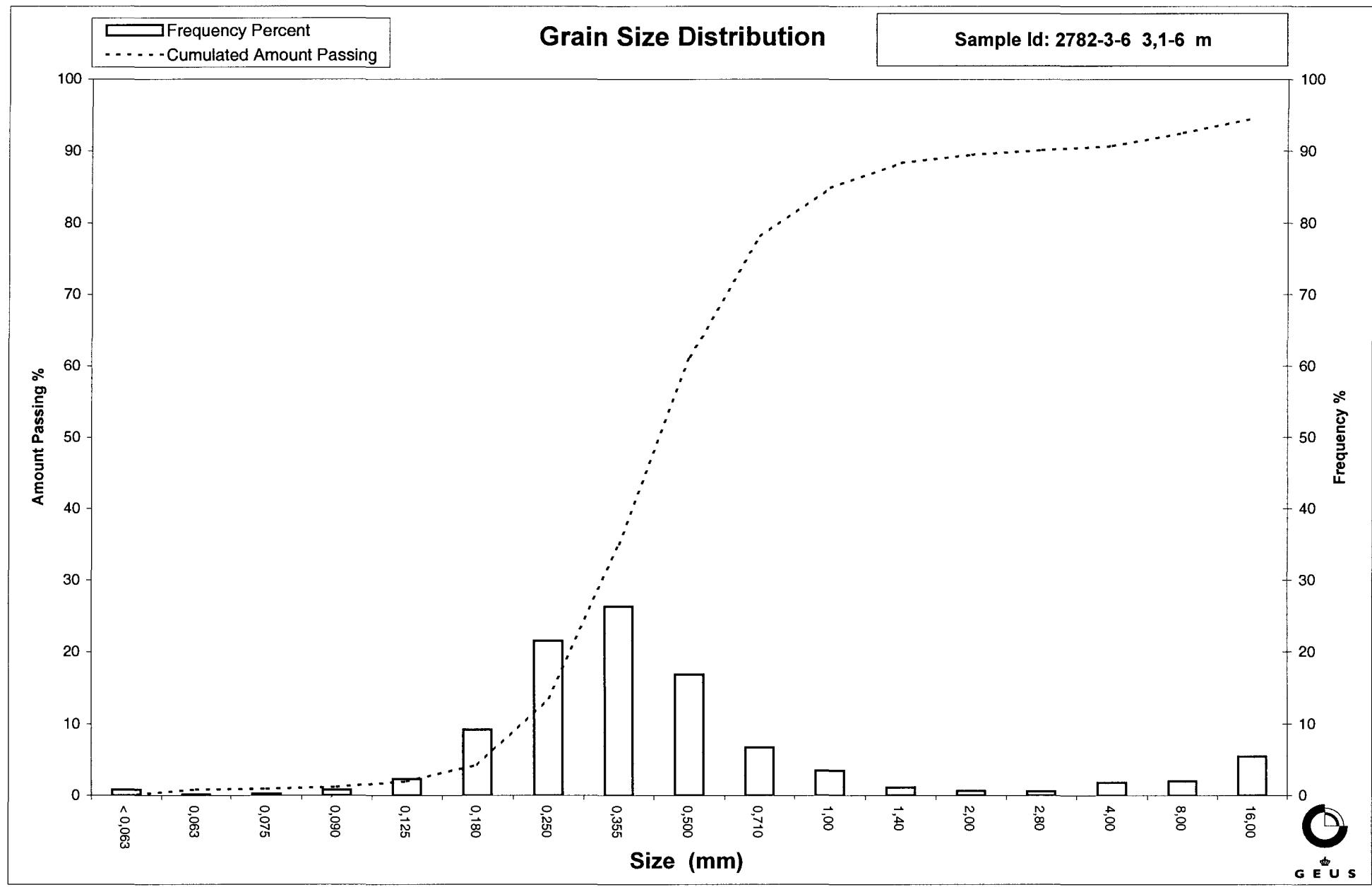
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

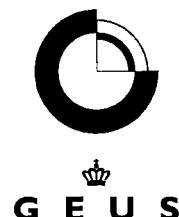
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Grain Size Distribution

Geotechnical

Sample Id: 2783-1-2 0,2-2,1 m
Lab. Id: 20663
SE: 22
Subject: 94. 2783
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 832,98 g

Size Fractions

| | | Gravel | | Sand | |
|--|--|--------|--|------|--|
|--|--|--------|--|------|--|

| size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 9,17 | 1,10 | 98,90 |
| 8,00 | -3,00 | 3,35 | 0,40 | 98,50 |
| 4,00 | -2,00 | 2,19 | 0,26 | 98,24 |
| 2,80 | -1,49 | 2,91 | 0,35 | 97,89 |
| 2,00 | -1,00 | 0,83 | 0,10 | 97,79 |
| 1,40 | -0,49 | 3,41 | 0,41 | 97,38 |
| 1,00 | 0,00 | 9,28 | 1,11 | 96,26 |
| 0,710 | 0,49 | 26,35 | 3,16 | 93,10 |
| 0,500 | 1,00 | 89,35 | 10,73 | 82,37 |
| 0,355 | 1,49 | 182,38 | 21,90 | 60,48 |
| 0,250 | 2,00 | 183,48 | 22,03 | 38,45 |
| 0,180 | 2,47 | 96,17 | 11,55 | 26,91 |
| 0,125 | 3,00 | 51,47 | 6,18 | 20,73 |
| 0,090 | 3,47 | 36,11 | 4,33 | 16,39 |
| 0,075 | 3,74 | 19,93 | 2,39 | 14,00 |
| 0,063 | 3,99 | 16,86 | 2,02 | 11,98 |
| < 0,063 | > 3,99 | 99,76 | 11,98 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 11,98 |
| Sand, fine | (0,063 mm - 0,200 mm): 18,23 |
| Sand, medium | (0,2 mm - 0,6 mm): 57,28 |
| Sand, coarse | (0,6 mm - 2 mm): 10,31 |
| Gravel | (> 2 mm): 2,21 |
| Sum: | 100,00 |

Sieve Analysis

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,88 | 0,18 |
| 16% | 84% | 0,53 | 0,91 |
| 25% | 75% | 0,45 | 1,15 |
| 40% | 60% | 0,35 | 1,50 |
| Median 50% | 50% | 0,31 | 1,71 |
| 75% | 25% | 0,16 | 2,62 |
| 84% | 16% | 0,09 | 3,51 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,05 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

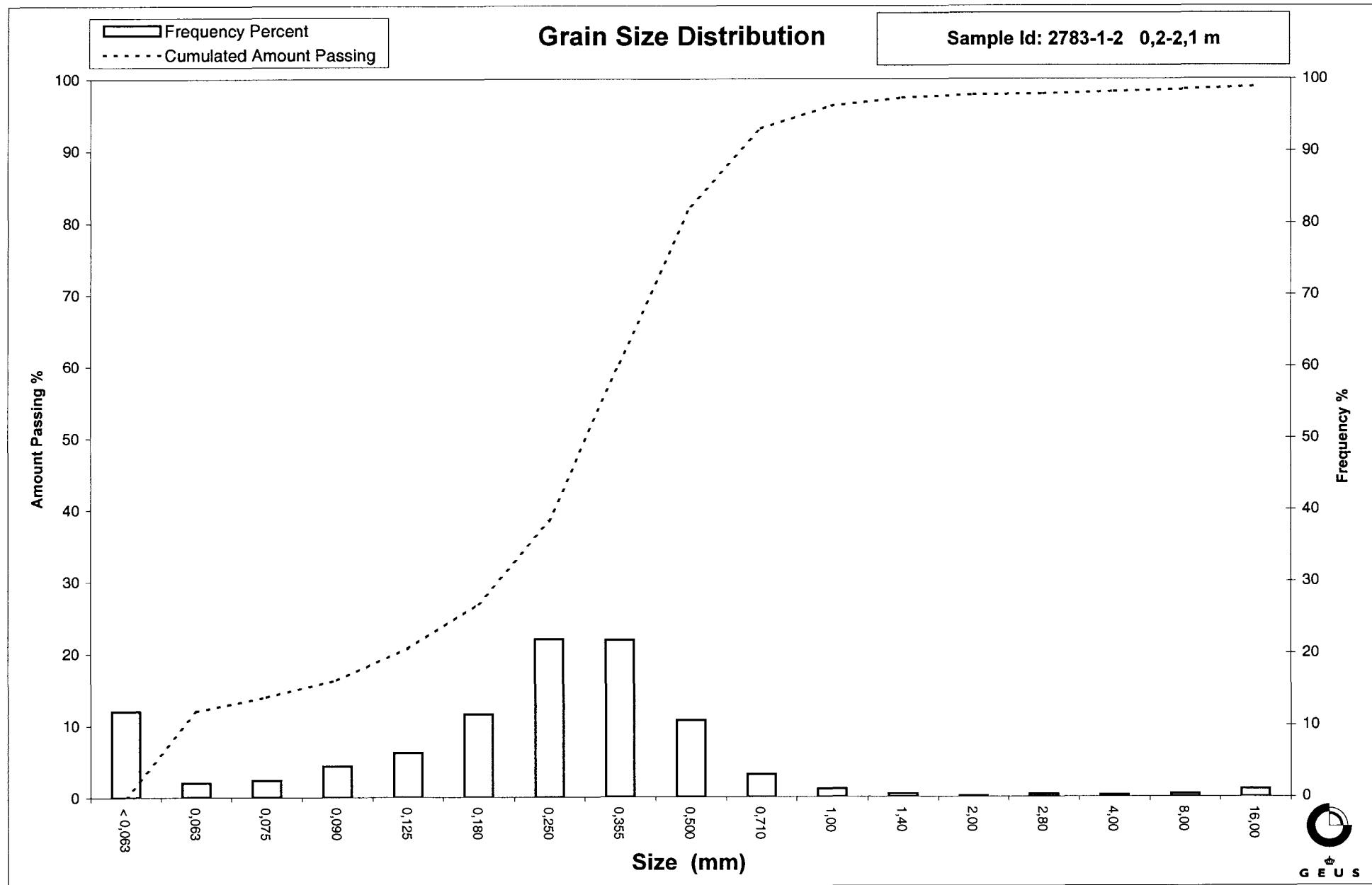
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2783-3 2,1-3,5 m
Lab. Id: 20664
SE: 20
Subject: 94. 2783
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 821,8 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 58,68 | 7,14 | 92,86 |
| 8,00 | -3,00 | 3,52 | 0,43 | 92,43 |
| 4,00 | -2,00 | 8,54 | 1,04 | 91,39 |
| 2,80 | -1,49 | 2,50 | 0,30 | 91,09 |
| 2,00 | -1,00 | 3,64 | 0,44 | 90,64 |
| 1,40 | -0,49 | 6,85 | 0,83 | 89,81 |
| 1,00 | 0,00 | 9,99 | 1,22 | 88,60 |
| 0,710 | 0,49 | 26,33 | 3,20 | 85,39 |
| 0,500 | 1,00 | 71,23 | 8,67 | 76,73 |
| 0,355 | 1,49 | 110,76 | 13,48 | 63,25 |
| 0,250 | 2,00 | 167,29 | 20,36 | 42,89 |
| 0,180 | 2,47 | 103,08 | 12,54 | 30,35 |
| 0,125 | 3,00 | 83,94 | 10,21 | 20,13 |
| 0,090 | 3,47 | 35,24 | 4,29 | 15,85 |
| 0,075 | 3,74 | 16,42 | 2,00 | 13,85 |
| 0,063 | 3,99 | 9,74 | 1,19 | 12,66 |
| < 0,063 | > 3,99 | 104,05 | 12,66 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 12,66 |
| Sand, fine | (0,063 mm - 0,200 mm): 21,27 |
| Sand, medium | (0,2 mm - 0,6 mm): 46,92 |
| Sand, coarse | (0,6 mm - 2 mm): 9,79 |
| Gravel | (> 2 mm): 9,36 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 0,68 | 0,56 |
| 25% | 75% | 0,48 | 1,05 |
| 40% | 60% | 0,34 | 1,56 |
| Median 50% | 50% | 0,29 | 1,80 |
| 75% | 25% | 0,15 | 2,73 |
| 84% | 16% | 0,09 | 3,45 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,94 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

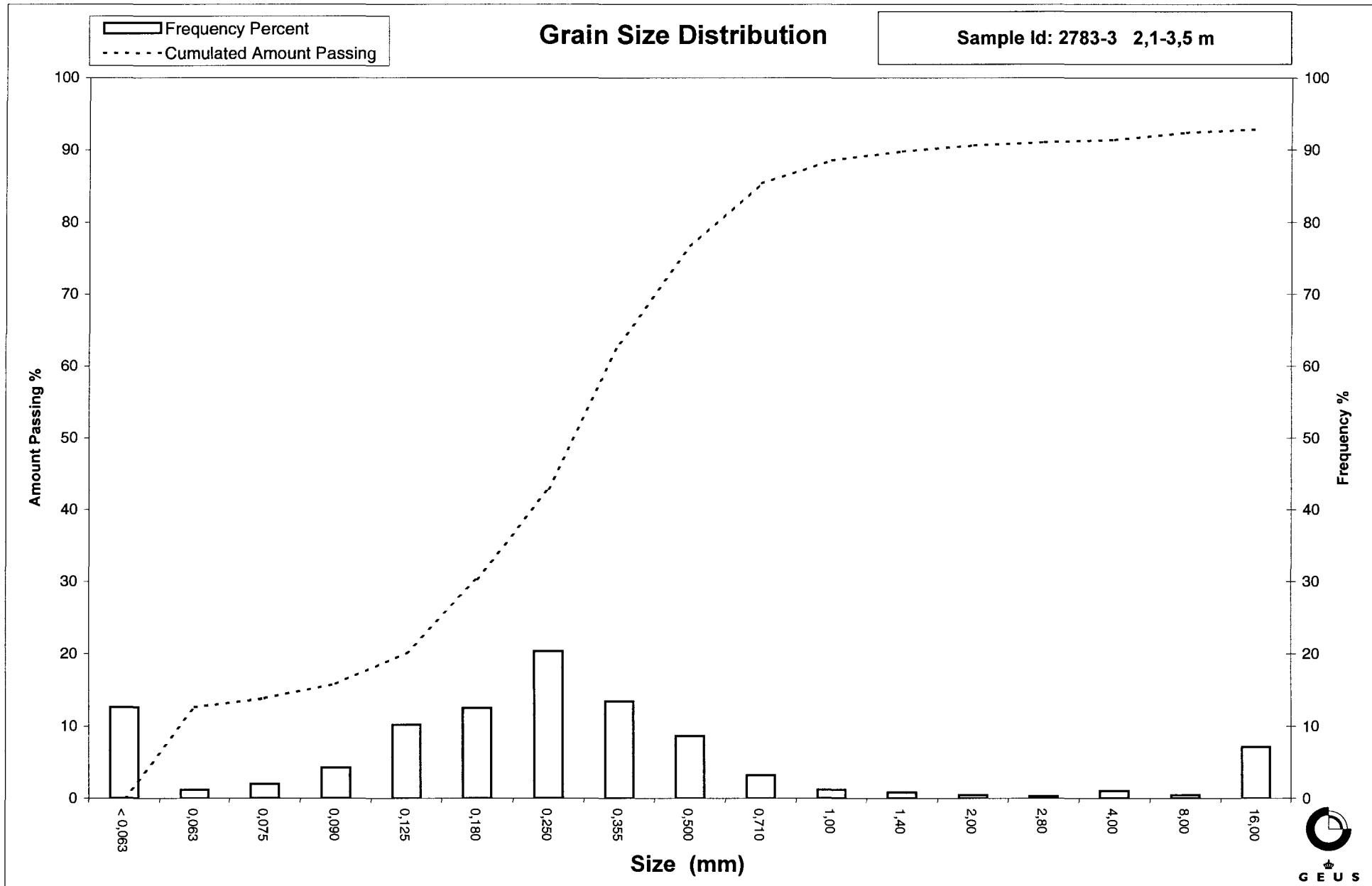
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2783-4-5 3,5-6 m
Lab. Id: 20665
SE: 36
Subject: 94. 2783
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 759,045 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 28,95 | 3,81 | 96,19 |
| 8,00 | -3,00 | 0,00 | 0,00 | 96,19 |
| 4,00 | -2,00 | 1,30 | 0,17 | 96,02 |
| 2,80 | -1,49 | 0,25 | 0,03 | 95,98 |
| 2,00 | -1,00 | 0,28 | 0,04 | 95,95 |
| 1,40 | -0,49 | 0,89 | 0,12 | 95,83 |
| 1,00 | 0,00 | 3,21 | 0,42 | 95,41 |
| 0,710 | 0,49 | 12,11 | 1,60 | 93,81 |
| 0,500 | 1,00 | 48,16 | 6,34 | 87,47 |
| 0,355 | 1,49 | 134,34 | 17,70 | 69,77 |
| 0,250 | 2,00 | 210,34 | 27,71 | 42,06 |
| 0,180 | 2,47 | 140,57 | 18,52 | 23,54 |
| 0,125 | 3,00 | 76,82 | 10,12 | 13,42 |
| 0,090 | 3,47 | 42,55 | 5,61 | 7,81 |
| 0,075 | 3,74 | 16,14 | 2,13 | 5,69 |
| 0,063 | 3,99 | 12,31 | 1,62 | 4,06 |
| < 0,063 | > 3,99 | 30,84 | 4,06 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 4,06 |
| Sand, fine | (0,063 mm - 0,200 mm): 24,77 |
| Sand, medium | (0,2 mm - 0,6 mm): 61,66 |
| Sand, coarse | (0,6 mm - 2 mm): 5,46 |
| Gravel | (> 2 mm): 4,05 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,93 | 0,11 |
| 16% | 84% | 0,47 | 1,08 |
| 25% | 75% | 0,40 | 1,33 |
| 40% | 60% | 0,32 | 1,65 |
| Median 50% | 50% | 0,28 | 1,84 |
| 75% | 25% | 0,19 | 2,43 |
| 84% | 16% | 0,14 | 2,85 |
| 90% | 10% | 0,10 | 3,27 |
| 95% | 5% | 0,07 | 3,84 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,92 |
| Sorting | 1,01 |
| Skewness | 0,11 |
| Kurtosis | 1,39 |
| Uniformity Coefficient | 3,07 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

$$\text{Mean } (\phi 16\% + \phi 84\% + \phi 50\%) / 3 \text{ (Folk and Ward 1957)}$$

$$\text{Sorting } (\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6 \text{ (Folk and Ward 1957)}$$

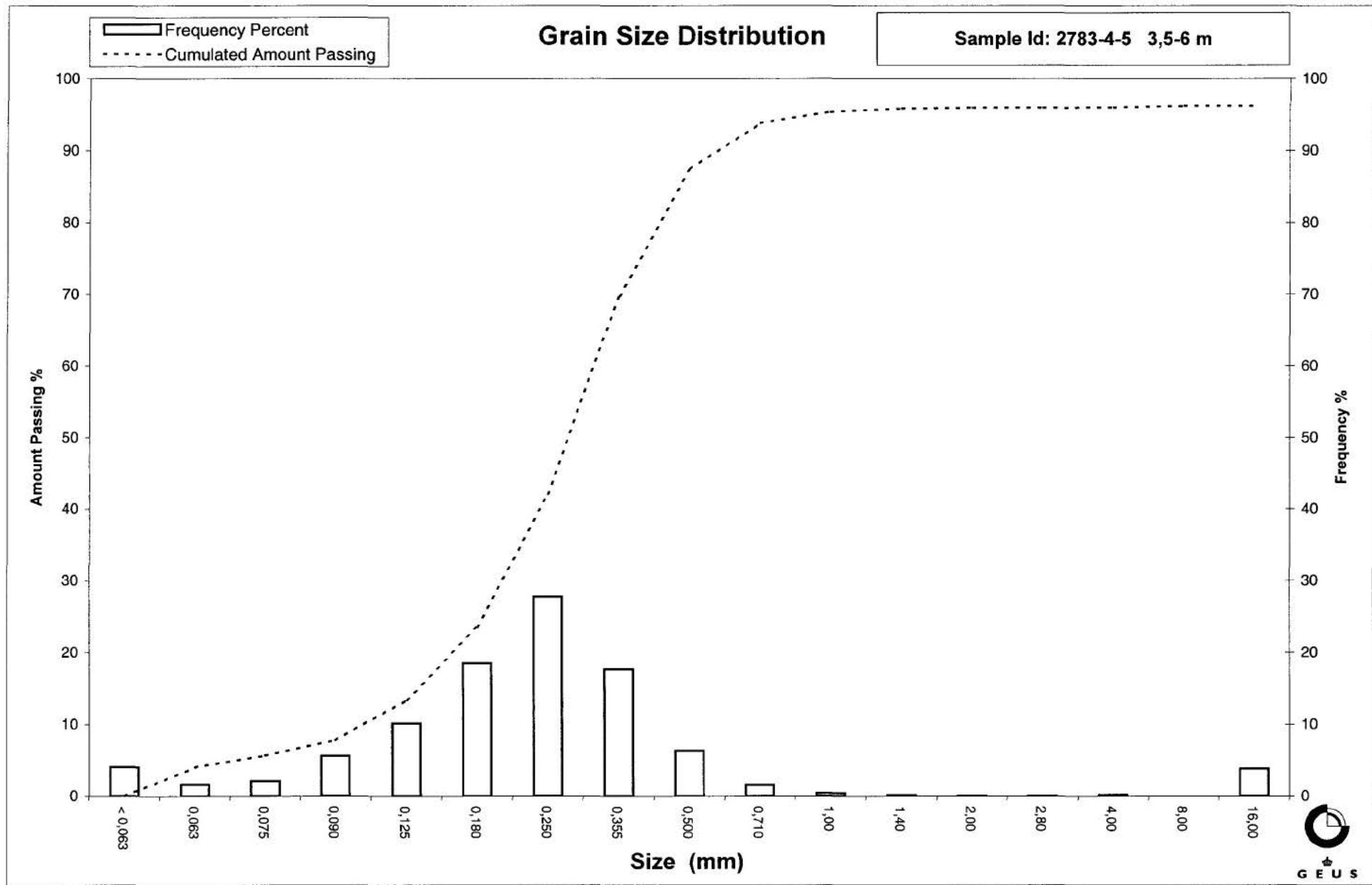
$$\text{Kurtosis } (\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Skewness } (\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Uniformity Coefficient } (d_{60\%} / d_{10\%}) \text{ (dgf-Bulletin 1988)}$$

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2784-1-2 0,2-4,4 m
Lab. Id: 20666
SE: 29
Subject: 94. 2784
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 145,37 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,09 | 0,06 | 99,94 |
| 2,00 | -1,00 | 0,38 | 0,26 | 99,68 |
| 1,40 | -0,49 | 1,16 | 0,80 | 98,88 |
| 1,00 | 0,00 | 1,91 | 1,31 | 97,57 |
| 0,710 | 0,49 | 4,98 | 3,43 | 94,14 |
| 0,500 | 1,00 | 14,85 | 10,21 | 83,93 |
| 0,355 | 1,49 | 27,22 | 18,73 | 65,20 |
| 0,250 | 2,00 | 36,22 | 24,91 | 40,29 |
| 0,180 | 2,47 | 21,53 | 14,81 | 25,48 |
| 0,125 | 3,00 | 17,26 | 11,87 | 13,61 |
| 0,090 | 3,47 | 6,66 | 4,58 | 9,02 |
| 0,075 | 3,74 | 2,70 | 1,86 | 7,17 |
| 0,063 | 3,99 | 1,81 | 1,25 | 5,92 |
| < 0,063 | > 3,99 | 8,60 | 5,92 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 5,92 |
| Sand, fine | (0,063 mm - 0,200 mm): 23,79 |
| Sand, medium | (0,2 mm - 0,6 mm): 59,08 |
| Sand, coarse | (0,6 mm - 2 mm): 10,89 |
| Gravel | (> 2 mm): 0,32 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,78 | 0,35 |
| 16% | 84% | 0,50 | 1,00 |
| 25% | 75% | 0,43 | 1,21 |
| 40% | 60% | 0,33 | 1,59 |
| Median 50% | 50% | 0,29 | 1,78 |
| 75% | 25% | 0,18 | 2,49 |
| 84% | 16% | 0,14 | 2,88 |
| 90% | 10% | 0,10 | 3,36 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,88 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,42 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

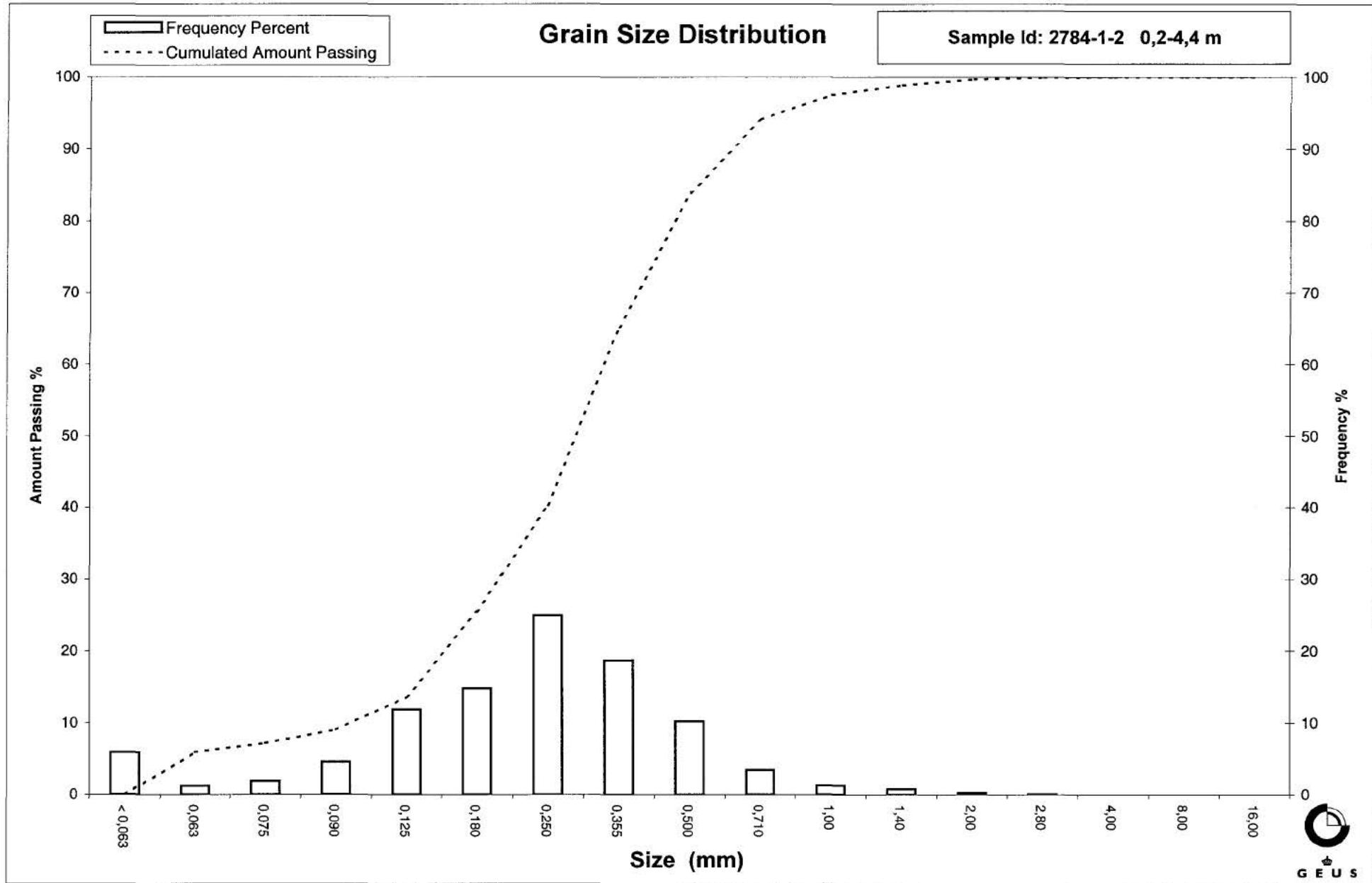
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

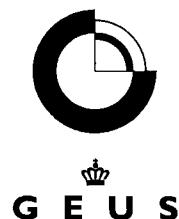
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2784-3 4,4-6 m
Lab. Id: 20667
SE: 82
Subject: 94. 2784
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 846,4 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 12,82 | 1,51 | 98,49 |
| 8,00 | -3,00 | 27,32 | 3,23 | 95,26 |
| 4,00 | -2,00 | 13,86 | 1,64 | 93,62 |
| 2,80 | -1,49 | 13,60 | 1,61 | 92,01 |
| 2,00 | -1,00 | 23,10 | 2,73 | 89,28 |
| 1,40 | -0,49 | 44,99 | 5,31 | 83,97 |
| 1,00 | 0,00 | 90,94 | 10,74 | 73,22 |
| 0,710 | 0,49 | 150,80 | 17,82 | 55,41 |
| 0,500 | 1,00 | 174,40 | 20,60 | 34,80 |
| 0,355 | 1,49 | 169,29 | 20,00 | 14,80 |
| 0,250 | 2,00 | 86,63 | 10,23 | 4,57 |
| 0,180 | 2,47 | 13,73 | 1,62 | 2,94 |
| 0,125 | 3,00 | 7,31 | 0,86 | 2,08 |
| 0,090 | 3,47 | 3,17 | 0,37 | 1,71 |
| 0,075 | 3,74 | 2,02 | 0,24 | 1,47 |
| 0,063 | 3,99 | 1,76 | 0,21 | 1,26 |
| < 0,063 | > 3,99 | 10,66 | 1,26 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,26 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,15 |
| Sand, medium | (0,2 mm - 0,6 mm): 41,21 |
| Sand, coarse | (0,6 mm - 2 mm): 44,67 |
| Gravel | (> 2 mm): 10,72 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 7,37 | -2,88 |
| 16% | 84% | 1,40 | -0,49 |
| 25% | 75% | 1,07 | -0,09 |
| 40% | 60% | 0,78 | 0,35 |
| Median 50% | 50% | 0,65 | 0,61 |
| 75% | 25% | 0,43 | 1,22 |
| 84% | 16% | 0,36 | 1,46 |
| 90% | 10% | 0,31 | 1,71 |
| 95% | 5% | 0,25 | 1,97 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,53 |
| Sorting | 1,22 |
| Skewness | -0,28 |
| Kurtosis | 1,52 |
| Uniformity Coefficient | 2,57 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

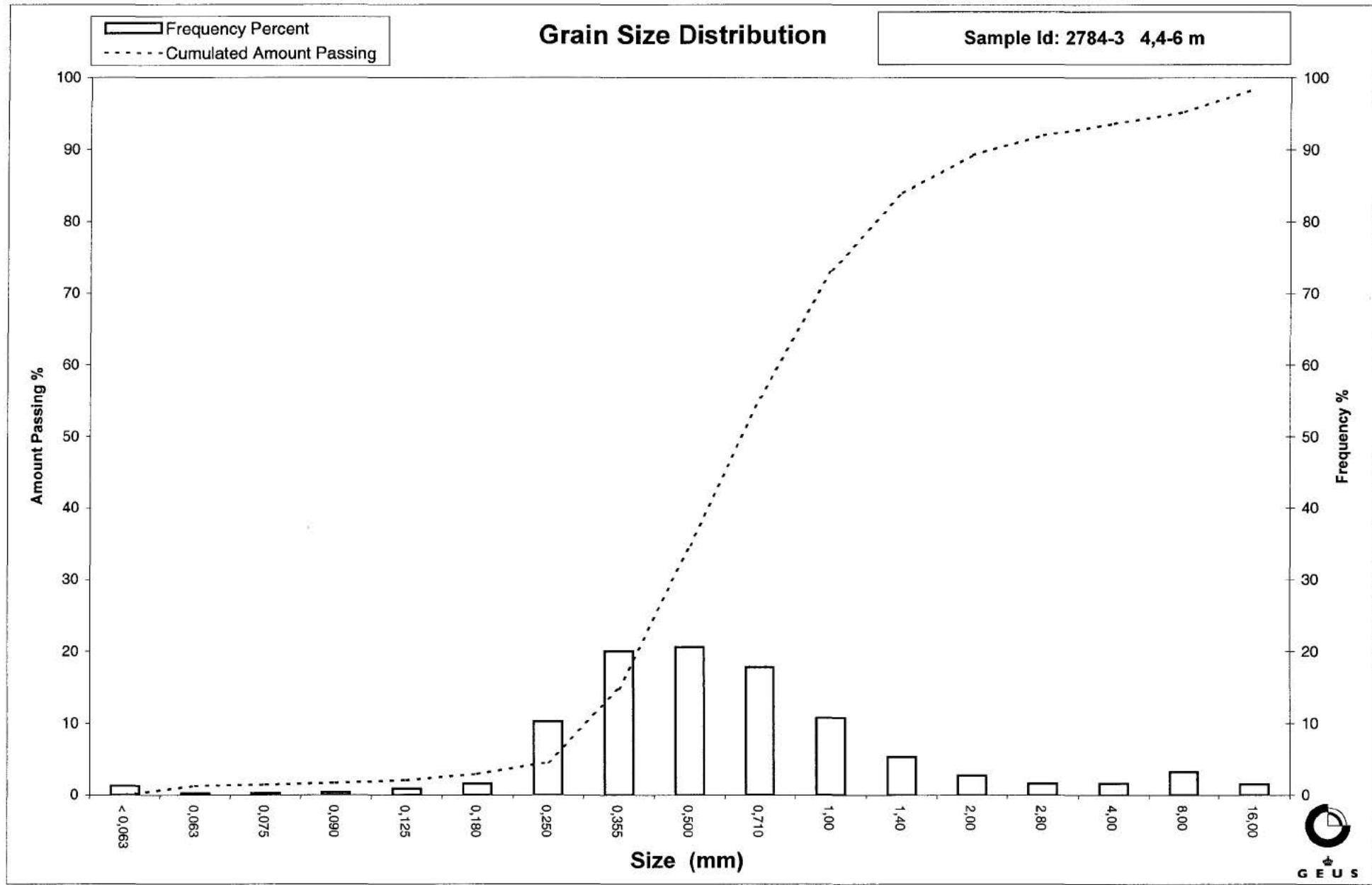
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2785-1-2 0,2-3,6 m
Lab. Id: 20668
SE: 49
Subject: 94. 2785
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 233,1 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,18 | 0,08 | 99,92 |
| 2,80 | -1,49 | 0,98 | 0,42 | 99,50 |
| 2,00 | -1,00 | 1,34 | 0,57 | 98,93 |
| 1,40 | -0,49 | 1,20 | 0,51 | 98,41 |
| 1,00 | 0,00 | 3,90 | 1,67 | 96,74 |
| 0,710 | 0,49 | 8,80 | 3,78 | 92,96 |
| 0,500 | 1,00 | 16,56 | 7,10 | 85,86 |
| 0,355 | 1,49 | 65,84 | 28,25 | 57,61 |
| 0,250 | 2,00 | 92,50 | 39,68 | 17,93 |
| 0,180 | 2,47 | 22,68 | 9,73 | 8,20 |
| 0,125 | 3,00 | 9,06 | 3,89 | 4,32 |
| 0,090 | 3,47 | 4,94 | 2,12 | 2,20 |
| 0,075 | 3,74 | 1,70 | 0,73 | 1,47 |
| 0,063 | 3,99 | 1,24 | 0,53 | 0,94 |
| < 0,063 | > 3,99 | 2,18 | 0,94 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 0,94 |
| Sand, fine | (0,063 mm - 0,200 mm): 10,05 |
| Sand, medium | (0,2 mm - 0,6 mm): 78,26 |
| Sand, coarse | (0,6 mm - 2 mm): 9,68 |
| Gravel | (> 2 mm): 1,07 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,87 | 0,21 |
| 16% | 84% | 0,49 | 1,03 |
| 25% | 75% | 0,44 | 1,17 |
| 40% | 60% | 0,37 | 1,45 |
| Median 50% | 50% | 0,33 | 1,58 |
| 75% | 25% | 0,27 | 1,90 |
| 84% | 16% | 0,24 | 2,08 |
| 90% | 10% | 0,19 | 2,37 |
| 95% | 5% | 0,13 | 2,89 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,56 |
| Sorting | 0,67 |
| Skewness | -0,03 |
| Kurtosis | 1,52 |
| Uniformity Coefficient | 1,90 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

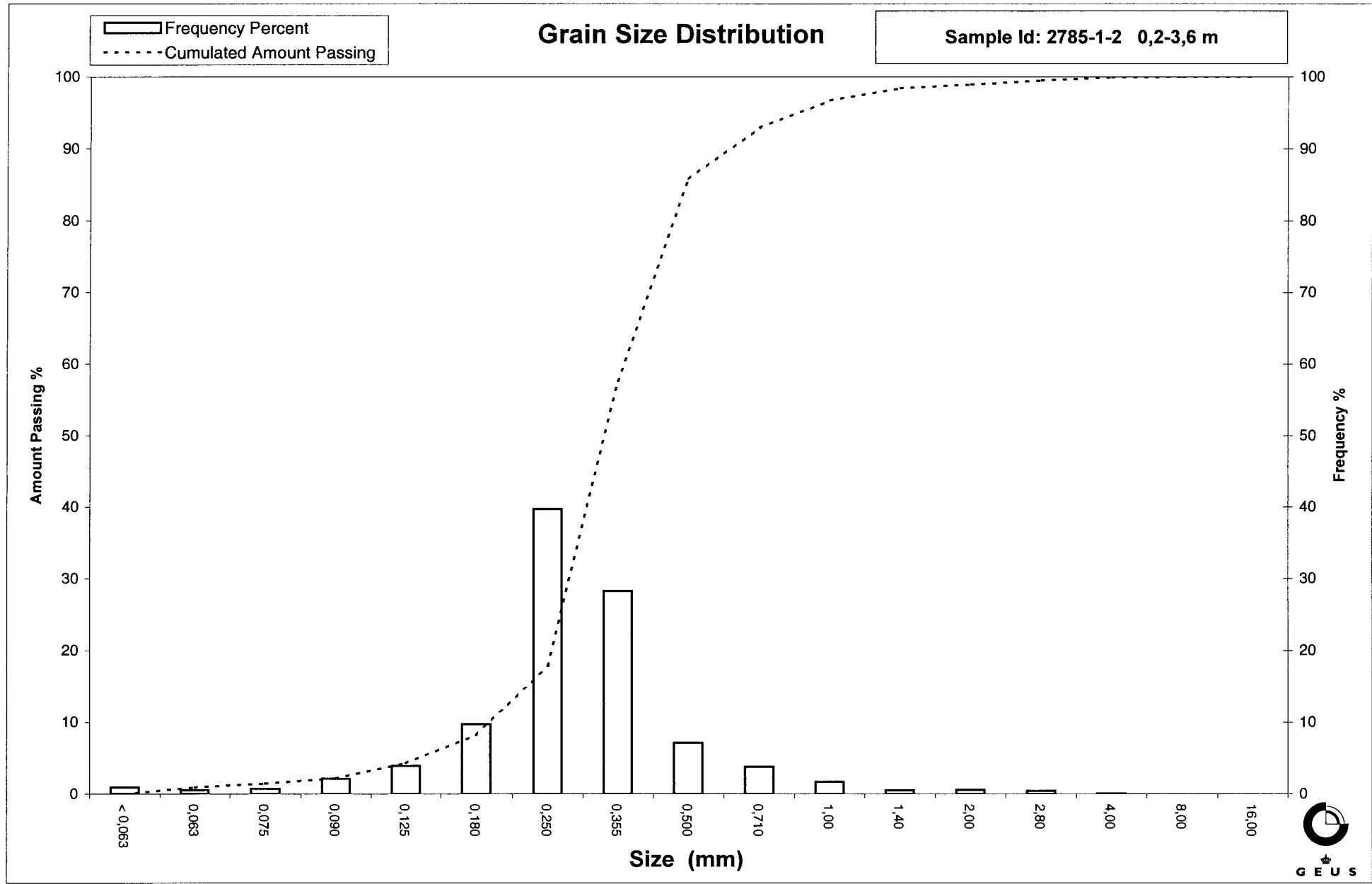
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2785-3-4 3,6-4,9 m
Lab. Id: 20669
SE: 83
Subject: 94. 2785
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 741,87 g

Size Fractions

Sieve Analysis

Gravel

Sand

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 36,42 | 4,91 | 95,09 |
| 8,00 | -3,00 | 13,80 | 1,86 | 93,23 |
| 4,00 | -2,00 | 6,27 | 0,85 | 92,39 |
| 2,80 | -1,49 | 4,92 | 0,66 | 91,72 |
| 2,00 | -1,00 | 9,75 | 1,31 | 90,41 |
| 1,40 | -0,49 | 16,64 | 2,24 | 88,17 |
| 1,00 | 0,00 | 52,65 | 7,10 | 81,07 |
| 0,710 | 0,49 | 101,91 | 13,74 | 67,33 |
| 0,500 | 1,00 | 158,14 | 21,32 | 46,02 |
| 0,355 | 1,49 | 198,93 | 26,81 | 19,20 |
| 0,250 | 2,00 | 110,08 | 14,84 | 4,36 |
| 0,180 | 2,47 | 15,38 | 2,07 | 2,29 |
| 0,125 | 3,00 | 5,25 | 0,71 | 1,58 |
| 0,090 | 3,47 | 2,50 | 0,34 | 1,24 |
| 0,075 | 3,74 | 1,19 | 0,16 | 1,08 |
| 0,063 | 3,99 | 0,72 | 0,10 | 0,99 |
| < 0,063 | > 3,99 | 7,32 | 0,99 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,99 |
| Sand, fine | (0,063 mm - 0,200 mm): 1,89 |
| Sand, medium | (0,2 mm - 0,6 mm): 53,28 |
| Sand, coarse | (0,6 mm - 2 mm): 34,24 |
| Gravel | (> 2 mm): 9,59 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 15,61 | -3,96 |
| 16% | 84% | 1,17 | -0,22 |
| 25% | 75% | 0,87 | 0,20 |
| 40% | 60% | 0,64 | 0,65 |
| Median 50% | 50% | 0,54 | 0,89 |
| 75% | 25% | 0,39 | 1,37 |
| 84% | 16% | 0,33 | 1,59 |
| 90% | 10% | 0,29 | 1,79 |
| 95% | 5% | 0,25 | 1,97 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,75 |
| Sorting | 1,35 |
| Skewness | -0,43 |
| Kurtosis | 2,07 |
| Uniformity Coefficient | 2,20 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

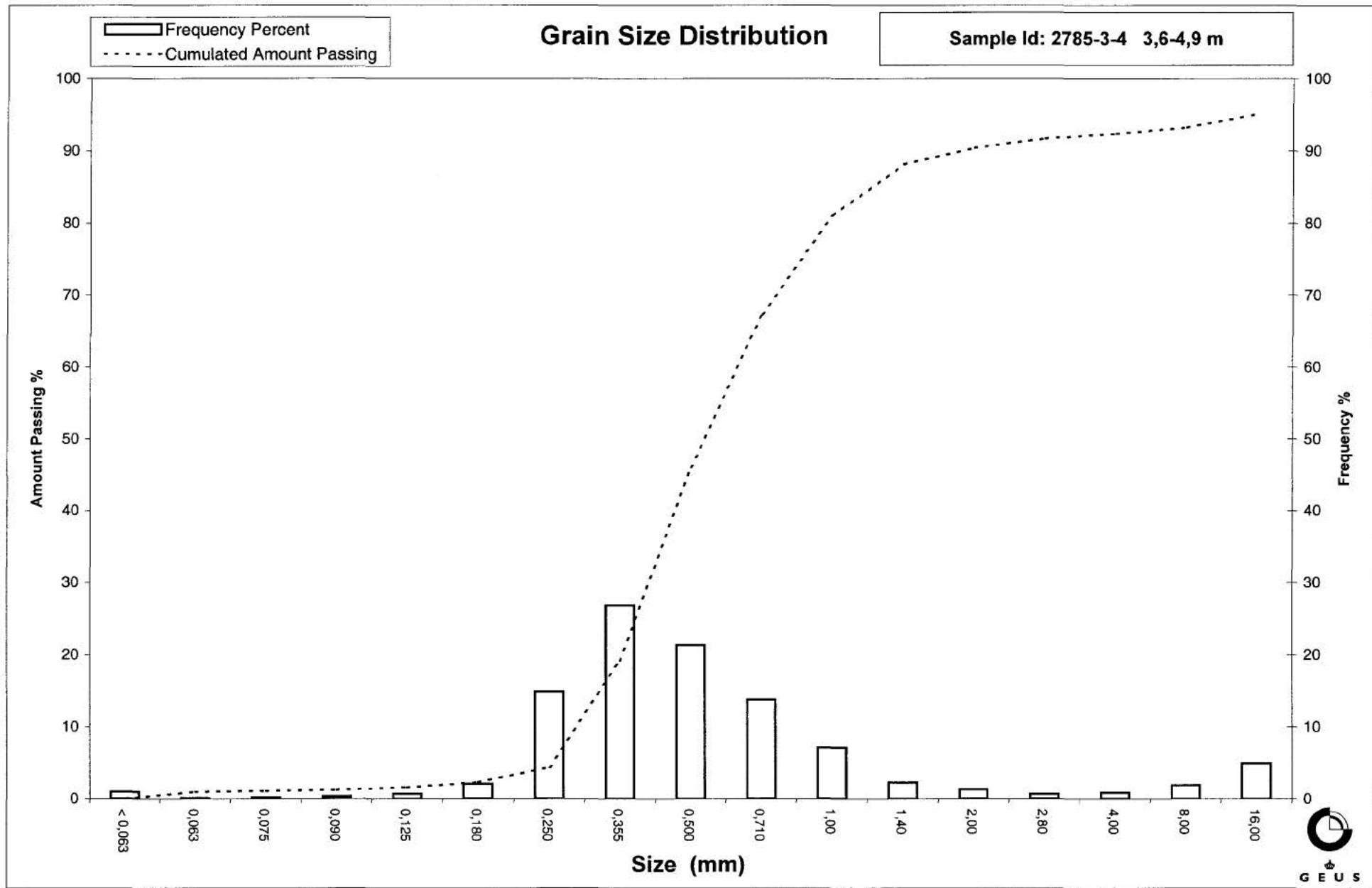
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient (d_{60} / d_{10}) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

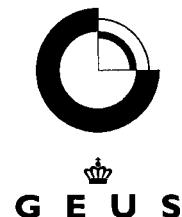
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Grain Size Distribution

Geotechnical

Sample Id: 2785-5 4,9-6 m
Lab. Id: 20670
SE: 65
Subject: 94. 2785
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 734,47 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 96,07 | 13,08 | 86,92 |
| 8,00 | -3,00 | 51,21 | 6,97 | 79,95 |
| 4,00 | -2,00 | 52,56 | 7,16 | 72,79 |
| 2,80 | -1,49 | 33,36 | 4,54 | 68,25 |
| 2,00 | -1,00 | 42,74 | 5,82 | 62,43 |
| 1,40 | -0,49 | 52,16 | 7,10 | 55,33 |
| 1,00 | 0,00 | 70,02 | 9,53 | 45,79 |
| 0,710 | 0,49 | 103,11 | 14,04 | 31,76 |
| 0,500 | 1,00 | 114,75 | 15,62 | 16,13 |
| 0,355 | 1,49 | 53,10 | 7,23 | 8,90 |
| 0,250 | 2,00 | 32,30 | 4,40 | 4,50 |
| 0,180 | 2,47 | 6,31 | 0,86 | 3,65 |
| 0,125 | 3,00 | 4,53 | 0,62 | 3,03 |
| 0,090 | 3,47 | 2,38 | 0,32 | 2,70 |
| 0,075 | 3,74 | 1,26 | 0,17 | 2,53 |
| 0,063 | 3,99 | 0,93 | 0,13 | 2,40 |
| < 0,063 | > 3,99 | 17,66 | 2,40 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,40 |
| Sand, fine | (0,063 mm - 0,200 mm): 1,49 |
| Sand, medium | (0,2 mm - 0,6 mm): 19,68 |
| Sand, coarse | (0,6 mm - 2 mm): 38,86 |
| Gravel | (> 2 mm): 37,57 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 12,65 | -3,66 |
| 25% | 75% | 5,23 | -2,39 |
| 40% | 60% | 1,79 | -0,84 |
| Median 50% | 50% | 1,18 | -0,23 |
| 75% | 25% | 0,62 | 0,69 |
| 84% | 16% | 0,50 | 1,01 |
| 90% | 10% | 0,38 | 1,41 |
| 95% | 5% | 0,26 | 1,93 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,96 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 4,76 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

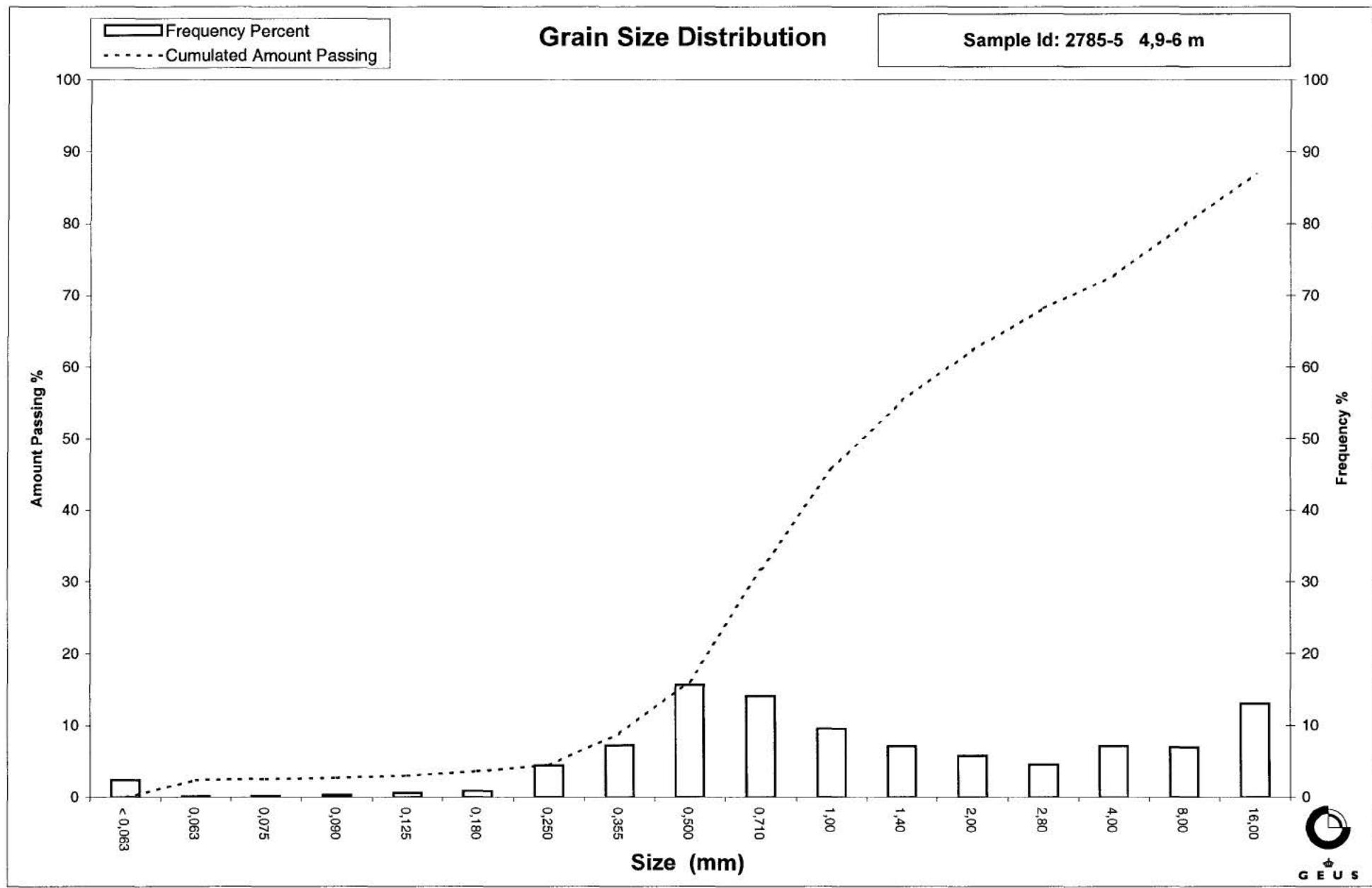
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

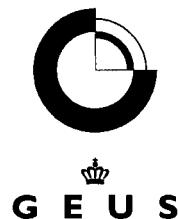
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Grain Size Distribution

Geotechnical

Sample Id: 2786-1-3 0,2-6 m
Lab. Id: 20671
SE: 53
Subject: 94. 2786
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 262,82 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,24 | 0,09 | 99,91 |
| 2,00 | -1,00 | 0,30 | 0,11 | 99,79 |
| 1,40 | -0,49 | 0,52 | 0,20 | 99,60 |
| 1,00 | 0,00 | 2,36 | 0,90 | 98,70 |
| 0,710 | 0,49 | 7,22 | 2,75 | 95,95 |
| 0,500 | 1,00 | 21,52 | 8,19 | 87,76 |
| 0,355 | 1,49 | 47,40 | 18,04 | 69,73 |
| 0,250 | 2,00 | 65,90 | 25,07 | 44,65 |
| 0,180 | 2,47 | 44,78 | 17,04 | 27,62 |
| 0,125 | 3,00 | 29,94 | 11,39 | 16,22 |
| 0,090 | 3,47 | 20,96 | 7,98 | 8,25 |
| 0,075 | 3,74 | 7,98 | 3,04 | 5,21 |
| 0,063 | 3,99 | 3,44 | 1,31 | 3,90 |
| < 0,063 | > 3,99 | 10,26 | 3,90 | 0,00 |

Sieve Analysis

Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,90 |
| Sand, fine | (0,063 mm - 0,200 mm): 28,58 |
| Sand, medium | (0,2 mm - 0,6 mm): 59,18 |
| Sand, coarse | (0,6 mm - 2 mm): 8,13 |
| Gravel | (> 2 mm): 0,21 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,69 | 0,54 |
| 16% | 84% | 0,47 | 1,09 |
| 25% | 75% | 0,40 | 1,33 |
| 40% | 60% | 0,31 | 1,67 |
| Median 50% | 50% | 0,27 | 1,88 |
| 75% | 25% | 0,17 | 2,58 |
| 84% | 16% | 0,12 | 3,01 |
| 90% | 10% | 0,10 | 3,36 |
| 95% | 5% | 0,07 | 3,77 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,99 |
| Sorting | 0,97 |
| Skewness | 0,18 |
| Kurtosis | 1,06 |
| Uniformity Coefficient | 3,22 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

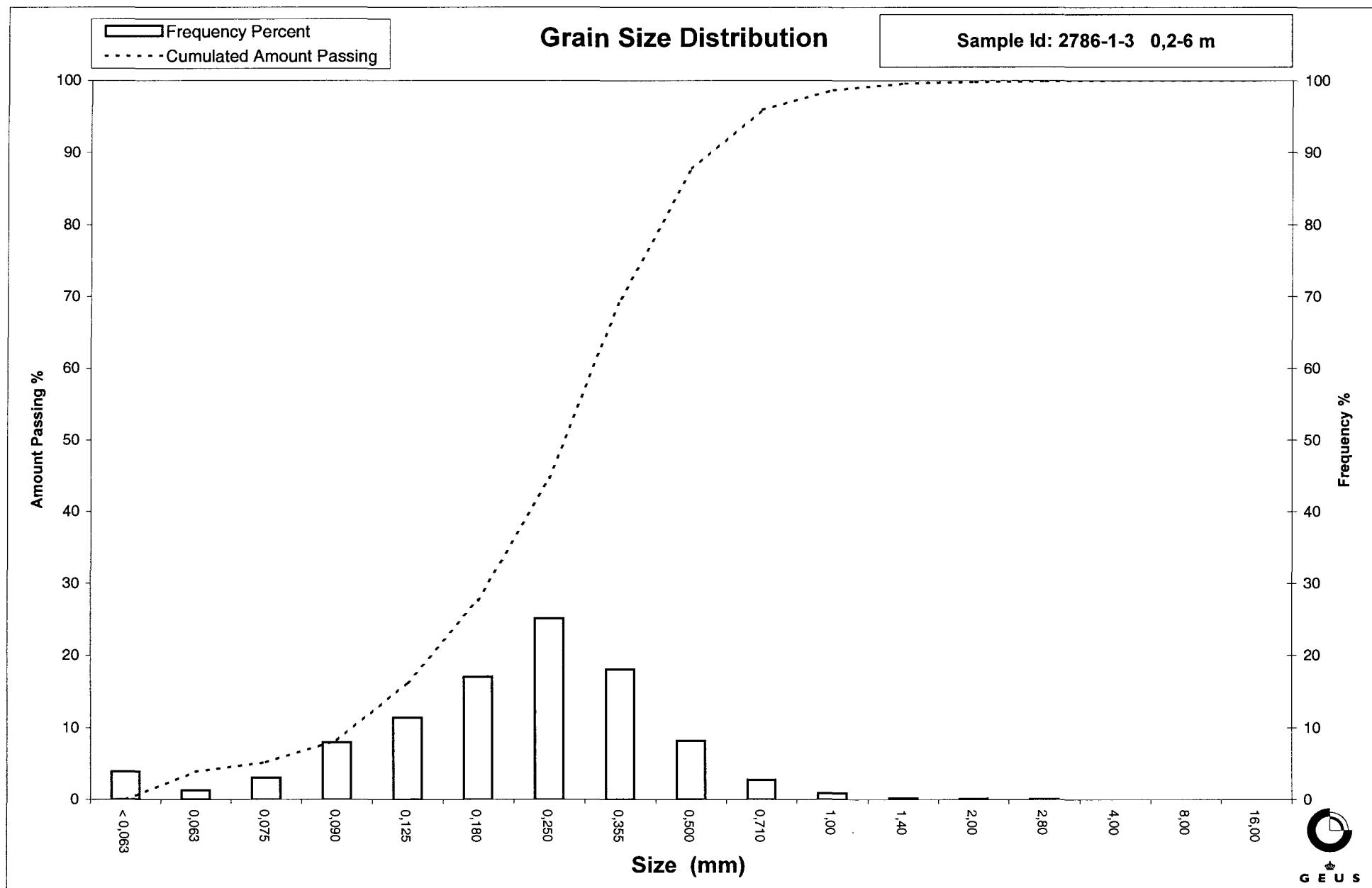
Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)
 Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)
 Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)
 Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)
 Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

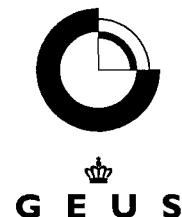
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www.geus.dk



Grain Size Distribution

Geotechnical

Sample Id: 2787-1 1,1-2 m
Lab. Id: 20672
SE: 32
Subject: 94. 2787
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 736,855 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 6,23 | 0,85 | 99,15 |
| 4,00 | -2,00 | 5,01 | 0,68 | 98,48 |
| 2,80 | -1,49 | 3,08 | 0,42 | 98,06 |
| 2,00 | -1,00 | 2,03 | 0,28 | 97,78 |
| 1,40 | -0,49 | 3,01 | 0,41 | 97,37 |
| 1,00 | 0,00 | 9,36 | 1,27 | 96,10 |
| 0,710 | 0,49 | 25,42 | 3,45 | 92,65 |
| 0,500 | 1,00 | 92,77 | 12,59 | 80,06 |
| 0,355 | 1,49 | 185,47 | 25,17 | 54,89 |
| 0,250 | 2,00 | 191,23 | 25,95 | 28,94 |
| 0,180 | 2,47 | 100,66 | 13,66 | 15,28 |
| 0,125 | 3,00 | 48,56 | 6,59 | 8,69 |
| 0,090 | 3,47 | 23,74 | 3,22 | 5,47 |
| 0,075 | 3,74 | 9,63 | 1,31 | 4,16 |
| 0,063 | 3,99 | 5,48 | 0,74 | 3,42 |
| < 0,063 | > 3,99 | 25,17 | 3,42 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,42 |
| Sand, fine | (0,063 mm - 0,200 mm): 15,77 |
| Sand, medium | (0,2 mm - 0,6 mm): 66,88 |
| Sand, coarse | (0,6 mm - 2 mm): 11,72 |
| Gravel | (> 2 mm): 2,22 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,91 | 0,14 |
| 16% | 84% | 0,57 | 0,82 |
| 25% | 75% | 0,47 | 1,09 |
| 40% | 60% | 0,38 | 1,38 |
| Median 50% | 50% | 0,34 | 1,58 |
| 75% | 25% | 0,23 | 2,12 |
| 84% | 16% | 0,18 | 2,44 |
| 90% | 10% | 0,14 | 2,88 |
| 95% | 5% | 0,08 | 3,56 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,61 |
| Sorting | 0,92 |
| Skewness | 0,12 |
| Kurtosis | 1,36 |
| Uniformity Coefficient | 2,83 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

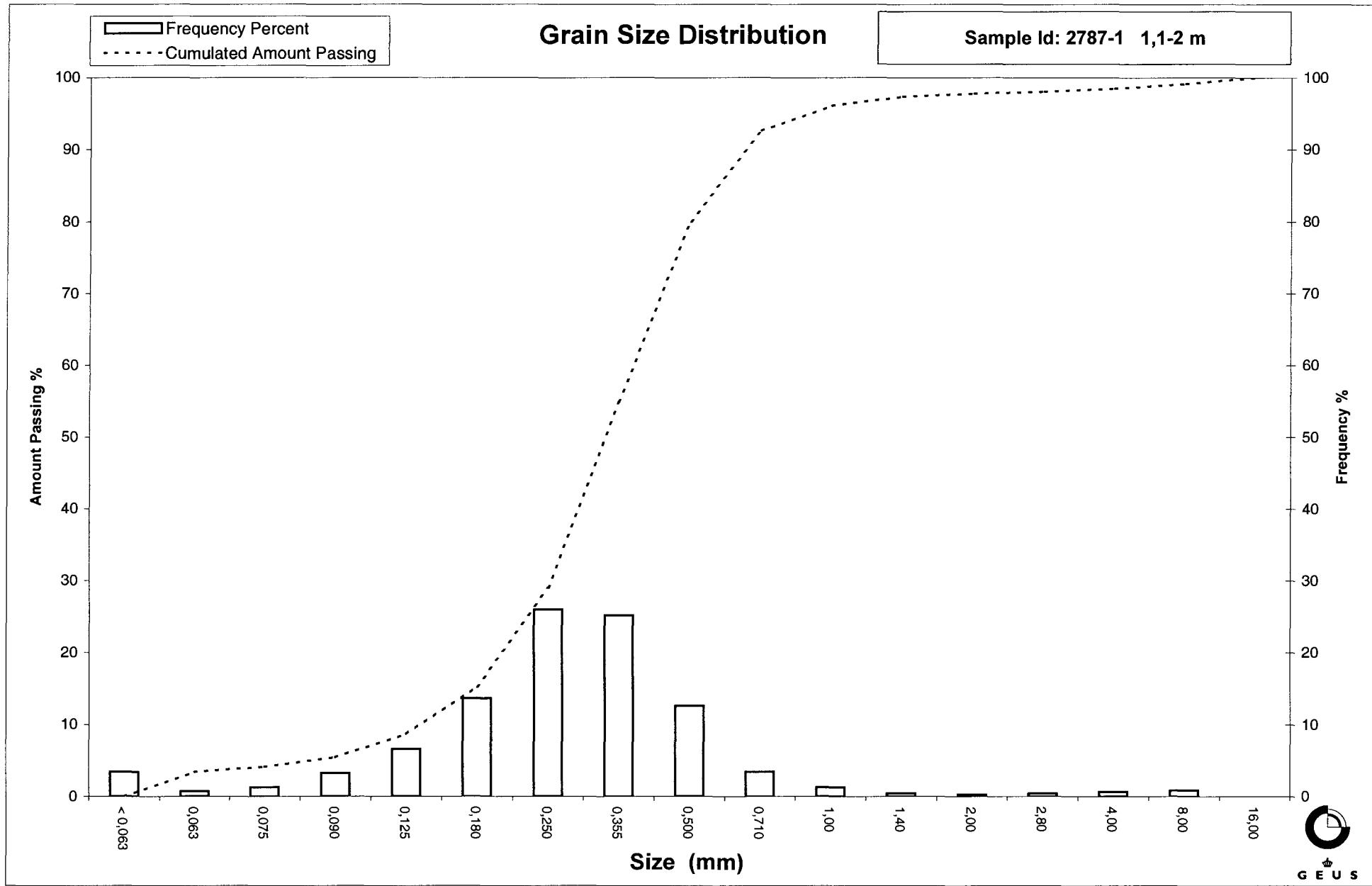
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)
 Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)
 Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)
 Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)
 Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2787-2-3 2,1-3,3 m
Lab. Id: 20673
SE: 70
Subject: 94. 2787
Date: November 2002
Executed: K.F/I.N
Remarks: For mat.<16mm mat>32mm



Total Weight 806,58 g

Size Fractions

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 200,24 | 24,83 | 75,17 |
| 8,00 | -3,00 | 52,10 | 6,46 | 68,71 |
| 4,00 | -2,00 | 27,30 | 3,38 | 65,33 |
| 2,80 | -1,49 | 16,74 | 2,08 | 63,25 |
| 2,00 | -1,00 | 13,04 | 1,62 | 61,64 |
| 1,40 | -0,49 | 12,70 | 1,57 | 60,06 |
| 1,00 | 0,00 | 20,22 | 2,51 | 57,56 |
| 0,710 | 0,49 | 50,68 | 6,28 | 51,27 |
| 0,500 | 1,00 | 107,32 | 13,31 | 37,97 |
| 0,355 | 1,49 | 101,40 | 12,57 | 25,40 |
| 0,250 | 2,00 | 104,58 | 12,97 | 12,43 |
| 0,180 | 2,47 | 51,59 | 6,40 | 6,04 |
| 0,125 | 3,00 | 33,37 | 4,14 | 1,90 |
| 0,090 | 3,47 | 8,51 | 1,06 | 0,84 |
| 0,075 | 3,74 | 2,37 | 0,29 | 0,55 |
| 0,063 | 3,99 | 1,05 | 0,13 | 0,42 |
| < 0,063 | > 3,99 | 3,38 | 0,42 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,42 |
| Sand, fine | (0,063 mm - 0,200 mm): 7,44 |
| Sand, medium | (0,2 mm - 0,6 mm): 36,44 |
| Sand, coarse | (0,6 mm - 2 mm): 17,33 |
| Gravel | (> 2 mm): 38,36 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | 15,78 | -3,98 |
| 40% | 60% | 1,39 | -0,48 |
| Median 50% | 50% | 0,69 | 0,54 |
| 75% | 25% | 0,35 | 1,51 |
| 84% | 16% | 0,28 | 1,84 |
| 90% | 10% | 0,22 | 2,16 |
| 95% | 5% | 0,17 | 2,59 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,19 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 6,22 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

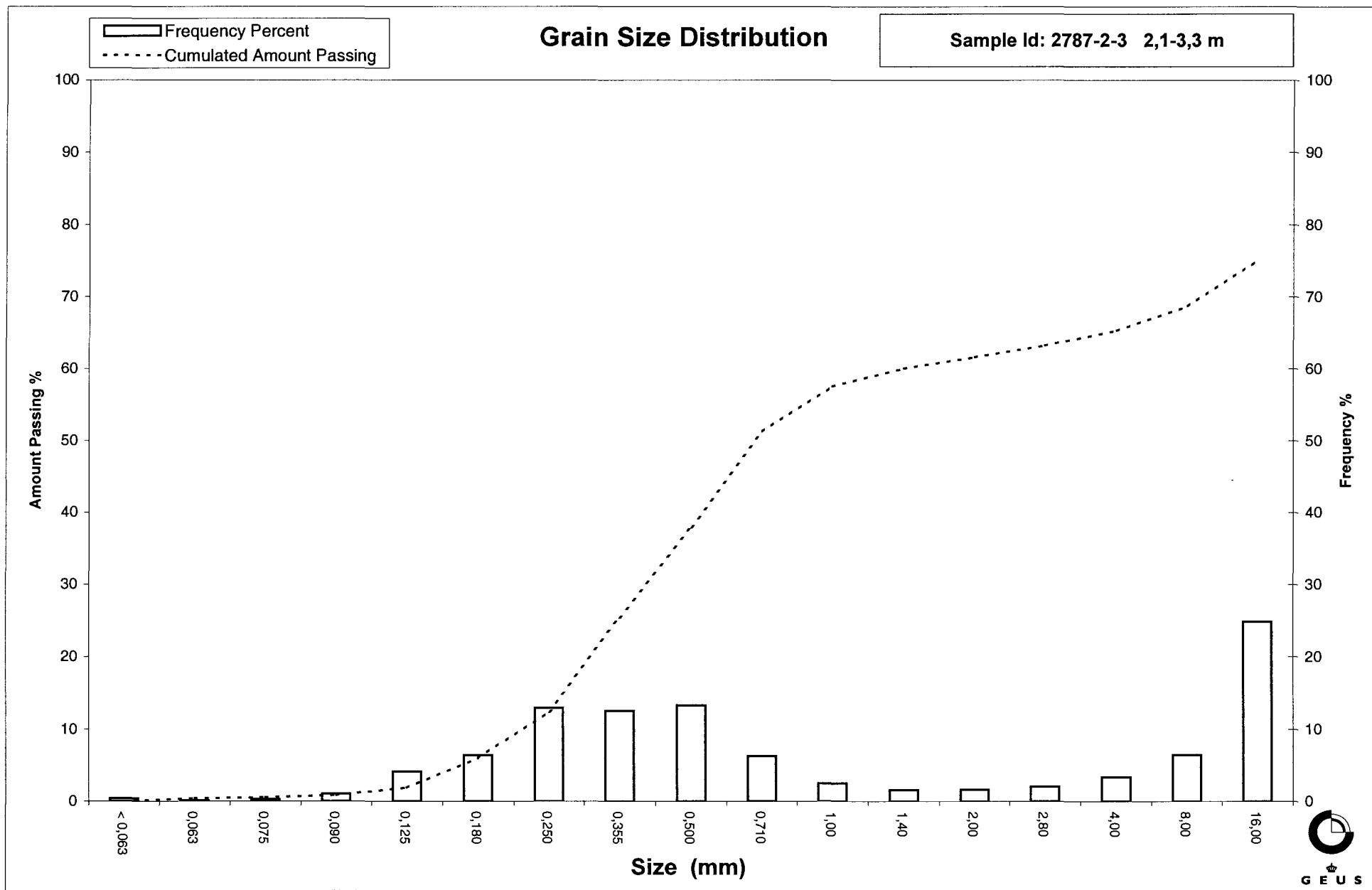
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

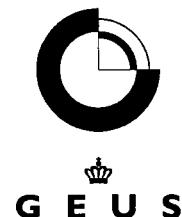
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2787-4-5 3,3-4,8 m
Lab. Id: 20674
SE: 72
Subject: 94. 2787
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 206,21 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,95 | 0,46 | 99,54 |
| 2,80 | -1,49 | 0,63 | 0,31 | 99,23 |
| 2,00 | -1,00 | 0,72 | 0,35 | 98,88 |
| 1,40 | -0,49 | 1,68 | 0,81 | 98,07 |
| 1,00 | 0,00 | 4,11 | 2,00 | 96,08 |
| 0,710 | 0,49 | 10,39 | 5,04 | 91,04 |
| 0,500 | 1,00 | 28,08 | 13,62 | 77,42 |
| 0,355 | 1,49 | 60,79 | 29,48 | 47,94 |
| 0,250 | 2,00 | 54,30 | 26,33 | 21,61 |
| 0,180 | 2,47 | 21,96 | 10,65 | 10,96 |
| 0,125 | 3,00 | 10,29 | 4,99 | 5,97 |
| 0,090 | 3,47 | 4,53 | 2,20 | 3,77 |
| 0,075 | 3,74 | 1,57 | 0,76 | 3,01 |
| 0,063 | 3,99 | 1,22 | 0,59 | 2,42 |
| < 0,063 | > 3,99 | 4,99 | 2,42 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,42 |
| Sand, fine | (0,063 mm - 0,200 mm): 11,58 |
| Sand, medium | (0,2 mm - 0,6 mm): 69,90 |
| Sand, coarse | (0,6 mm - 2 mm): 14,98 |
| Gravel | (> 2 mm): 1,12 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,94 | 0,09 |
| 16% | 84% | 0,60 | 0,73 |
| 25% | 75% | 0,49 | 1,03 |
| 40% | 60% | 0,41 | 1,27 |
| Median 50% | 50% | 0,37 | 1,45 |
| 75% | 25% | 0,26 | 1,92 |
| 84% | 16% | 0,21 | 2,23 |
| 90% | 10% | 0,17 | 2,56 |
| 95% | 5% | 0,11 | 3,19 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,47 |
| Sorting | 0,84 |
| Skewness | 0,08 |
| Kurtosis | 1,43 |
| Uniformity Coefficient | 2,45 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

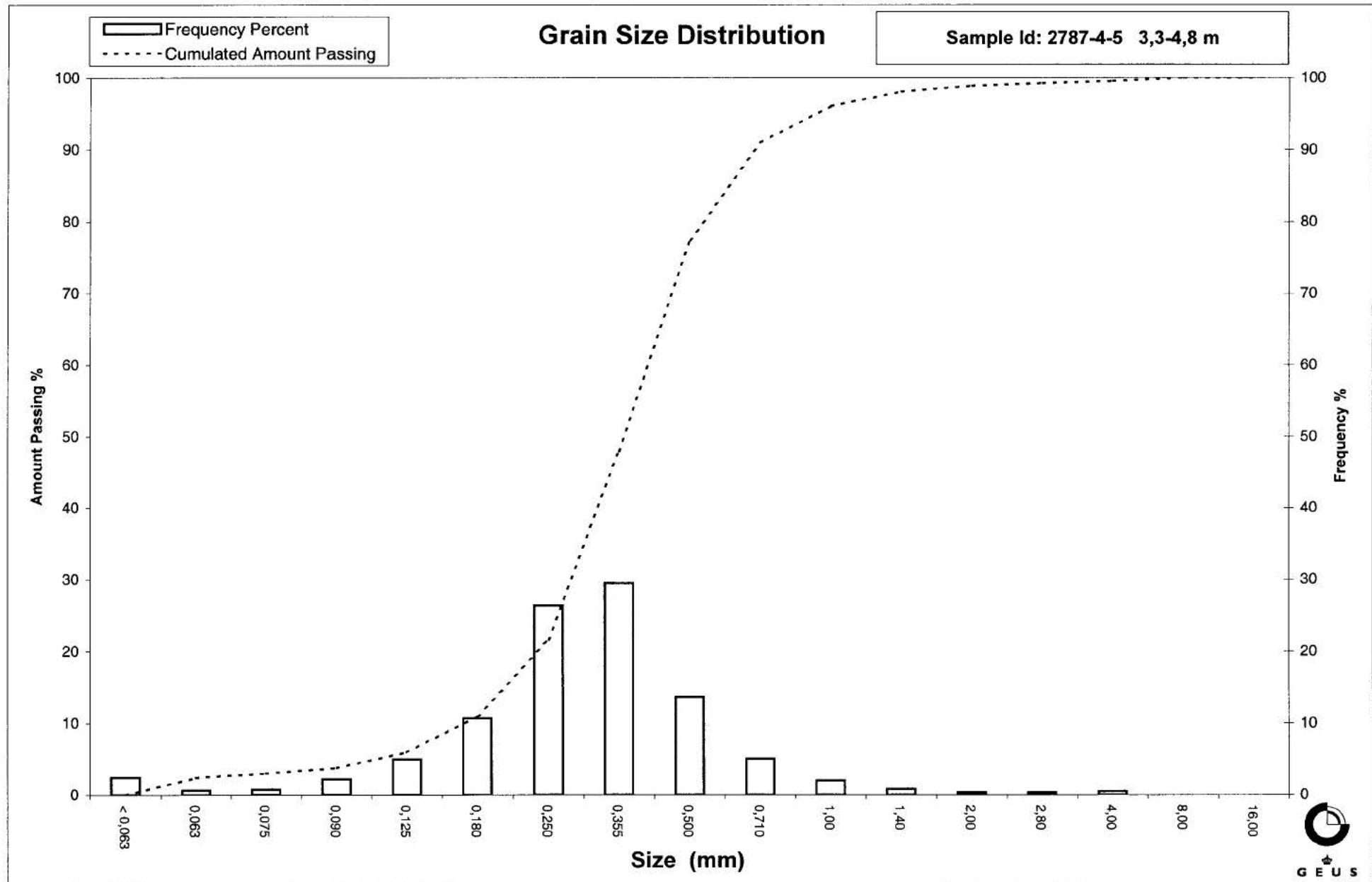
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2787-6-7 4,8-6 m
Lab. Id: 20675
SE: 81
Subject: 94. 2787
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 240,315 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 1,34 | 0,56 | 99,44 |
| 2,80 | -1,49 | 2,55 | 1,06 | 98,38 |
| 2,00 | -1,00 | 4,85 | 2,02 | 96,37 |
| 1,40 | -0,49 | 7,64 | 3,18 | 93,19 |
| 1,00 | 0,00 | 14,72 | 6,12 | 87,07 |
| 0,710 | 0,49 | 25,61 | 10,65 | 76,41 |
| 0,500 | 1,00 | 44,63 | 18,57 | 57,84 |
| 0,355 | 1,49 | 63,05 | 26,23 | 31,61 |
| 0,250 | 2,00 | 52,35 | 21,78 | 9,82 |
| 0,180 | 2,47 | 12,89 | 5,36 | 4,46 |
| 0,125 | 3,00 | 6,50 | 2,70 | 1,76 |
| 0,090 | 3,47 | 1,29 | 0,54 | 1,22 |
| 0,075 | 3,74 | 0,45 | 0,19 | 1,04 |
| 0,063 | 3,99 | 0,45 | 0,19 | 0,85 |
| < 0,063 | > 3,99 | 2,04 | 0,85 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,85 |
| Sand, fine | (0,063 mm - 0,200 mm): 5,15 |
| Sand, medium | (0,2 mm - 0,6 mm): 60,69 |
| Sand, coarse | (0,6 mm - 2 mm): 29,68 |
| Gravel | (> 2 mm): 3,63 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 1,74 | -0,80 |
| 16% | 84% | 0,92 | 0,13 |
| 25% | 75% | 0,69 | 0,53 |
| 40% | 60% | 0,52 | 0,93 |
| Median 50% | 50% | 0,46 | 1,13 |
| 75% | 25% | 0,32 | 1,63 |
| 84% | 16% | 0,28 | 1,84 |
| 90% | 10% | 0,25 | 2,00 |
| 95% | 5% | 0,19 | 2,42 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,03 |
| Sorting | 0,92 |
| Skewness | -0,19 |
| Kurtosis | 1,20 |
| Uniformity Coefficient | 2,09 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

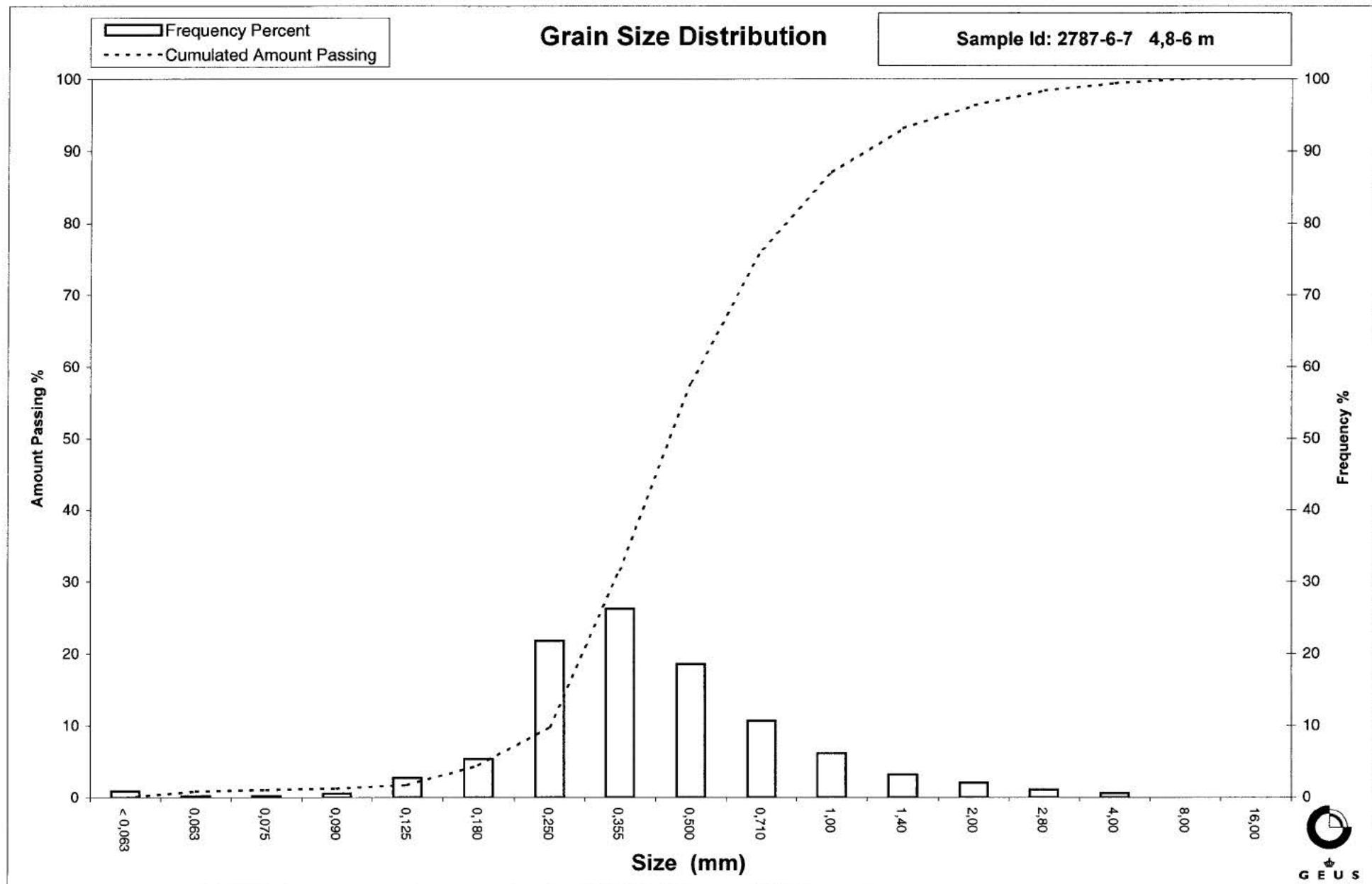
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

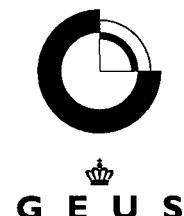
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Grain Size Distribution

Geotechnical

Sample Id: 2788-1-2 0,8-4 m
Lab. Id: 20676
SE: 55
Subject: 94. 2788
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 205,1 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,52 | 0,25 | 99,75 |
| 2,00 | -1,00 | 0,30 | 0,15 | 99,60 |
| 1,40 | -0,49 | 0,94 | 0,46 | 99,14 |
| 1,00 | 0,00 | 1,94 | 0,95 | 98,20 |
| 0,710 | 0,49 | 5,60 | 2,73 | 95,47 |
| 0,500 | 1,00 | 20,02 | 9,76 | 85,70 |
| 0,355 | 1,49 | 33,40 | 16,28 | 69,42 |
| 0,250 | 2,00 | 50,72 | 24,73 | 44,69 |
| 0,180 | 2,47 | 30,40 | 14,82 | 29,87 |
| 0,125 | 3,00 | 27,50 | 13,41 | 16,46 |
| 0,090 | 3,47 | 11,80 | 5,75 | 10,71 |
| 0,075 | 3,74 | 7,22 | 3,52 | 7,19 |
| 0,063 | 3,99 | 3,78 | 1,84 | 5,34 |
| < 0,063 | > 3,99 | 10,96 | 5,34 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 5,34 |
| Sand, fine | (0,063 mm - 0,200 mm): 28,76 |
| Sand, medium | (0,2 mm - 0,6 mm): 56,25 |
| Sand, coarse | (0,6 mm - 2 mm): 9,25 |
| Gravel | (> 2 mm): 0,40 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,70 | 0,51 |
| 16% | 84% | 0,48 | 1,04 |
| 25% | 75% | 0,40 | 1,31 |
| 40% | 60% | 0,32 | 1,67 |
| Median 50% | 50% | 0,27 | 1,88 |
| 75% | 25% | 0,16 | 2,64 |
| 84% | 16% | 0,12 | 3,03 |
| 90% | 10% | 0,09 | 3,52 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,98 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,62 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

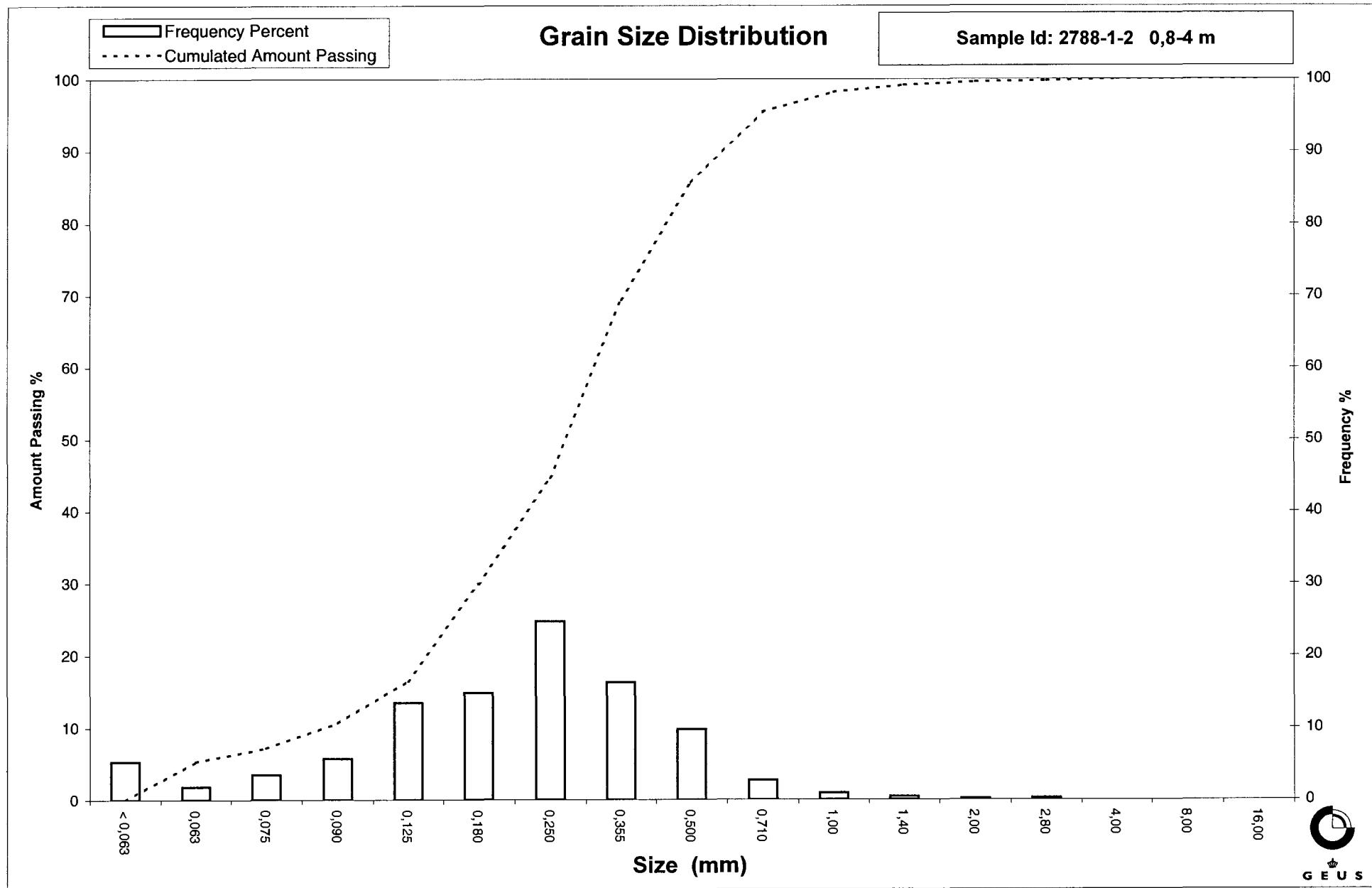
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

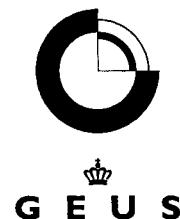
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Grain Size Distribution

Geotechnical

Sample Id: 2788-3 4,0-6 m
Lab. Id: 20677
SE: 42
Subject: 94. 2788
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 205,87 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,13 | 0,06 | 99,94 |
| 1,40 | -0,49 | 0,58 | 0,28 | 99,65 |
| 1,00 | 0,00 | 1,36 | 0,66 | 98,99 |
| 0,710 | 0,49 | 4,27 | 2,07 | 96,92 |
| 0,500 | 1,00 | 13,64 | 6,62 | 90,29 |
| 0,355 | 1,49 | 25,43 | 12,35 | 77,94 |
| 0,250 | 2,00 | 47,97 | 23,30 | 54,64 |
| 0,180 | 2,47 | 33,35 | 16,20 | 38,44 |
| 0,125 | 3,00 | 31,54 | 15,32 | 23,12 |
| 0,090 | 3,47 | 13,35 | 6,48 | 16,64 |
| 0,075 | 3,74 | 5,98 | 2,91 | 13,73 |
| 0,063 | 3,99 | 4,11 | 2,00 | 11,74 |
| < 0,063 | > 3,99 | 24,16 | 11,74 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 11,74 |
| Sand, fine | (0,063 mm - 0,200 mm): 31,34 |
| Sand, medium | (0,2 mm - 0,6 mm): 50,38 |
| Sand, coarse | (0,6 mm - 2 mm): 6,49 |
| Gravel | (> 2 mm): 0,06 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,65 | 0,62 |
| 16% | 84% | 0,43 | 1,23 |
| 25% | 75% | 0,34 | 1,55 |
| 40% | 60% | 0,27 | 1,87 |
| Median 50% | 50% | 0,23 | 2,12 |
| 75% | 25% | 0,13 | 2,92 |
| 84% | 16% | 0,09 | 3,53 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,29 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

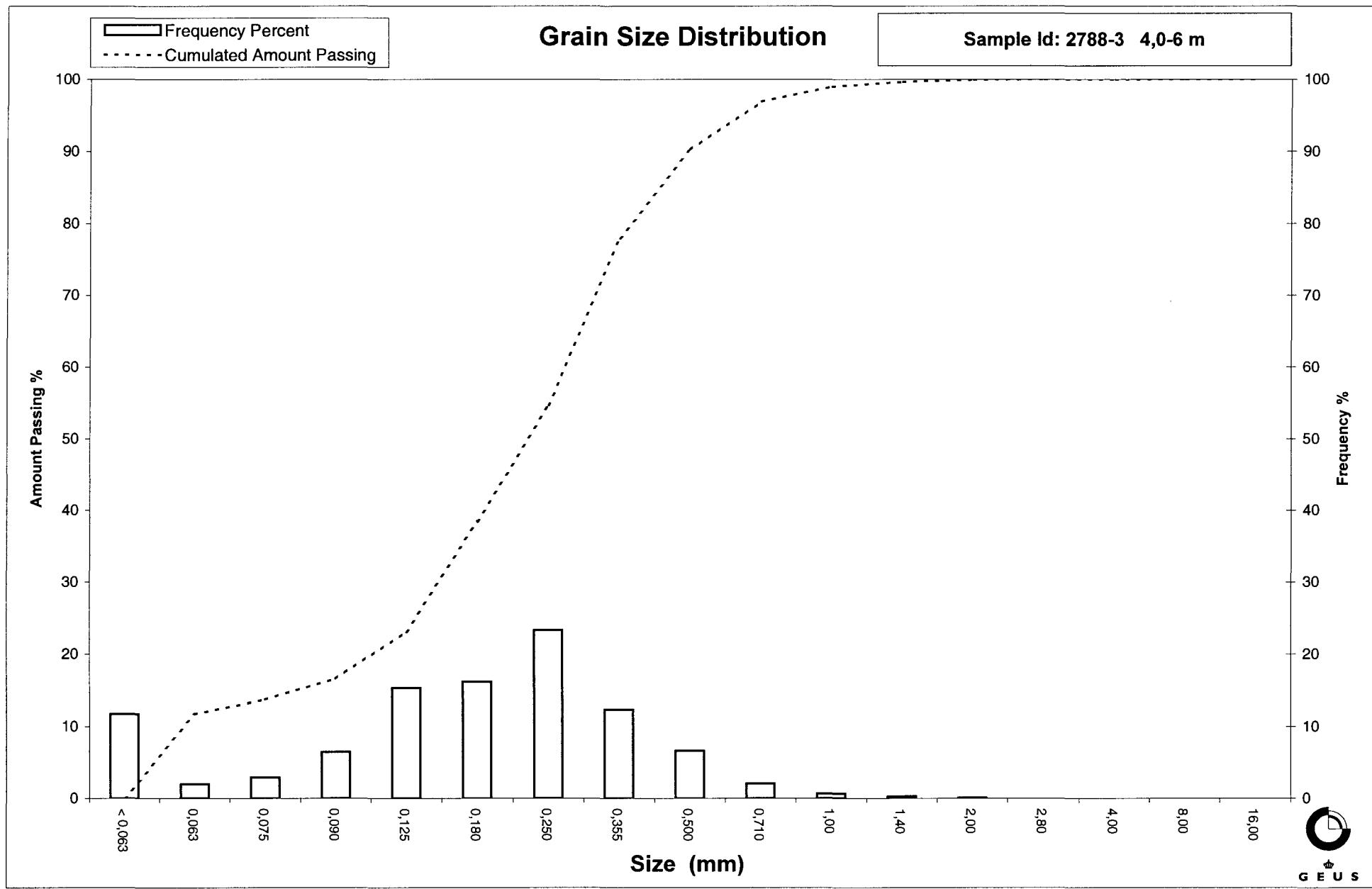
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient (d_{60} / d_{10}) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

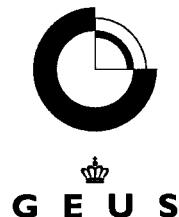
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2789-1 0,2-2 m
Lab. Id: 20678
SE: 62
Subject: 94. 2789
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 205,32 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 1,60 | 0,78 | 99,22 |
| 2,80 | -1,49 | 0,26 | 0,13 | 99,09 |
| 2,00 | -1,00 | 0,80 | 0,39 | 98,70 |
| 1,40 | -0,49 | 1,51 | 0,74 | 97,97 |
| 1,00 | 0,00 | 4,97 | 2,42 | 95,55 |
| 0,710 | 0,49 | 11,90 | 5,79 | 89,75 |
| 0,500 | 1,00 | 27,69 | 13,49 | 76,27 |
| 0,355 | 1,49 | 46,19 | 22,50 | 53,77 |
| 0,250 | 2,00 | 48,36 | 23,55 | 30,22 |
| 0,180 | 2,47 | 28,68 | 13,97 | 16,25 |
| 0,125 | 3,00 | 15,48 | 7,54 | 8,71 |
| 0,090 | 3,47 | 8,67 | 4,22 | 4,49 |
| 0,075 | 3,74 | 2,84 | 1,39 | 3,10 |
| 0,063 | 3,99 | 1,95 | 0,95 | 2,15 |
| < 0,063 | > 3,99 | 4,42 | 2,15 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,15 |
| Sand, fine | (0,063 mm - 0,200 mm): 18,09 |
| Sand, medium | (0,2 mm - 0,6 mm): 62,45 |
| Sand, coarse | (0,6 mm - 2 mm): 16,02 |
| Gravel | (> 2 mm): 1,30 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,97 | 0,04 |
| 16% | 84% | 0,62 | 0,69 |
| 25% | 75% | 0,49 | 1,02 |
| 40% | 60% | 0,40 | 1,34 |
| Median 50% | 50% | 0,34 | 1,56 |
| 75% | 25% | 0,22 | 2,16 |
| 84% | 16% | 0,18 | 2,49 |
| 90% | 10% | 0,13 | 2,90 |
| 95% | 5% | 0,09 | 3,41 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,58 |
| Sorting | 0,96 |
| Skewness | 0,06 |
| Kurtosis | 1,22 |
| Uniformity Coefficient | 2,94 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

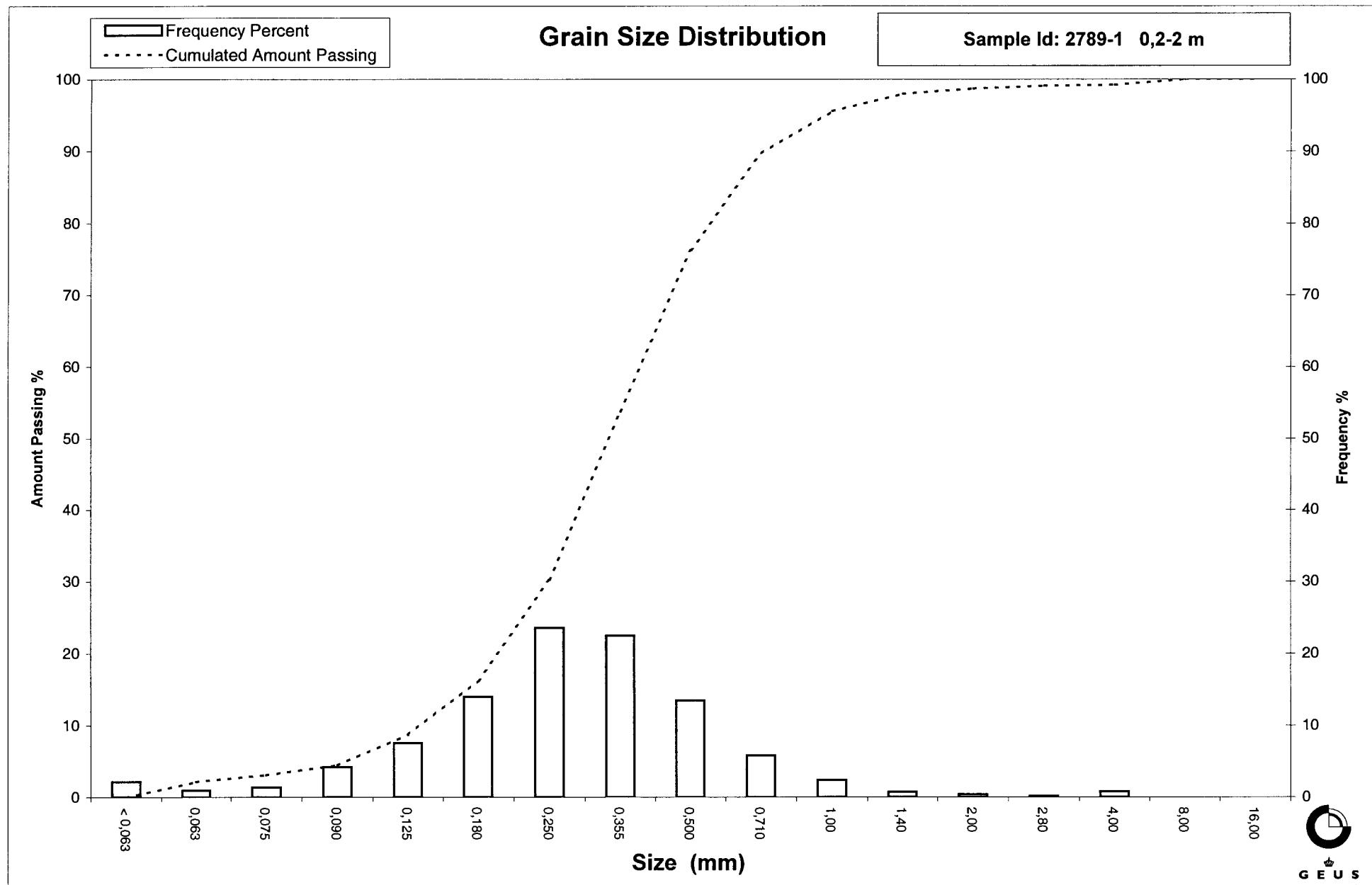
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

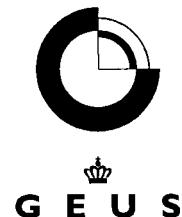
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Grain Size Distribution

Geotechnical

Sample Id: 2789-2 2,2-3,3 m
Lab. Id: 20679
SE: 82
Subject: 94. 2789
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 798,585 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 27,48 | 3,44 | 96,56 |
| 8,00 | -3,00 | 20,36 | 2,55 | 94,01 |
| 4,00 | -2,00 | 16,67 | 2,09 | 91,92 |
| 2,80 | -1,49 | 6,33 | 0,79 | 91,13 |
| 2,00 | -1,00 | 5,67 | 0,71 | 90,42 |
| 1,40 | -0,49 | 8,65 | 1,08 | 89,34 |
| 1,00 | 0,00 | 19,49 | 2,44 | 86,90 |
| 0,710 | 0,49 | 48,38 | 6,06 | 80,84 |
| 0,500 | 1,00 | 121,60 | 15,23 | 65,61 |
| 0,355 | 1,49 | 169,15 | 21,18 | 44,43 |
| 0,250 | 2,00 | 226,52 | 28,36 | 16,07 |
| 0,180 | 2,47 | 85,30 | 10,68 | 5,39 |
| 0,125 | 3,00 | 31,22 | 3,91 | 1,48 |
| 0,090 | 3,47 | 5,97 | 0,75 | 0,73 |
| 0,075 | 3,74 | 1,99 | 0,25 | 0,48 |
| 0,063 | 3,99 | 1,17 | 0,15 | 0,33 |
| < 0,063 | > 3,99 | 2,66 | 0,33 | 0,00 |

Sieve Analysis

| |
|--------|
| Gravel |
| Sand |
| |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,33 |
| Sand, fine | (0,063 mm - 0,200 mm): 8,10 |
| Sand, medium | (0,2 mm - 0,6 mm): 64,43 |
| Sand, coarse | (0,6 mm - 2 mm): 17,56 |
| Gravel | (> 2 mm): 9,58 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 11,11 | -3,47 |
| 16% | 84% | 0,86 | 0,22 |
| 25% | 75% | 0,63 | 0,67 |
| 40% | 60% | 0,46 | 1,12 |
| Median 50% | 50% | 0,39 | 1,35 |
| 75% | 25% | 0,28 | 1,82 |
| 84% | 16% | 0,25 | 2,00 |
| 90% | 10% | 0,21 | 2,25 |
| 95% | 5% | 0,17 | 2,52 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,19 |
| Sorting | 1,35 |
| Skewness | -0,44 |
| Kurtosis | 2,13 |
| Uniformity Coefficient | 2,20 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

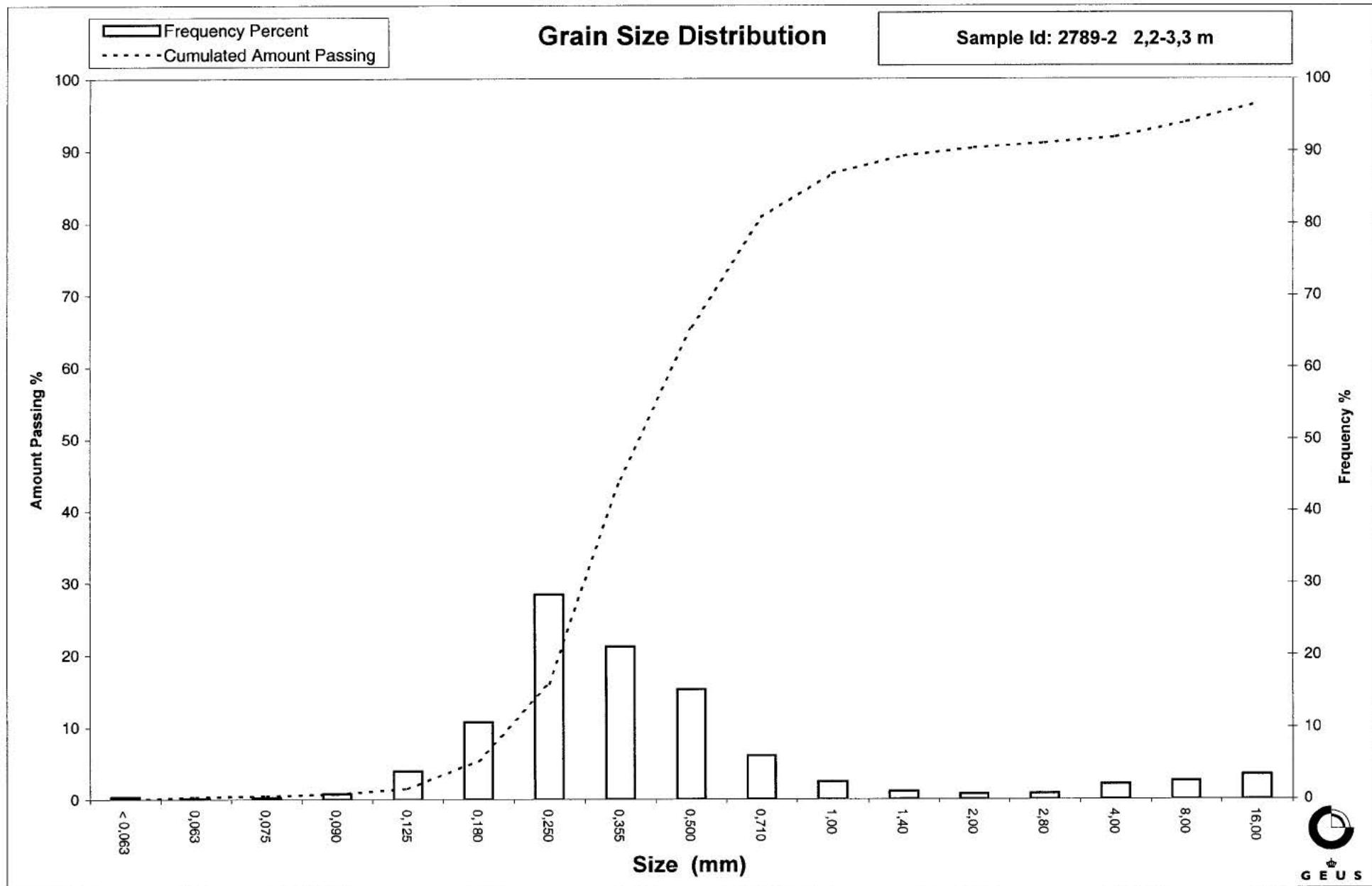
Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)
 Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)
 Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

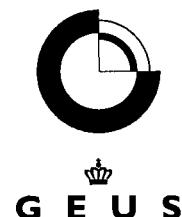
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Grain Size Distribution

Geotechnical

Sample Id: 2789-3-4 3,3-6 m
Lab. Id: 20680
SE: 86
Subject: 94. 2789
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 738,71 g

Size Fractions

| Size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 5,53 | 0,75 | 99,25 |
| 4,00 | -2,00 | 1,54 | 0,21 | 99,04 |
| 2,80 | -1,49 | 0,84 | 0,11 | 98,93 |
| 2,00 | -1,00 | 1,05 | 0,14 | 98,79 |
| 1,40 | -0,49 | 2,10 | 0,28 | 98,50 |
| 1,00 | 0,00 | 9,45 | 1,28 | 97,22 |
| 0,710 | 0,49 | 25,20 | 3,41 | 93,81 |
| 0,500 | 1,00 | 121,87 | 16,50 | 77,31 |
| 0,355 | 1,49 | 347,48 | 47,04 | 30,28 |
| 0,250 | 2,00 | 168,35 | 22,79 | 7,49 |
| 0,180 | 2,47 | 33,11 | 4,48 | 3,00 |
| 0,125 | 3,00 | 9,66 | 1,31 | 1,70 |
| 0,090 | 3,47 | 4,41 | 0,60 | 1,10 |
| 0,075 | 3,74 | 1,96 | 0,27 | 0,83 |
| 0,063 | 3,99 | 1,40 | 0,19 | 0,64 |
| < 0,063 | > 3,99 | 4,76 | 0,64 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,64 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,64 |
| Sand, medium | (0,2 mm - 0,6 mm): 80,89 |
| Sand, coarse | (0,6 mm - 2 mm): 13,62 |
| Gravel | (> 2 mm): 1,21 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | 0,81 | 0,30 |
| 16% | 84% | 0,59 | 0,77 |
| 25% | 75% | 0,49 | 1,02 |
| 40% | 60% | 0,45 | 1,16 |
| Median 50% | 50% | 0,42 | 1,27 |
| 75% | 25% | 0,33 | 1,60 |
| 84% | 16% | 0,29 | 1,79 |
| 90% | 10% | 0,26 | 1,93 |
| 95% | 5% | 0,21 | 2,24 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,28 |
| Sorting | 0,55 |
| Skewness | 0,02 |
| Kurtosis | 1,38 |
| Uniformity Coefficient | 1,71 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

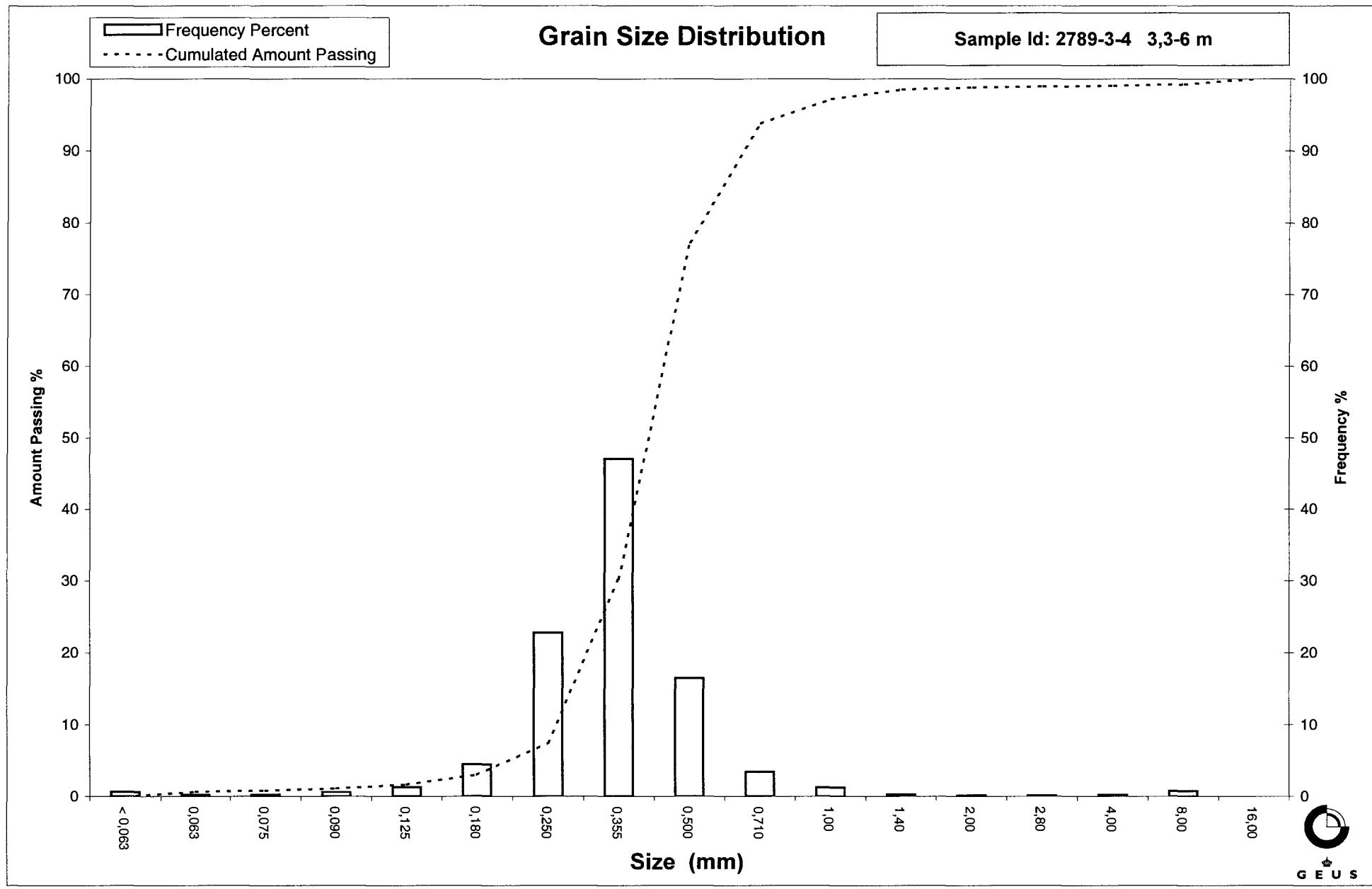
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d60\% / d10\%$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

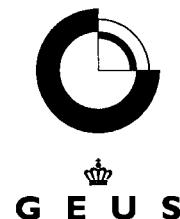
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Grain Size Distribution

Geotechnical

Sample Id: 2790-1-2 0,5-3,3 m
Lab. Id: 20681
SE: 32
Subject: 94. 2790
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 747,705 g

Size Fractions

| Size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 45,99 | 6,15 | 93,85 |
| 8,00 | -3,00 | 4,52 | 0,60 | 93,25 |
| 4,00 | -2,00 | 1,62 | 0,22 | 93,03 |
| 2,80 | -1,49 | 1,89 | 0,25 | 92,78 |
| 2,00 | -1,00 | 1,73 | 0,23 | 92,55 |
| 1,40 | -0,49 | 3,13 | 0,42 | 92,13 |
| 1,00 | 0,00 | 7,21 | 0,96 | 91,16 |
| 0,710 | 0,49 | 21,16 | 2,83 | 88,33 |
| 0,500 | 1,00 | 78,61 | 10,51 | 77,82 |
| 0,355 | 1,49 | 175,06 | 23,41 | 54,40 |
| 0,250 | 2,00 | 195,28 | 26,12 | 28,29 |
| 0,180 | 2,47 | 102,75 | 13,74 | 14,55 |
| 0,125 | 3,00 | 50,77 | 6,79 | 7,75 |
| 0,090 | 3,47 | 28,25 | 3,78 | 3,98 |
| 0,075 | 3,74 | 8,81 | 1,18 | 2,80 |
| 0,063 | 3,99 | 5,85 | 0,78 | 2,02 |
| < 0,063 | > 3,99 | 15,07 | 2,02 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 2,02 |
| Sand, fine | (0,063 mm - 0,200 mm): 16,46 |
| Sand, medium | (0,2 mm - 0,6 mm): 64,35 |
| Sand, coarse | (0,6 mm - 2 mm): 9,72 |
| Gravel | (> 2 mm): 7,45 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | Amount in sieve | Amount passing | d(mm) | Φ |
|------------|------------|-----------------|----------------|-------|-------|
| 5% | 95% | | | ----- | ----- |
| 16% | 84% | | | 0,62 | 0,68 |
| 25% | 75% | | | 0,48 | 1,05 |
| 40% | 60% | | | 0,39 | 1,36 |
| Median 50% | 50% | | | 0,34 | 1,57 |
| 75% | 25% | | | 0,23 | 2,10 |
| 84% | 16% | | | 0,19 | 2,42 |
| 90% | 10% | | | 0,14 | 2,80 |
| 95% | 5% | | | 0,10 | 3,33 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,56 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,72 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

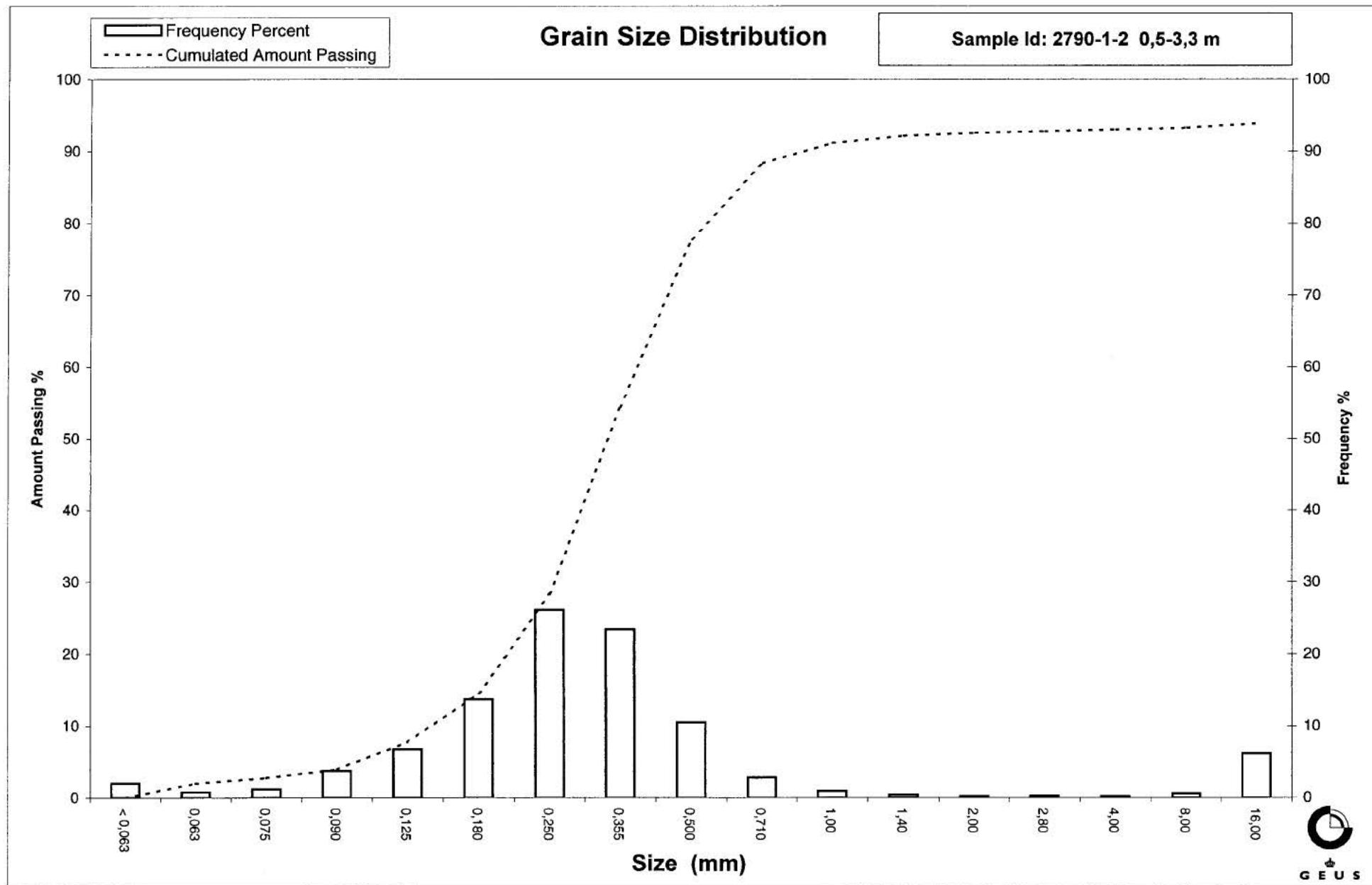
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2790-3 3,3-3,7 m
Lab. Id: 20682
SE: 30
Subject: 94. 2790
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 769,38 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 63,54 | 8,26 | 91,74 | |
| 8,00 | -3,00 | 115,05 | 14,95 | 76,79 | |
| 4,00 | -2,00 | 43,19 | 5,61 | 71,17 | |
| 2,80 | -1,49 | 22,13 | 2,88 | 68,30 | |
| 2,00 | -1,00 | 11,99 | 1,56 | 66,74 | |
| 1,40 | -0,49 | 8,07 | 1,05 | 65,69 | |
| 1,00 | 0,00 | 6,95 | 0,90 | 64,79 | |
| 0,710 | 0,49 | 16,90 | 2,20 | 62,59 | |
| 0,500 | 1,00 | 63,98 | 8,32 | 54,28 | |
| 0,355 | 1,49 | 111,85 | 14,54 | 39,74 | |
| 0,250 | 2,00 | 149,43 | 19,42 | 20,32 | |
| 0,180 | 2,47 | 63,26 | 8,22 | 12,10 | |
| 0,125 | 3,00 | 38,63 | 5,02 | 7,08 | |
| 0,090 | 3,47 | 14,34 | 1,86 | 5,21 | |
| 0,075 | 3,74 | 7,32 | 0,95 | 4,26 | |
| 0,063 | 3,99 | 5,63 | 0,73 | 3,53 | |
| < 0,063 | > 3,99 | 27,14 | 3,53 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,53 |
| Sand, fine | (0,063 mm - 0,200 mm): 10,92 |
| Sand, medium | (0,2 mm - 0,6 mm): 43,79 |
| Sand, coarse | (0,6 mm - 2 mm): 8,50 |
| Gravel | (> 2 mm): 33,26 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 11,86 | -3,57 |
| 25% | 75% | 6,73 | -2,75 |
| 40% | 60% | 0,64 | 0,63 |
| Median 50% | 50% | 0,46 | 1,13 |
| 75% | 25% | 0,28 | 1,86 |
| 84% | 16% | 0,21 | 2,23 |
| 90% | 10% | 0,16 | 2,67 |
| 95% | 5% | 0,09 | 3,53 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,07 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 4,10 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

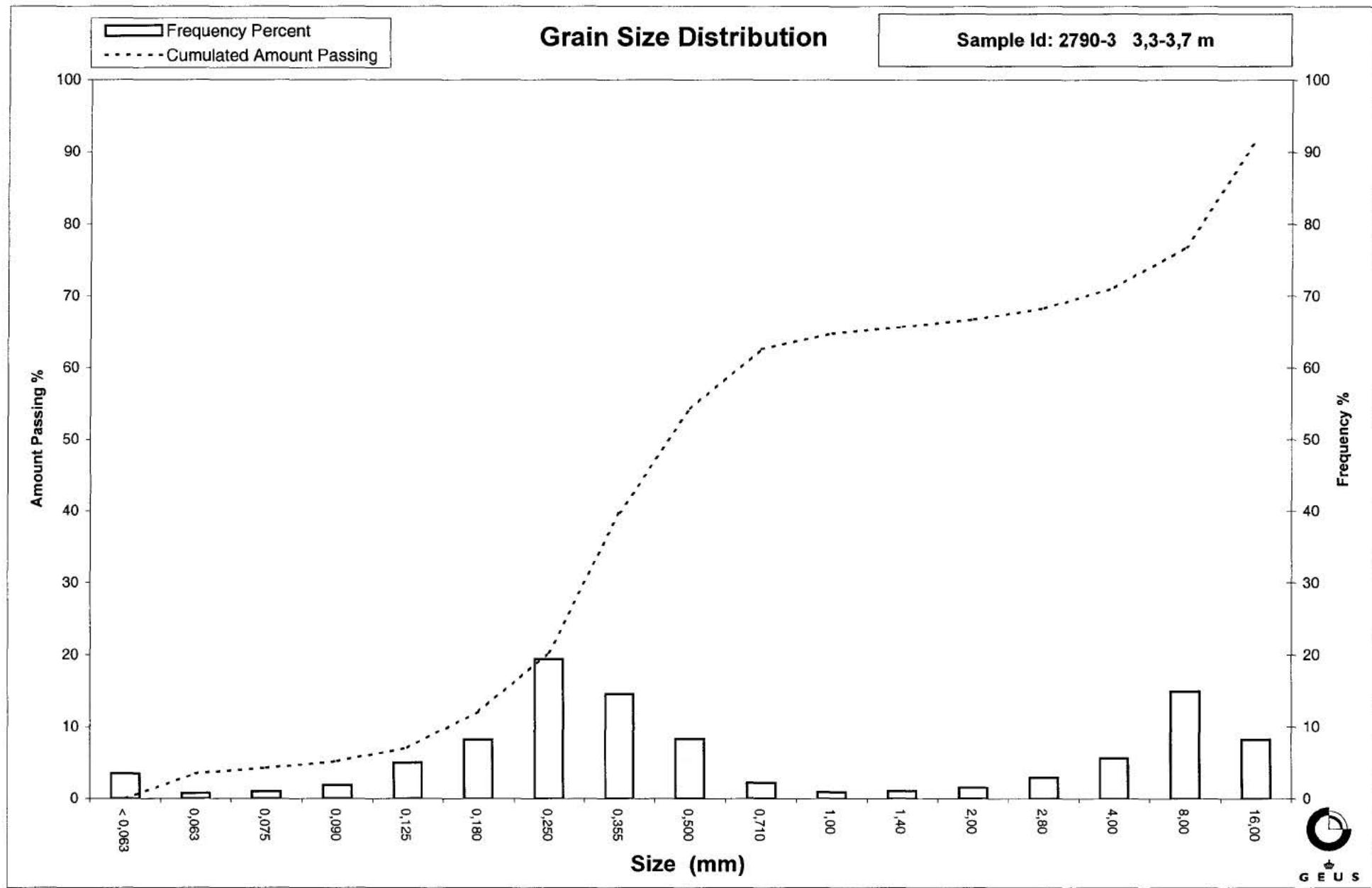
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2790-4 4,1-5,1 m
Lab. Id: 20683
SE: 35
Subject: 94. 2790
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 1544,99 g

Size Fractions

| | | Gravel | | Sand | |
|---------|--------|--------|-------|--------|--------------------------|
| mm | Φ | g | % | Weight | Cumulated amount passing |
| 16,00 | -4,00 | 317,44 | 20,55 | 79,45 | |
| 8,00 | -3,00 | 312,03 | 20,20 | 59,26 | |
| 4,00 | -2,00 | 167,25 | 10,83 | 48,43 | |
| 2,80 | -1,49 | 66,68 | 4,32 | 44,12 | |
| 2,00 | -1,00 | 39,16 | 2,53 | 41,58 | |
| 1,40 | -0,49 | 23,14 | 1,50 | 40,08 | |
| 1,00 | 0,00 | 25,66 | 1,66 | 38,42 | |
| 0,710 | 0,49 | 43,89 | 2,84 | 35,58 | |
| 0,500 | 1,00 | 100,80 | 6,52 | 29,06 | |
| 0,355 | 1,49 | 155,25 | 10,05 | 19,01 | |
| 0,250 | 2,00 | 150,04 | 9,71 | 9,30 | |
| 0,180 | 2,47 | 71,93 | 4,66 | 4,64 | |
| 0,125 | 3,00 | 27,97 | 1,81 | 2,83 | |
| 0,090 | 3,47 | 14,80 | 0,96 | 1,87 | |
| 0,075 | 3,74 | 5,13 | 0,33 | 1,54 | |
| 0,063 | 3,99 | 4,61 | 0,30 | 1,24 | |
| < 0,063 | > 3,99 | 19,19 | 1,24 | 0,00 | |

Sieve Analysis

| size | size | Weight | Weight | Cumulated amount passing | |
|---------|--------|--------|--------|--------------------------|--|
| mm | Φ | g | % | % | |
| 16,00 | -4,00 | 317,44 | 20,55 | 79,45 | |
| 8,00 | -3,00 | 312,03 | 20,20 | 59,26 | |
| 4,00 | -2,00 | 167,25 | 10,83 | 48,43 | |
| 2,80 | -1,49 | 66,68 | 4,32 | 44,12 | |
| 2,00 | -1,00 | 39,16 | 2,53 | 41,58 | |
| 1,40 | -0,49 | 23,14 | 1,50 | 40,08 | |
| 1,00 | 0,00 | 25,66 | 1,66 | 38,42 | |
| 0,710 | 0,49 | 43,89 | 2,84 | 35,58 | |
| 0,500 | 1,00 | 100,80 | 6,52 | 29,06 | |
| 0,355 | 1,49 | 155,25 | 10,05 | 19,01 | |
| 0,250 | 2,00 | 150,04 | 9,71 | 9,30 | |
| 0,180 | 2,47 | 71,93 | 4,66 | 4,64 | |
| 0,125 | 3,00 | 27,97 | 1,81 | 2,83 | |
| 0,090 | 3,47 | 14,80 | 0,96 | 1,87 | |
| 0,075 | 3,74 | 5,13 | 0,33 | 1,54 | |
| 0,063 | 3,99 | 4,61 | 0,30 | 1,24 | |
| < 0,063 | > 3,99 | 19,19 | 1,24 | 0,00 | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,24 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,73 |
| Sand, medium | (0,2 mm - 0,6 mm): 26,19 |
| Sand, coarse | (0,6 mm - 2 mm): 9,42 |
| Gravel | (> 2 mm): 58,42 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | 14,24 | -3,83 |
| 40% | 60% | 8,29 | -3,05 |
| Median 50% | 50% | 4,58 | -2,20 |
| 75% | 25% | 0,44 | 1,18 |
| 84% | 16% | 0,32 | 1,63 |
| 90% | 10% | 0,26 | 1,96 |
| 95% | 5% | 0,19 | 2,43 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,28 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 32,20 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

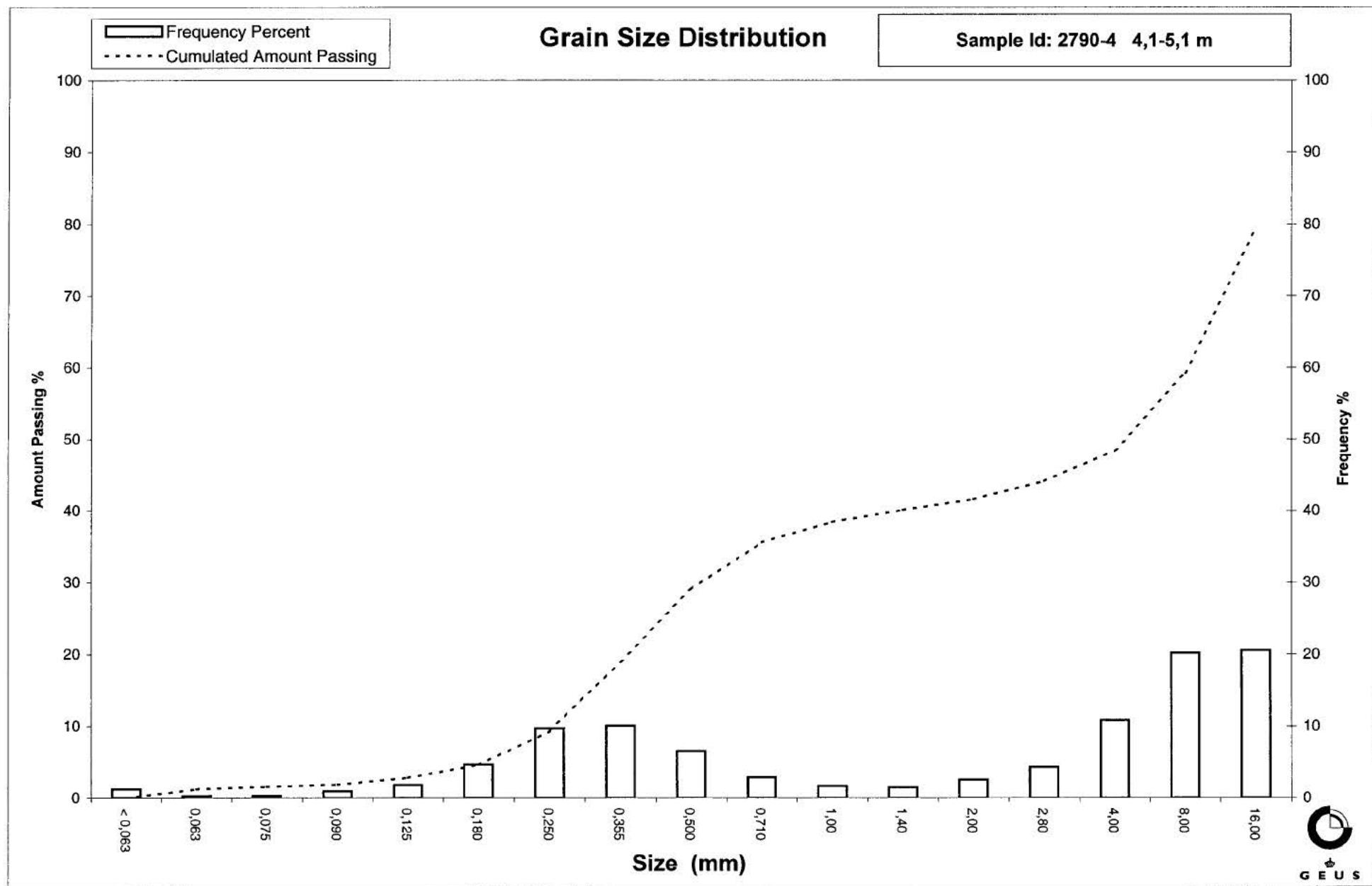
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2790-5 5,1-6 m
Lab. Id: 20684
SE: 76
Subject: 94. 2790
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 882,555 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 53,01 | 6,01 | 93,99 |
| 8,00 | -3,00 | 22,46 | 2,54 | 91,45 |
| 4,00 | -2,00 | 22,28 | 2,52 | 88,93 |
| 2,80 | -1,49 | 5,93 | 0,67 | 88,25 |
| 2,00 | -1,00 | 4,23 | 0,48 | 87,77 |
| 1,40 | -0,49 | 3,24 | 0,37 | 87,41 |
| 1,00 | 0,00 | 5,87 | 0,66 | 86,74 |
| 0,710 | 0,49 | 18,88 | 2,14 | 84,60 |
| 0,500 | 1,00 | 91,59 | 10,38 | 74,23 |
| 0,355 | 1,49 | 271,95 | 30,81 | 43,41 |
| 0,250 | 2,00 | 245,74 | 27,84 | 15,57 |
| 0,180 | 2,47 | 84,50 | 9,57 | 5,99 |
| 0,125 | 3,00 | 27,49 | 3,12 | 2,88 |
| 0,090 | 3,47 | 11,30 | 1,28 | 1,60 |
| 0,075 | 3,74 | 4,28 | 0,48 | 1,11 |
| 0,063 | 3,99 | 3,05 | 0,35 | 0,77 |
| < 0,063 | > 3,99 | 6,76 | 0,77 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,77 |
| Sand, fine | (0,063 mm - 0,200 mm): 7,96 |
| Sand, medium | (0,2 mm - 0,6 mm): 70,44 |
| Sand, coarse | (0,6 mm - 2 mm): 8,61 |
| Gravel | (> 2 mm): 12,23 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 0,70 | 0,52 |
| 25% | 75% | 0,52 | 0,96 |
| 40% | 60% | 0,43 | 1,21 |
| Median 50% | 50% | 0,39 | 1,37 |
| 75% | 25% | 0,29 | 1,81 |
| 84% | 16% | 0,25 | 1,99 |
| 90% | 10% | 0,21 | 2,26 |
| 95% | 5% | 0,16 | 2,62 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,29 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,07 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

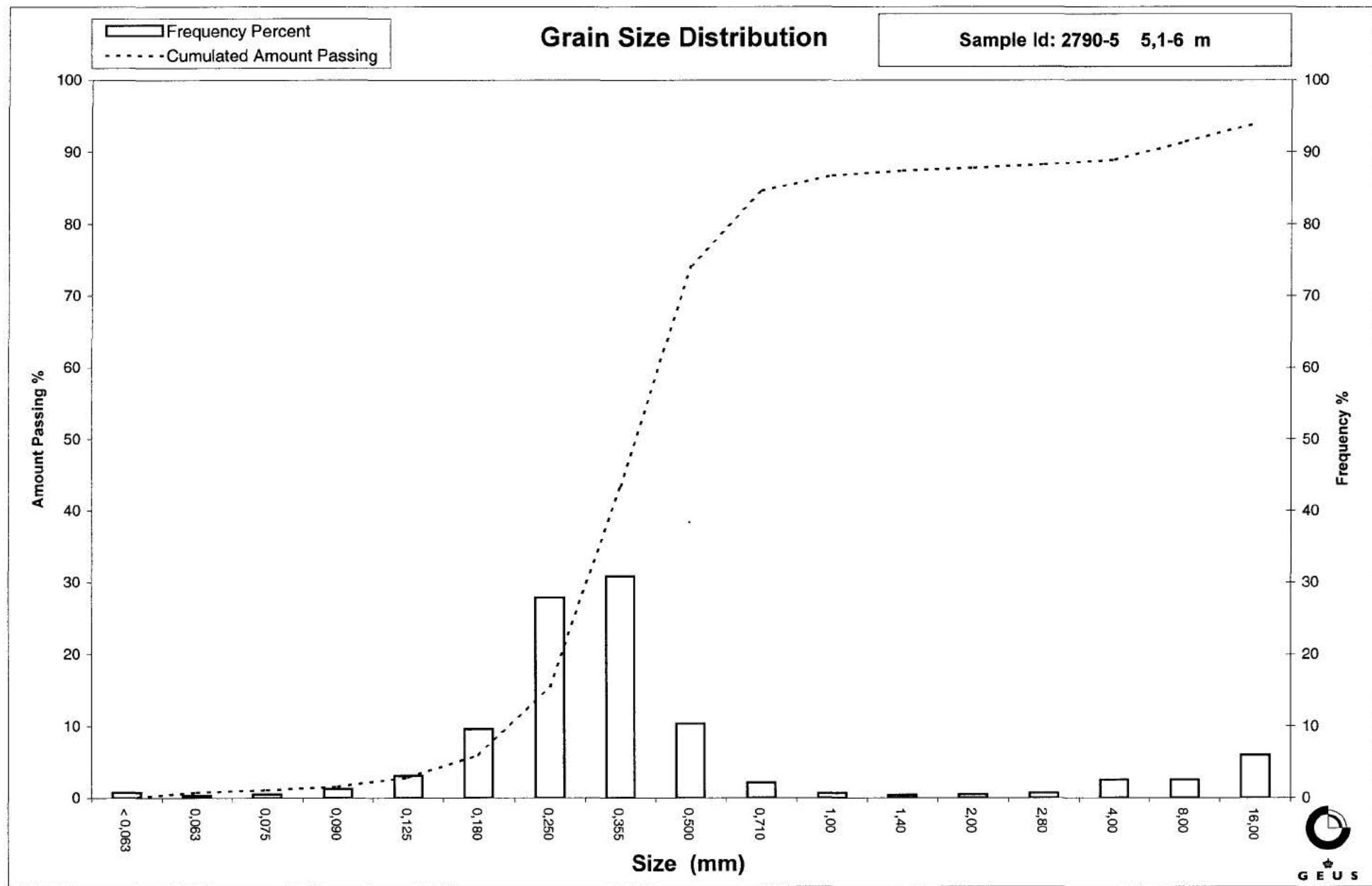
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

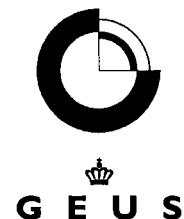
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 Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2791-1-2 0,2-4 m
Lab. Id: 20685
SE: 47
Subject: 94. 2791
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 237,04 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 | |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 | |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 | |
| 2,00 | -1,00 | 0,14 | 0,06 | 99,94 | |
| 1,40 | -0,49 | 0,52 | 0,22 | 99,72 | |
| 1,00 | 0,00 | 1,56 | 0,66 | 99,06 | |
| 0,710 | 0,49 | 6,10 | 2,57 | 96,49 | |
| 0,500 | 1,00 | 24,12 | 10,18 | 86,31 | |
| 0,355 | 1,49 | 43,24 | 18,24 | 68,07 | |
| 0,250 | 2,00 | 65,94 | 27,82 | 40,25 | |
| 0,180 | 2,47 | 36,84 | 15,54 | 24,71 | |
| 0,125 | 3,00 | 30,78 | 12,99 | 11,73 | |
| 0,090 | 3,47 | 12,22 | 5,16 | 6,57 | |
| 0,075 | 3,74 | 4,76 | 2,01 | 4,56 | |
| 0,063 | 3,99 | 2,50 | 1,05 | 3,51 | |
| < 0,063 | > 3,99 | 8,32 | 3,51 | 0,00 | |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,51 |
| Sand, fine | (0,063 mm - 0,200 mm): 25,64 |
| Sand, medium | (0,2 mm - 0,6 mm): 62,01 |
| Sand, coarse | (0,6 mm - 2 mm): 8,78 |
| Gravel | (> 2 mm): 0,06 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,68 | 0,56 |
| 16% | 84% | 0,48 | 1,05 |
| 25% | 75% | 0,41 | 1,29 |
| 40% | 60% | 0,32 | 1,62 |
| Median 50% | 50% | 0,29 | 1,80 |
| 75% | 25% | 0,18 | 2,46 |
| 84% | 16% | 0,14 | 2,80 |
| 90% | 10% | 0,11 | 3,14 |
| 95% | 5% | 0,08 | 3,68 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,89 |
| Sorting | 0,91 |
| Skewness | 0,17 |
| Kurtosis | 1,09 |
| Uniformity Coefficient | 2,87 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

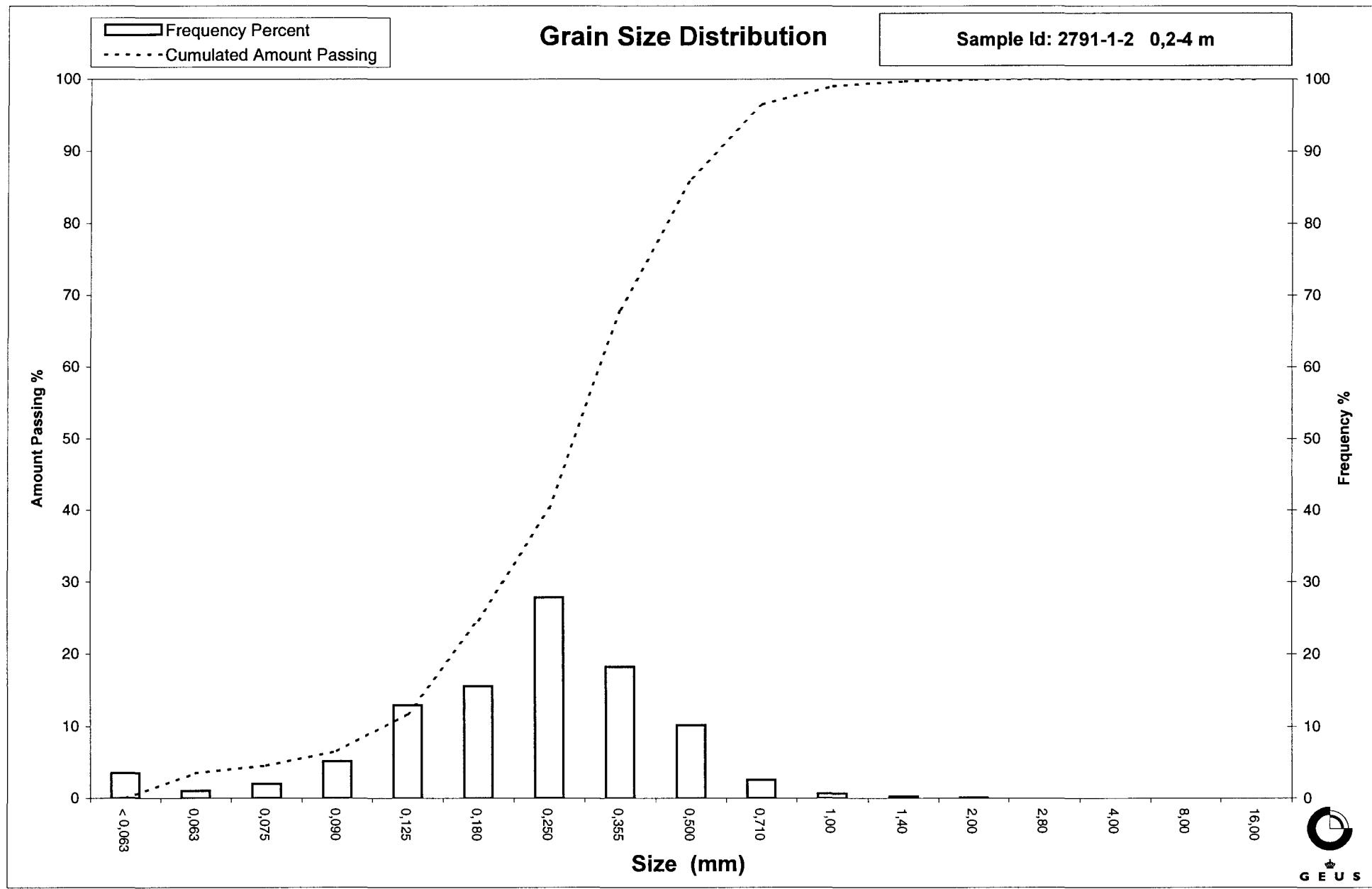
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

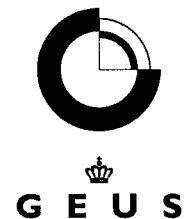
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Grain Size Distribution

Geotechnical

Sample Id: 2791-3 4,0-6 m
Lab. Id: 20686
SE: 8
Subject: 94. 2791
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 623,58 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 2,34 | 0,38 | 99,62 |
| 4,00 | -2,00 | 1,86 | 0,30 | 99,33 |
| 2,80 | -1,49 | 0,48 | 0,08 | 99,25 |
| 2,00 | -1,00 | 1,23 | 0,20 | 99,05 |
| 1,40 | -0,49 | 4,18 | 0,67 | 98,38 |
| 1,00 | 0,00 | 21,63 | 3,47 | 94,91 |
| 0,710 | 0,49 | 80,69 | 12,94 | 81,97 |
| 0,500 | 1,00 | 209,30 | 33,57 | 48,41 |
| 0,355 | 1,49 | 178,95 | 28,70 | 19,71 |
| 0,250 | 2,00 | 76,51 | 12,27 | 7,44 |
| 0,180 | 2,47 | 20,72 | 3,32 | 4,12 |
| 0,125 | 3,00 | 9,00 | 1,44 | 2,68 |
| 0,090 | 3,47 | 4,28 | 0,69 | 1,99 |
| 0,075 | 3,74 | 1,61 | 0,26 | 1,73 |
| 0,063 | 3,99 | 1,18 | 0,19 | 1,54 |
| < 0,063 | > 3,99 | 9,62 | 1,54 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,54 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,53 |
| Sand, medium | (0,2 mm - 0,6 mm): 59,32 |
| Sand, coarse | (0,6 mm - 2 mm): 34,66 |
| Gravel | (> 2 mm): 0,95 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,01 | -0,01 |
| 16% | 84% | 0,76 | 0,40 |
| 25% | 75% | 0,67 | 0,59 |
| 40% | 60% | 0,57 | 0,80 |
| Median 50% | 50% | 0,51 | 0,97 |
| 75% | 25% | 0,38 | 1,39 |
| 84% | 16% | 0,32 | 1,63 |
| 90% | 10% | 0,27 | 1,88 |
| 95% | 5% | 0,20 | 2,33 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,00 |
| Sorting | 0,66 |
| Skewness | 0,12 |
| Kurtosis | 1,20 |
| Uniformity Coefficient | 2,11 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

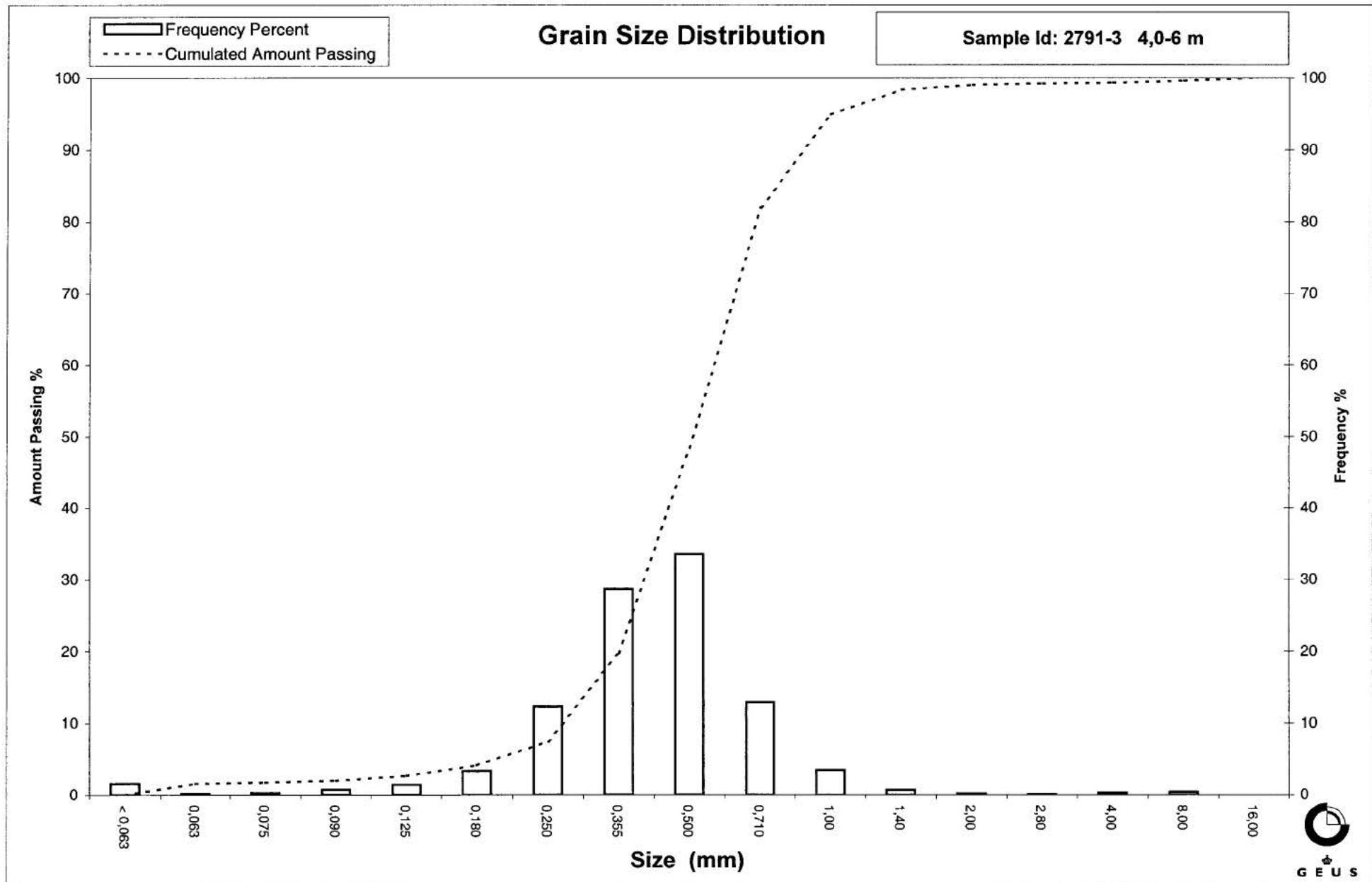
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

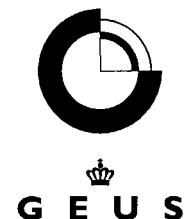
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2792-1 0,2-2 m
Lab. Id: 20687
SE: 19
Subject: 94. 2792
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 772,5 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 10,75 | 1,39 | 98,61 |
| 4,00 | -2,00 | 7,65 | 0,99 | 97,62 |
| 2,80 | -1,49 | 4,00 | 0,52 | 97,10 |
| 2,00 | -1,00 | 4,70 | 0,61 | 96,49 |
| 1,40 | -0,49 | 6,02 | 0,78 | 95,71 |
| 1,00 | 0,00 | 12,04 | 1,56 | 94,15 |
| 0,710 | 0,49 | 26,64 | 3,45 | 90,71 |
| 0,500 | 1,00 | 66,99 | 8,67 | 82,03 |
| 0,355 | 1,49 | 100,87 | 13,06 | 68,98 |
| 0,250 | 2,00 | 165,18 | 21,38 | 47,60 |
| 0,180 | 2,47 | 98,08 | 12,70 | 34,90 |
| 0,125 | 3,00 | 89,28 | 11,56 | 23,34 |
| 0,090 | 3,47 | 41,46 | 5,37 | 17,97 |
| 0,075 | 3,74 | 19,62 | 2,54 | 15,44 |
| 0,063 | 3,99 | 13,60 | 1,76 | 13,67 |
| < 0,063 | > 3,99 | 105,64 | 13,67 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 13,67 |
| Sand, fine | (0,063 mm - 0,200 mm): 24,85 |
| Sand, medium | (0,2 mm - 0,6 mm): 47,64 |
| Sand, coarse | (0,6 mm - 2 mm): 10,33 |
| Gravel | (> 2 mm): 3,51 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,22 | -0,28 |
| 16% | 84% | 0,55 | 0,87 |
| 25% | 75% | 0,42 | 1,25 |
| 40% | 60% | 0,31 | 1,69 |
| Median 50% | 50% | 0,26 | 1,93 |
| 75% | 25% | 0,13 | 2,91 |
| 84% | 16% | 0,08 | 3,67 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,16 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

$$\text{Mean } (\phi 16\% + \phi 84\% + \phi 50\%) / 3 \text{ (Folk and Ward 1957)}$$

$$\text{Sorting } (\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6 \text{ (Folk and Ward 1957)}$$

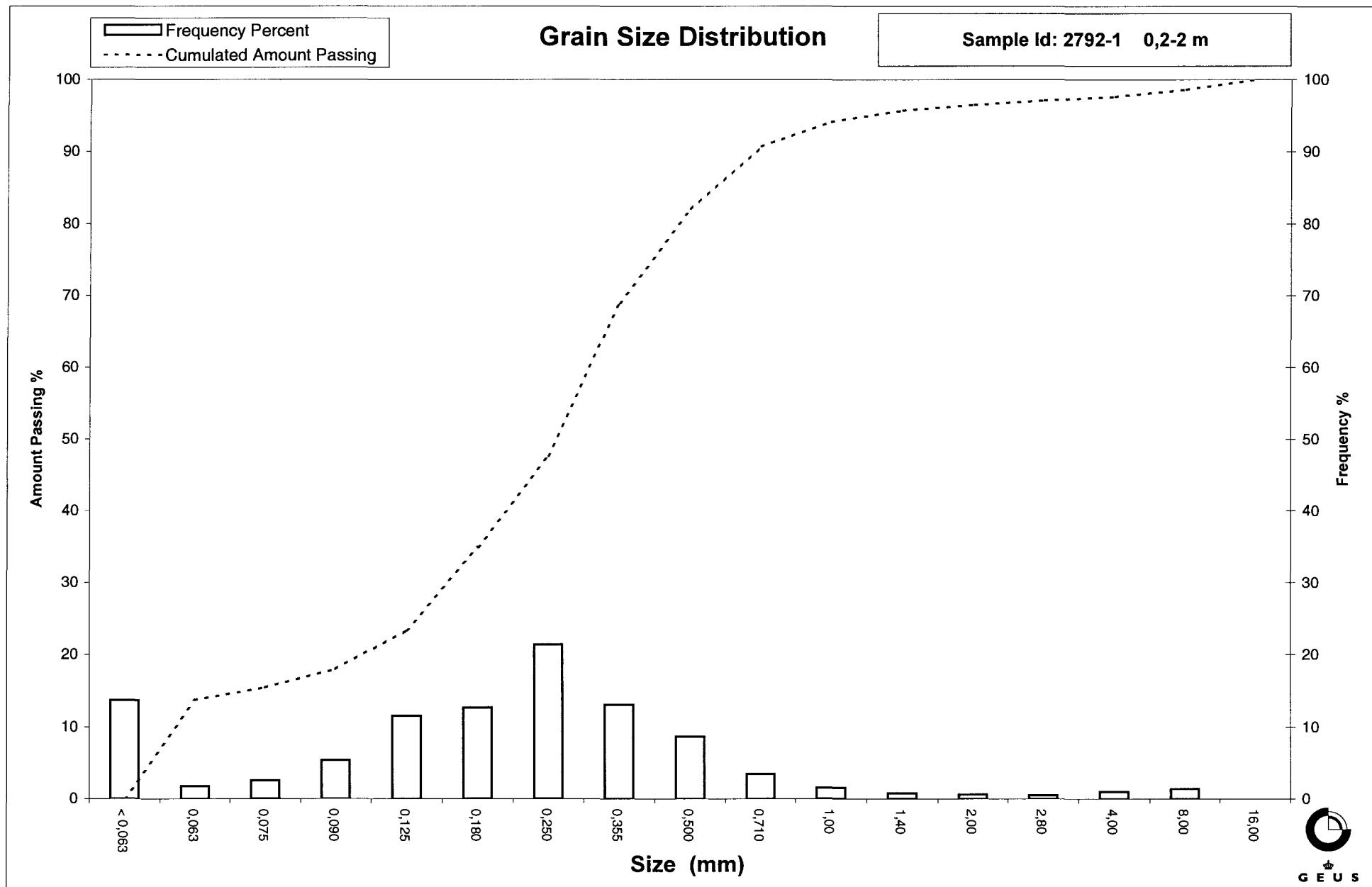
$$\text{Kurtosis } (\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Skewness } (\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Uniformity Coefficient } (d60\% / d10\%) \text{ (dgf-Bulletin 1988)}$$

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

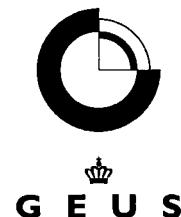
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Grain Size Distribution

Geotechnical

Sample Id: 2792-2-4 2,0-4 m
Lab. Id: 20688
SE: 31
Subject: 94. 2792
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 666,6 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 9,10 | 1,37 | 98,63 |
| 4,00 | -2,00 | 4,20 | 0,63 | 98,00 |
| 2,80 | -1,49 | 0,76 | 0,11 | 97,89 |
| 2,00 | -1,00 | 1,52 | 0,23 | 97,66 |
| 1,40 | -0,49 | 2,78 | 0,42 | 97,25 |
| 1,00 | 0,00 | 6,53 | 0,98 | 96,27 |
| 0,710 | 0,49 | 15,31 | 2,30 | 93,97 |
| 0,500 | 1,00 | 43,60 | 6,54 | 87,43 |
| 0,355 | 1,49 | 104,15 | 15,62 | 71,81 |
| 0,250 | 2,00 | 166,35 | 24,96 | 46,85 |
| 0,180 | 2,47 | 123,88 | 18,58 | 28,27 |
| 0,125 | 3,00 | 82,01 | 12,30 | 15,96 |
| 0,090 | 3,47 | 48,40 | 7,26 | 8,70 |
| 0,075 | 3,74 | 16,43 | 2,47 | 6,24 |
| 0,063 | 3,99 | 11,48 | 1,72 | 4,52 |
| < 0,063 | > 3,99 | 30,11 | 4,52 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 4,52 |
| Sand, fine | (0,063 mm - 0,200 mm): 29,06 |
| Sand, medium | (0,2 mm - 0,6 mm): 56,97 |
| Sand, coarse | (0,6 mm - 2 mm): 7,12 |
| Gravel | (> 2 mm): 2,34 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,84 | 0,25 |
| 16% | 84% | 0,47 | 1,09 |
| 25% | 75% | 0,38 | 1,38 |
| 40% | 60% | 0,31 | 1,71 |
| Median 50% | 50% | 0,26 | 1,93 |
| 75% | 25% | 0,17 | 2,60 |
| 84% | 16% | 0,13 | 3,00 |
| 90% | 10% | 0,10 | 3,38 |
| 95% | 5% | 0,07 | 3,91 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,01 |
| Sorting | 1,03 |
| Skewness | 0,11 |
| Kurtosis | 1,23 |
| Uniformity Coefficient | 3,17 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

$$\text{Mean } (\phi 16\% + \phi 84\% + \phi 50\%) / 3 \text{ (Folk and Ward 1957)}$$

$$\text{Sorting } (\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6 \text{ (Folk and Ward 1957)}$$

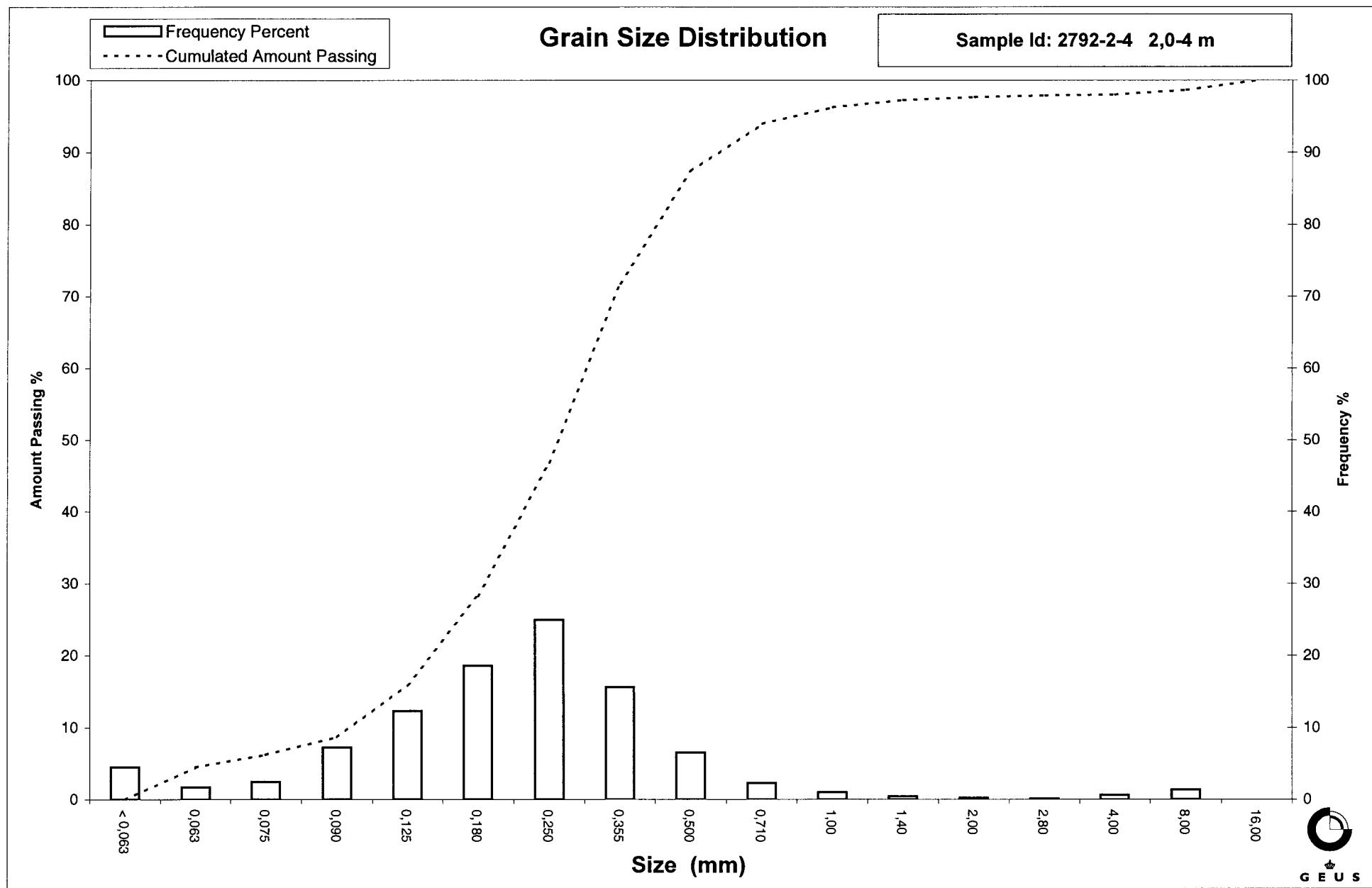
$$\text{Kurtosis } (\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Skewness } (\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%)) \text{ (Folk and Ward 1957)}$$

$$\text{Uniformity Coefficient } (d_{60\%} / d_{10\%}) \text{ (dgf-Bulletin 1988)}$$

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

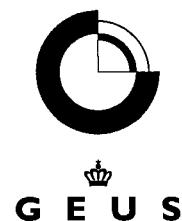
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Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2793-1 0,2-2,6 m
Lab. Id: 20689
SE: 78
Subject: 94. 2793
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 114,94 g

Size Fractions

Sieve Analysis

Gravel

Sand

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing % |
|---------|-------------|----------|----------|----------------------------|
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,00 | 0,00 | 100,00 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,01 | 0,01 | 99,99 |
| 1,00 | 0,00 | 0,01 | 0,01 | 99,98 |
| 0,710 | 0,49 | 0,09 | 0,08 | 99,90 |
| 0,500 | 1,00 | 1,81 | 1,57 | 98,33 |
| 0,355 | 1,49 | 19,57 | 17,03 | 81,30 |
| 0,250 | 2,00 | 44,79 | 38,97 | 42,34 |
| 0,180 | 2,47 | 29,91 | 26,02 | 16,31 |
| 0,125 | 3,00 | 11,52 | 10,02 | 6,29 |
| 0,090 | 3,47 | 4,20 | 3,65 | 2,64 |
| 0,075 | 3,74 | 1,20 | 1,04 | 1,59 |
| 0,063 | 3,99 | 0,66 | 0,57 | 1,02 |
| < 0,063 | > 3,99 | 1,17 | 1,02 | 0,00 |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 1,02 |
| Sand, fine | (0,063 mm - 0,200 mm): 22,73 |
| Sand, medium | (0,2 mm - 0,6 mm): 75,33 |
| Sand, coarse | (0,6 mm - 2 mm): 0,92 |
| Gravel | (> 2 mm): 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,47 | 1,08 |
| 16% | 84% | 0,38 | 1,40 |
| 25% | 75% | 0,34 | 1,56 |
| 40% | 60% | 0,30 | 1,75 |
| Median 50% | 50% | 0,27 | 1,89 |
| 75% | 25% | 0,20 | 2,30 |
| 84% | 16% | 0,18 | 2,49 |
| 90% | 10% | 0,15 | 2,78 |
| 95% | 5% | 0,11 | 3,15 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,93 |
| Sorting | 0,58 |
| Skewness | 0,17 |
| Kurtosis | 1,16 |
| Uniformity Coefficient | 2,05 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

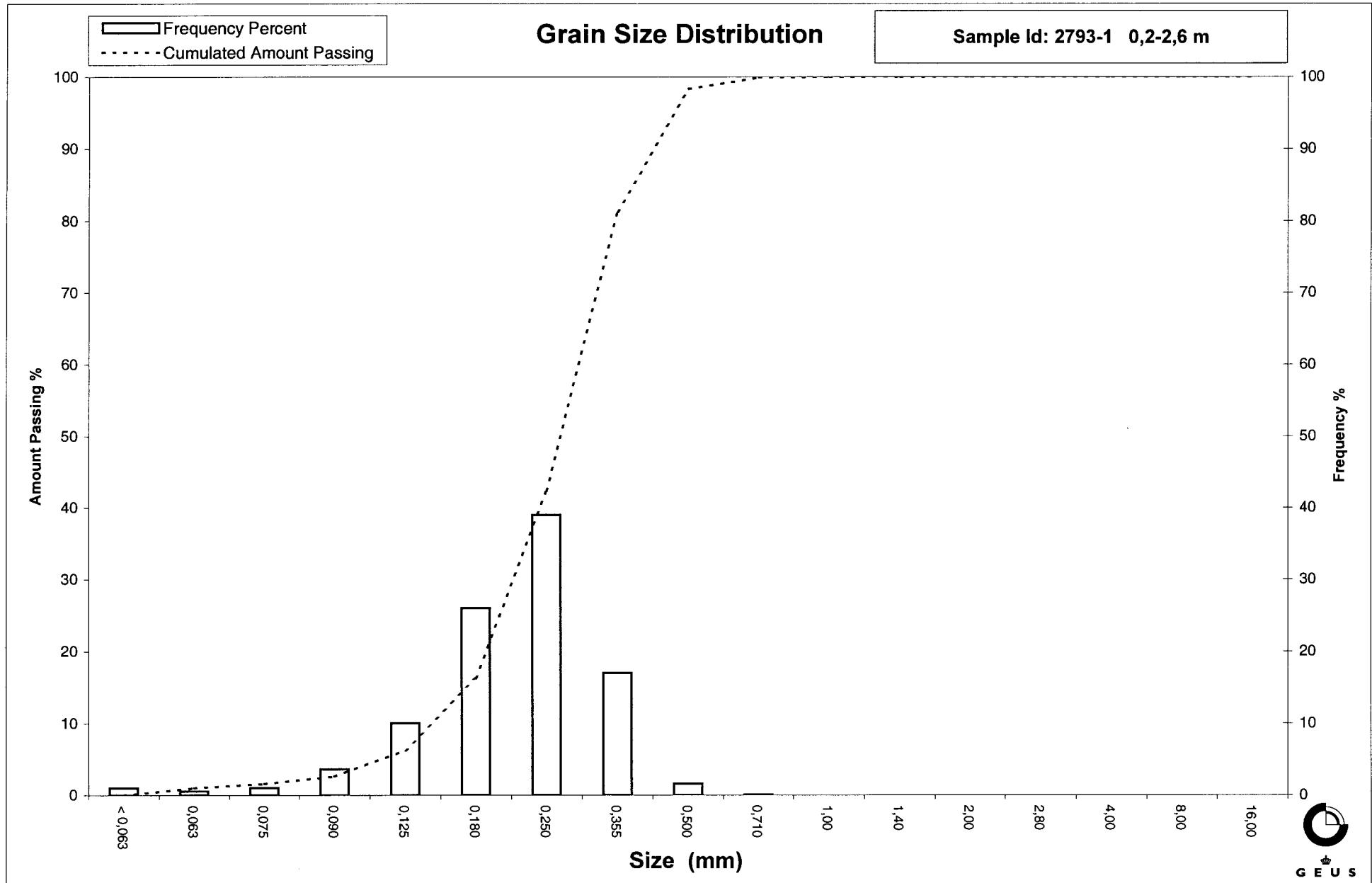
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

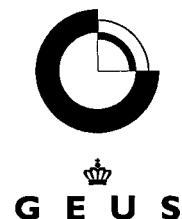
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Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2793-2-4 2,6-4,3 m
Lab. Id: 20690
SE: 51
Subject: 94. 2793
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 782,82 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 41,38 | 5,29 | 94,71 |
| 4,00 | -2,00 | 21,94 | 2,80 | 91,91 |
| 2,80 | -1,49 | 15,88 | 2,03 | 89,88 |
| 2,00 | -1,00 | 15,94 | 2,04 | 87,85 |
| 1,40 | -0,49 | 7,31 | 0,93 | 86,91 |
| 1,00 | 0,00 | 8,60 | 1,10 | 85,81 |
| 0,710 | 0,49 | 20,00 | 2,56 | 83,26 |
| 0,500 | 1,00 | 53,92 | 6,89 | 76,37 |
| 0,355 | 1,49 | 114,28 | 14,60 | 61,77 |
| 0,250 | 2,00 | 160,38 | 20,49 | 41,28 |
| 0,180 | 2,47 | 111,77 | 14,28 | 27,01 |
| 0,125 | 3,00 | 76,57 | 9,78 | 17,22 |
| 0,090 | 3,47 | 49,97 | 6,38 | 10,84 |
| 0,075 | 3,74 | 25,17 | 3,21 | 7,63 |
| 0,063 | 3,99 | 18,43 | 2,35 | 5,27 |
| < 0,063 | > 3,99 | 41,27 | 5,27 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 5,27 |
| Sand, fine | (0,063 mm - 0,200 mm): 25,81 |
| Sand, medium | (0,2 mm - 0,6 mm): 48,57 |
| Sand, coarse | (0,6 mm - 2 mm): 8,20 |
| Gravel | (> 2 mm): 12,15 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 8,43 | -3,08 |
| 16% | 84% | 0,79 | 0,33 |
| 25% | 75% | 0,49 | 1,04 |
| 40% | 60% | 0,35 | 1,53 |
| Median 50% | 50% | 0,29 | 1,76 |
| 75% | 25% | 0,17 | 2,57 |
| 84% | 16% | 0,12 | 3,08 |
| 90% | 10% | 0,09 | 3,54 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,72 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 4,02 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

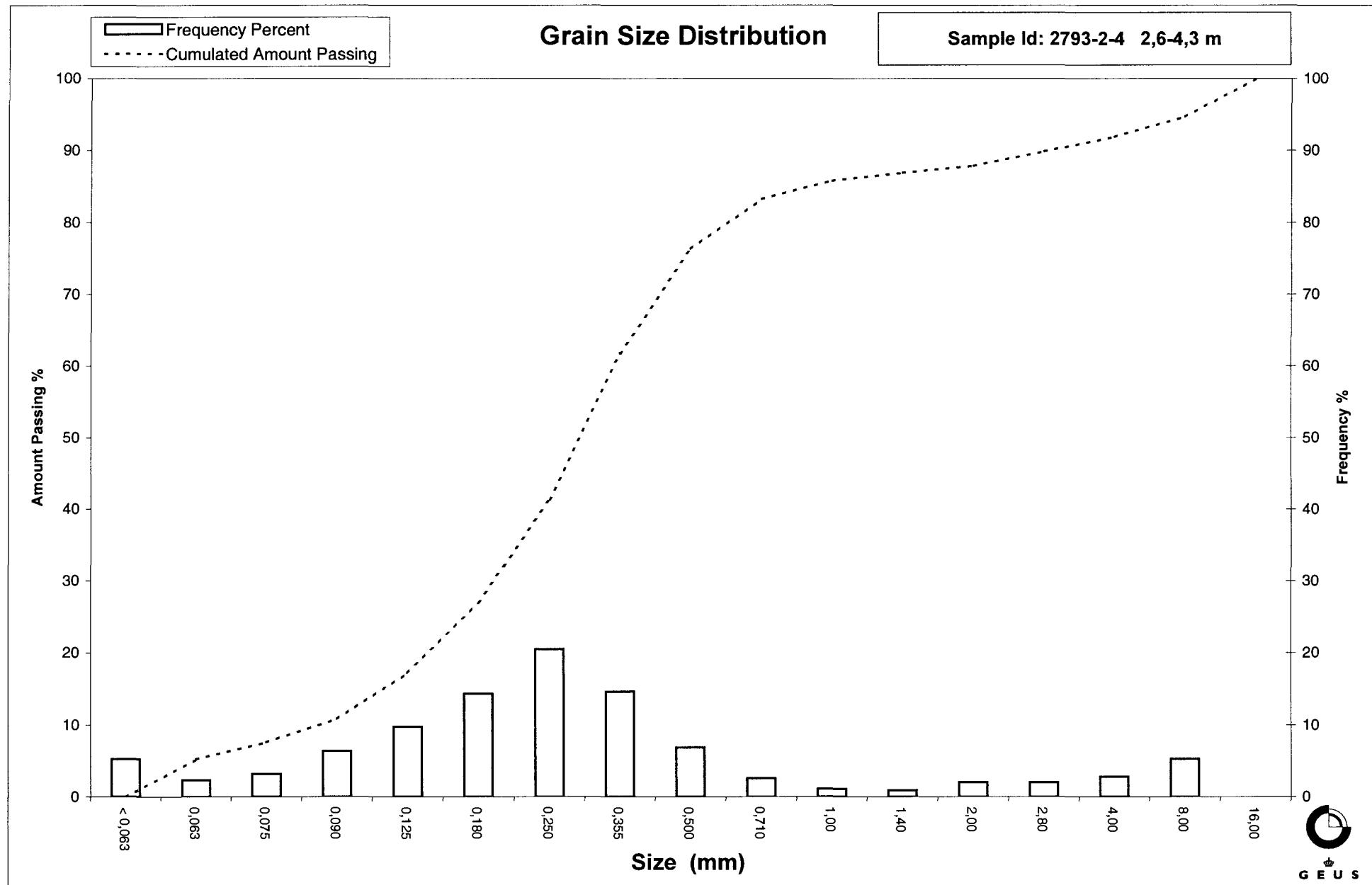
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

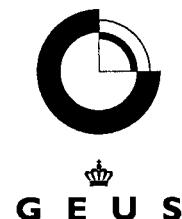
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 Email: GEUS@geus.dk
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Grain Size Distribution

Geotechnical

Sample Id: 2793-5 4,3-5,7 m
Lab. Id: 20691
SE: 82
Subject: 94. 2793
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 774,39 g

Size Fractions

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing | % |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | | |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | |
| 8,00 | -3,00 | 3,06 | 0,40 | 99,60 | |
| 4,00 | -2,00 | 32,79 | 4,23 | 95,37 | |
| 2,80 | -1,49 | 19,71 | 2,55 | 92,83 | |
| 2,00 | -1,00 | 26,88 | 3,47 | 89,35 | |
| 1,40 | -0,49 | 39,08 | 5,05 | 84,31 | |
| 1,00 | 0,00 | 53,16 | 6,86 | 77,44 | |
| 0,710 | 0,49 | 114,69 | 14,81 | 62,63 | |
| 0,500 | 1,00 | 187,44 | 24,21 | 38,43 | |
| 0,355 | 1,49 | 146,76 | 18,95 | 19,48 | |
| 0,250 | 2,00 | 86,47 | 11,17 | 8,31 | |
| 0,180 | 2,47 | 30,64 | 3,96 | 4,35 | |
| 0,125 | 3,00 | 18,73 | 2,42 | 1,94 | |
| 0,090 | 3,47 | 5,52 | 0,71 | 1,22 | |
| 0,075 | 3,74 | 2,42 | 0,31 | 0,91 | |
| 0,063 | 3,99 | 1,92 | 0,25 | 0,66 | |
| < 0,063 | > 3,99 | 5,13 | 0,66 | 0,00 | |

Gravel

Sand

Sieve Analysis

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 0,66 |
| Sand, fine | (0,063 mm - 0,200 mm): 4,82 |
| Sand, medium | (0,2 mm - 0,6 mm): 44,47 |
| Sand, coarse | (0,6 mm - 2 mm): 39,40 |
| Gravel | (> 2 mm): 10,65 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 3,83 | -1,94 |
| 16% | 84% | 1,38 | -0,47 |
| 25% | 75% | 0,95 | 0,07 |
| 40% | 60% | 0,69 | 0,54 |
| Median 50% | 50% | 0,60 | 0,74 |
| 75% | 25% | 0,40 | 1,33 |
| 84% | 16% | 0,32 | 1,63 |
| 90% | 10% | 0,27 | 1,91 |
| 95% | 5% | 0,19 | 2,39 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,63 |
| Sorting | 1,18 |
| Skewness | -0,19 |
| Kurtosis | 1,40 |
| Uniformity Coefficient | 2,58 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

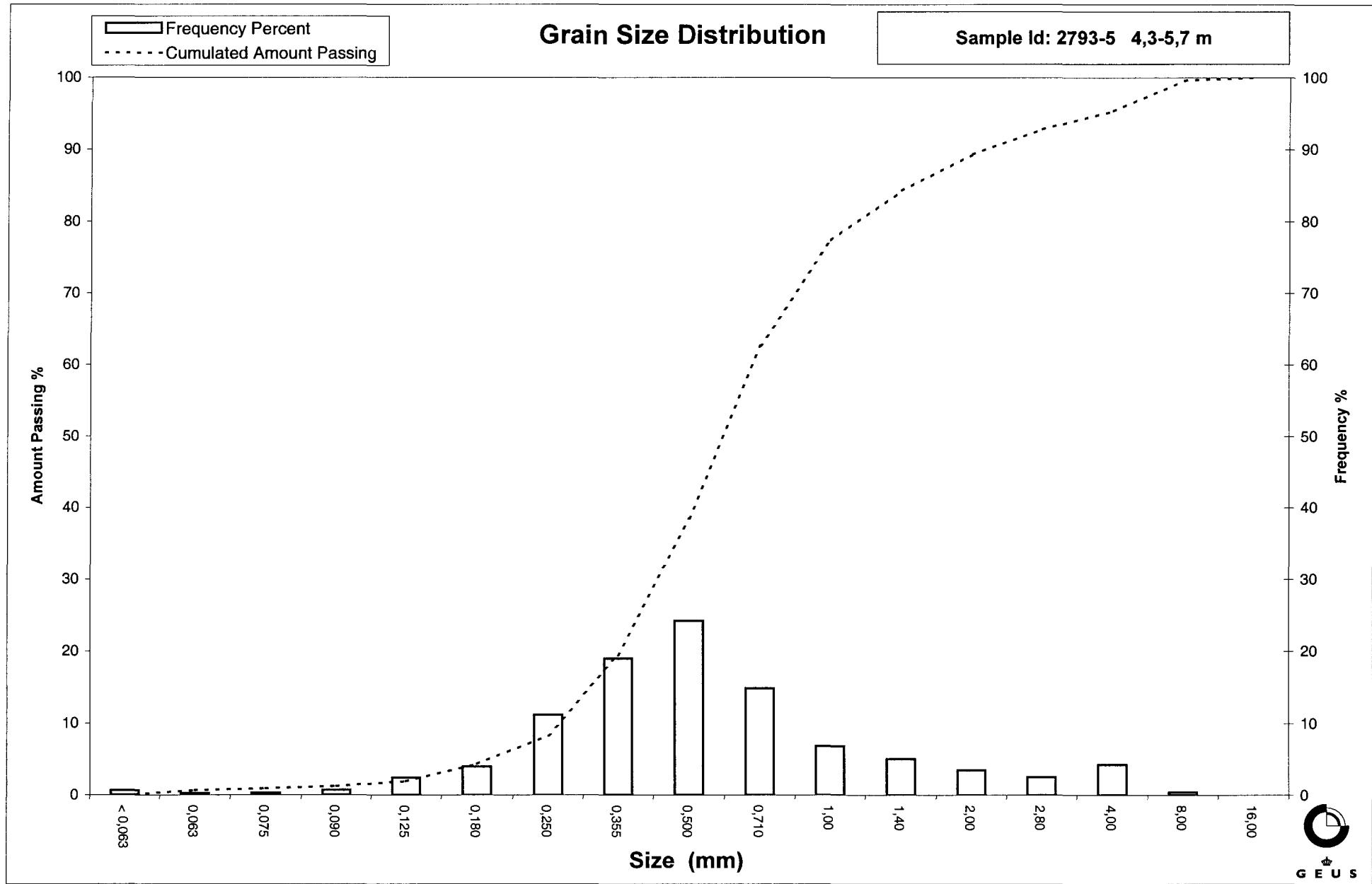
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

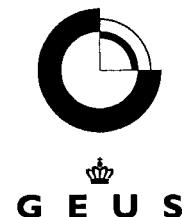
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Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
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www.geus.dk



Grain Size Distribution

Geotechnical

Sample Id: 2793-6 5,7-6 m
Lab. Id: 20692
SE: 58
Subject: 94. 2793
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 625,71 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 7,95 | 1,27 | 98,73 |
| 4,00 | -2,00 | 2,73 | 0,44 | 98,29 |
| 2,80 | -1,49 | 0,51 | 0,08 | 98,21 |
| 2,00 | -1,00 | 1,08 | 0,17 | 98,04 |
| 1,40 | -0,49 | 2,13 | 0,34 | 97,70 |
| 1,00 | 0,00 | 6,62 | 1,06 | 96,64 |
| 0,710 | 0,49 | 14,50 | 2,32 | 94,32 |
| 0,500 | 1,00 | 43,66 | 6,98 | 87,34 |
| 0,355 | 1,49 | 114,03 | 18,22 | 69,12 |
| 0,250 | 2,00 | 190,91 | 30,51 | 38,61 |
| 0,180 | 2,47 | 119,50 | 19,10 | 19,51 |
| 0,125 | 3,00 | 54,33 | 8,68 | 10,83 |
| 0,090 | 3,47 | 31,57 | 5,05 | 5,78 |
| 0,075 | 3,74 | 11,05 | 1,77 | 4,01 |
| 0,063 | 3,99 | 4,92 | 0,79 | 3,23 |
| < 0,063 | > 3,99 | 20,20 | 3,23 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,23 |
| Sand, fine | (0,063 mm - 0,200 mm): 21,74 |
| Sand, medium | (0,2 mm - 0,6 mm): 65,70 |
| Sand, coarse | (0,6 mm - 2 mm): 7,37 |
| Gravel | (> 2 mm): 1,96 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,79 | 0,33 |
| 16% | 84% | 0,47 | 1,08 |
| 25% | 75% | 0,40 | 1,32 |
| 40% | 60% | 0,32 | 1,63 |
| Median 50% | 50% | 0,29 | 1,79 |
| 75% | 25% | 0,20 | 2,32 |
| 84% | 16% | 0,16 | 2,66 |
| 90% | 10% | 0,12 | 3,07 |
| 95% | 5% | 0,08 | 3,58 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,84 |
| Sorting | 0,89 |
| Skewness | 0,10 |
| Kurtosis | 1,33 |
| Uniformity Coefficient | 2,71 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

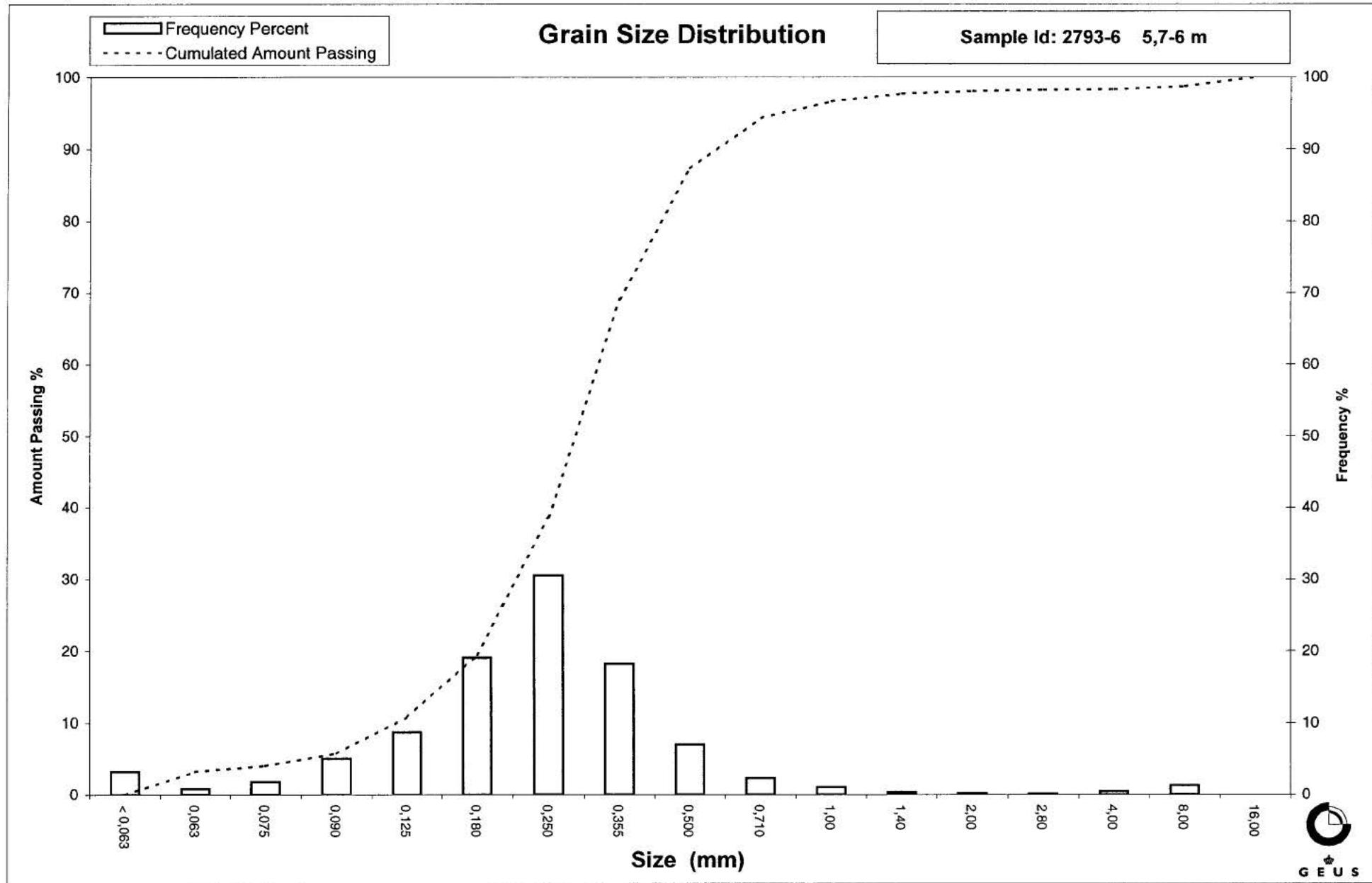
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2794-1-3 0,6-6 m
Lab. Id: 20693
SE: 40
Subject: 94. 2794
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 771,435 g

Size Fractions

| Size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 7,98 | 1,03 | 98,97 |
| 4,00 | -2,00 | 2,14 | 0,28 | 98,69 |
| 2,80 | -1,49 | 1,09 | 0,14 | 98,55 |
| 2,00 | -1,00 | 1,37 | 0,18 | 98,37 |
| 1,40 | -0,49 | 1,96 | 0,25 | 98,12 |
| 1,00 | 0,00 | 6,33 | 0,82 | 97,30 |
| 0,710 | 0,49 | 16,95 | 2,20 | 95,10 |
| 0,500 | 1,00 | 59,21 | 7,68 | 87,42 |
| 0,355 | 1,49 | 139,37 | 18,07 | 69,36 |
| 0,250 | 2,00 | 202,30 | 26,22 | 43,13 |
| 0,180 | 2,47 | 128,10 | 16,61 | 26,53 |
| 0,125 | 3,00 | 120,39 | 15,61 | 10,92 |
| 0,090 | 3,47 | 45,61 | 5,91 | 5,01 |
| 0,075 | 3,74 | 16,37 | 2,12 | 2,89 |
| 0,063 | 3,99 | 11,49 | 1,49 | 1,40 |
| < 0,063 | > 3,99 | 10,79 | 1,40 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | | Weight % |
|---------------|------------------------|----------|
| Silt and clay | (< 0,063 mm): | 1,40 |
| Sand, fine | (0,063 mm - 0,200 mm): | 29,87 |
| Sand, medium | (0,2 mm - 0,6 mm): | 59,81 |
| Sand, coarse | (0,6 mm - 2 mm): | 7,29 |
| Gravel | (> 2 mm): | 1,63 |
| Sum: | | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,71 | 0,50 |
| 16% | 84% | 0,47 | 1,08 |
| 25% | 75% | 0,40 | 1,32 |
| 40% | 60% | 0,32 | 1,66 |
| Median 50% | 50% | 0,28 | 1,85 |
| 75% | 25% | 0,17 | 2,52 |
| 84% | 16% | 0,14 | 2,81 |
| 90% | 10% | 0,12 | 3,06 |
| 95% | 5% | 0,09 | 3,48 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,91 |
| Sorting | 0,88 |
| Skewness | 0,10 |
| Kurtosis | 1,02 |
| Uniformity Coefficient | 2,66 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

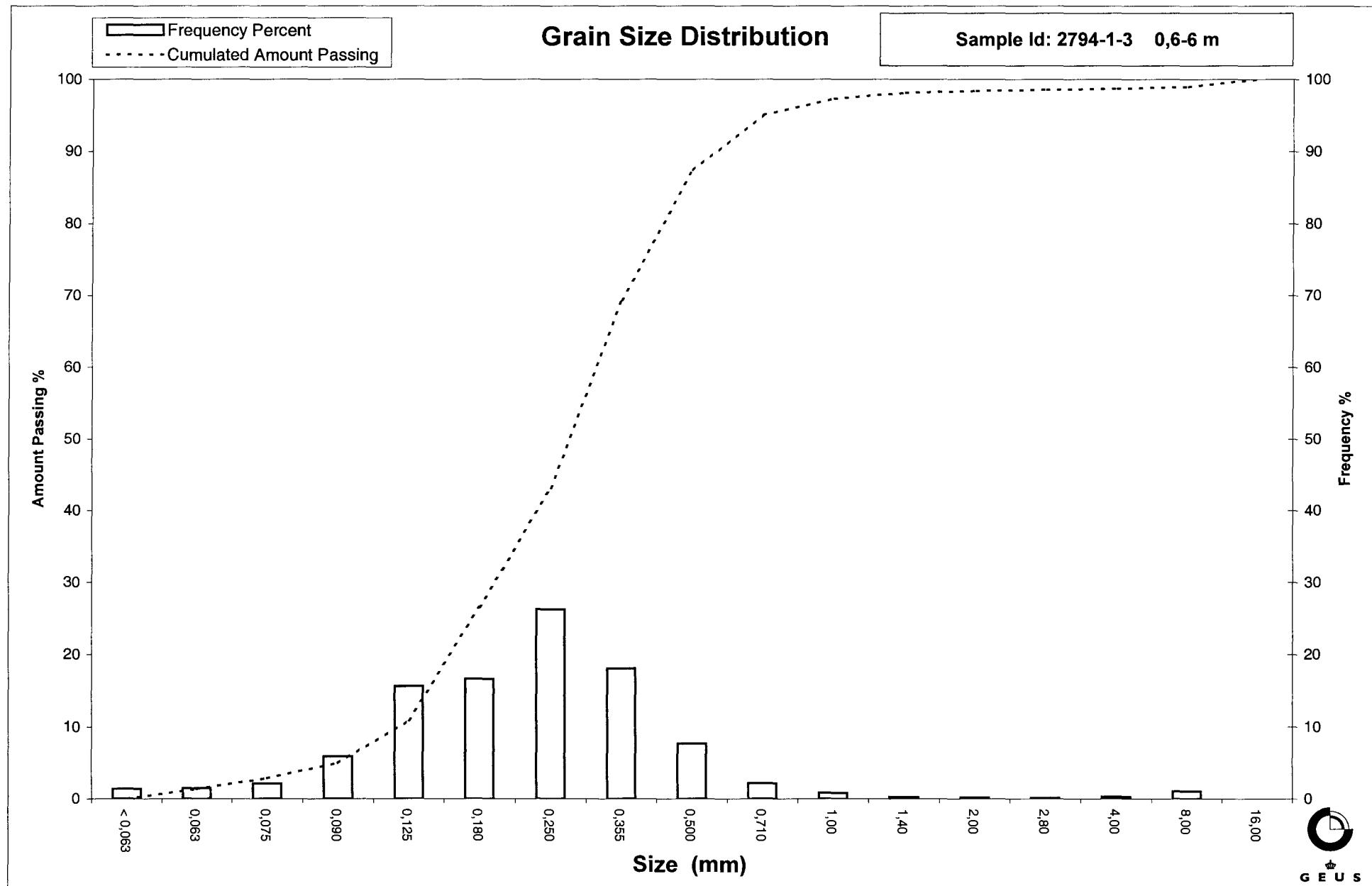
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2795-1-2 0,2-2 m
Lab. Id: 20694
SE: 76
Subject: 94. 2795
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 780,44 g

Size Fractions

| Size mm | Size Φ | Weight g | Weight % | Cumulated amount passing | |
|------------|----------------|-------------|-------------|--------------------------------|---|
| | | | | % | % |
| 16,00 | -4,00 | 32,08 | 4,11 | 95,89 | |
| 8,00 | -3,00 | 18,14 | 2,32 | 93,57 | |
| 4,00 | -2,00 | 17,24 | 2,21 | 91,36 | |
| 2,80 | -1,49 | 9,18 | 1,18 | 90,18 | |
| 2,00 | -1,00 | 12,48 | 1,60 | 88,58 | |
| 1,40 | -0,49 | 25,28 | 3,24 | 85,34 | |
| 1,00 | 0,00 | 36,68 | 4,70 | 80,64 | |
| 0,710 | 0,49 | 52,20 | 6,69 | 73,95 | |
| 0,500 | 1,00 | 80,76 | 10,35 | 63,60 | |
| 0,355 | 1,49 | 74,14 | 9,50 | 54,10 | |
| 0,250 | 2,00 | 198,20 | 25,40 | 28,71 | |
| 0,180 | 2,47 | 167,61 | 21,48 | 7,23 | |
| 0,125 | 3,00 | 33,54 | 4,30 | 2,94 | |
| 0,090 | 3,47 | 5,83 | 0,75 | 2,19 | |
| 0,075 | 3,74 | 2,88 | 0,37 | 1,82 | |
| 0,063 | 3,99 | 1,24 | 0,16 | 1,66 | |
| < 0,063 | > 3,99 | 12,95 | 1,66 | 0,00 | |

Sieve Analysis

| | |
|--------|--|
| Gravel | |
| | |
| Sand | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 1,66 |
| Sand, fine | (0,063 mm - 0,200 mm): 11,71 |
| Sand, medium | (0,2 mm - 0,6 mm): 55,16 |
| Sand, coarse | (0,6 mm - 2 mm): 20,05 |
| Gravel | (> 2 mm): 11,42 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 12,94 | -3,69 |
| 16% | 84% | 1,29 | -0,36 |
| 25% | 75% | 0,76 | 0,40 |
| 40% | 60% | 0,44 | 1,17 |
| Median 50% | 50% | 0,34 | 1,56 |
| 75% | 25% | 0,24 | 2,07 |
| 84% | 16% | 0,21 | 2,26 |
| 90% | 10% | 0,19 | 2,40 |
| 95% | 5% | 0,15 | 2,72 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,15 |
| Sorting | 1,63 |
| Skewness | -0,55 |
| Kurtosis | 1,58 |
| Uniformity Coefficient | 2,35 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

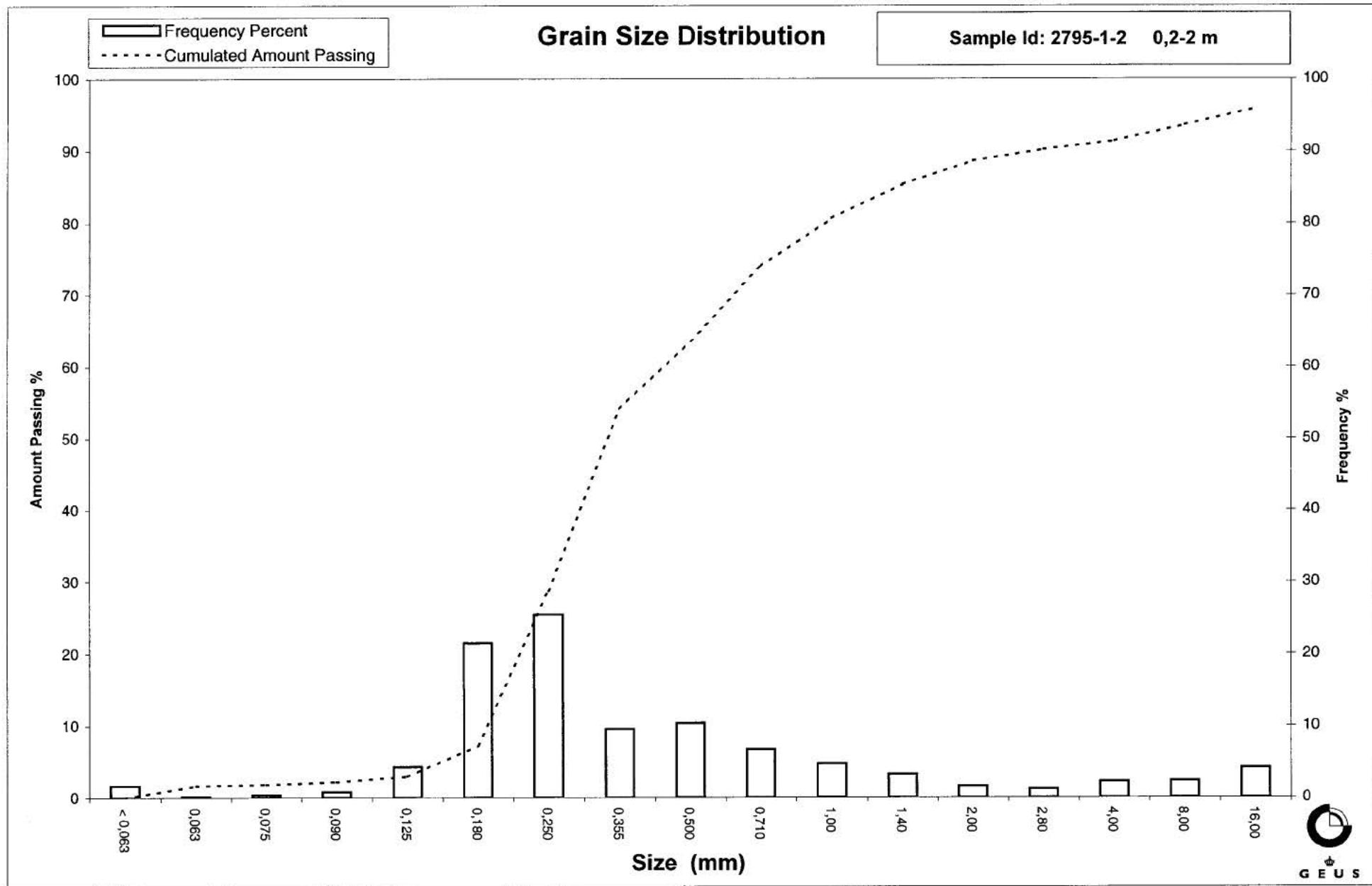
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

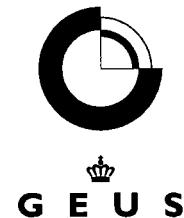
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Grain Size Distribution

Geotechnical

Sample Id: 2795-3-4 2,0-6 m
Lab. Id: 20695
SE: 45
Subject: 94. 2795
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 1127,79 g

Size Fractions

| Size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 168,65 | 14,95 | 85,05 |
| 8,00 | -3,00 | 50,83 | 4,51 | 80,54 |
| 4,00 | -2,00 | 34,31 | 3,04 | 77,50 |
| 2,80 | -1,49 | 22,20 | 1,97 | 75,53 |
| 2,00 | -1,00 | 23,17 | 2,05 | 73,47 |
| 1,40 | -0,49 | 31,16 | 2,76 | 70,71 |
| 1,00 | 0,00 | 33,03 | 2,93 | 67,78 |
| 0,710 | 0,49 | 54,12 | 4,80 | 62,98 |
| 0,500 | 1,00 | 128,89 | 11,43 | 51,56 |
| 0,355 | 1,49 | 233,33 | 20,69 | 30,87 |
| 0,250 | 2,00 | 250,16 | 22,18 | 8,68 |
| 0,180 | 2,47 | 56,12 | 4,98 | 3,71 |
| 0,125 | 3,00 | 16,71 | 1,48 | 2,23 |
| 0,090 | 3,47 | 4,58 | 0,41 | 1,82 |
| 0,075 | 3,74 | 3,23 | 0,29 | 1,53 |
| 0,063 | 3,99 | 2,06 | 0,18 | 1,35 |
| < 0,063 | > 3,99 | 15,24 | 1,35 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,35 |
| Sand, fine | (0,063 mm - 0,200 mm): 3,78 |
| Sand, medium | (0,2 mm - 0,6 mm): 51,87 |
| Sand, coarse | (0,6 mm - 2 mm): 16,48 |
| Gravel | (> 2 mm): 26,53 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | | |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | d(mm) | Φ |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 14,14 | -3,82 |
| 25% | 75% | 2,59 | -1,38 |
| 40% | 60% | 0,66 | 0,61 |
| Median 50% | 50% | 0,49 | 1,03 |
| 75% | 25% | 0,33 | 1,61 |
| 84% | 16% | 0,28 | 1,81 |
| 90% | 10% | 0,26 | 1,96 |
| 95% | 5% | 0,20 | 2,34 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -0,33 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,56 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi 16\% + \phi 84\% + \phi 50\% / 3$) (Folk and Ward 1957)

Sorting ($\phi 84\% - \phi 16\% / 4 + (\phi 95\% - \phi 5\%) / 6,6$) (Folk and Ward 1957)

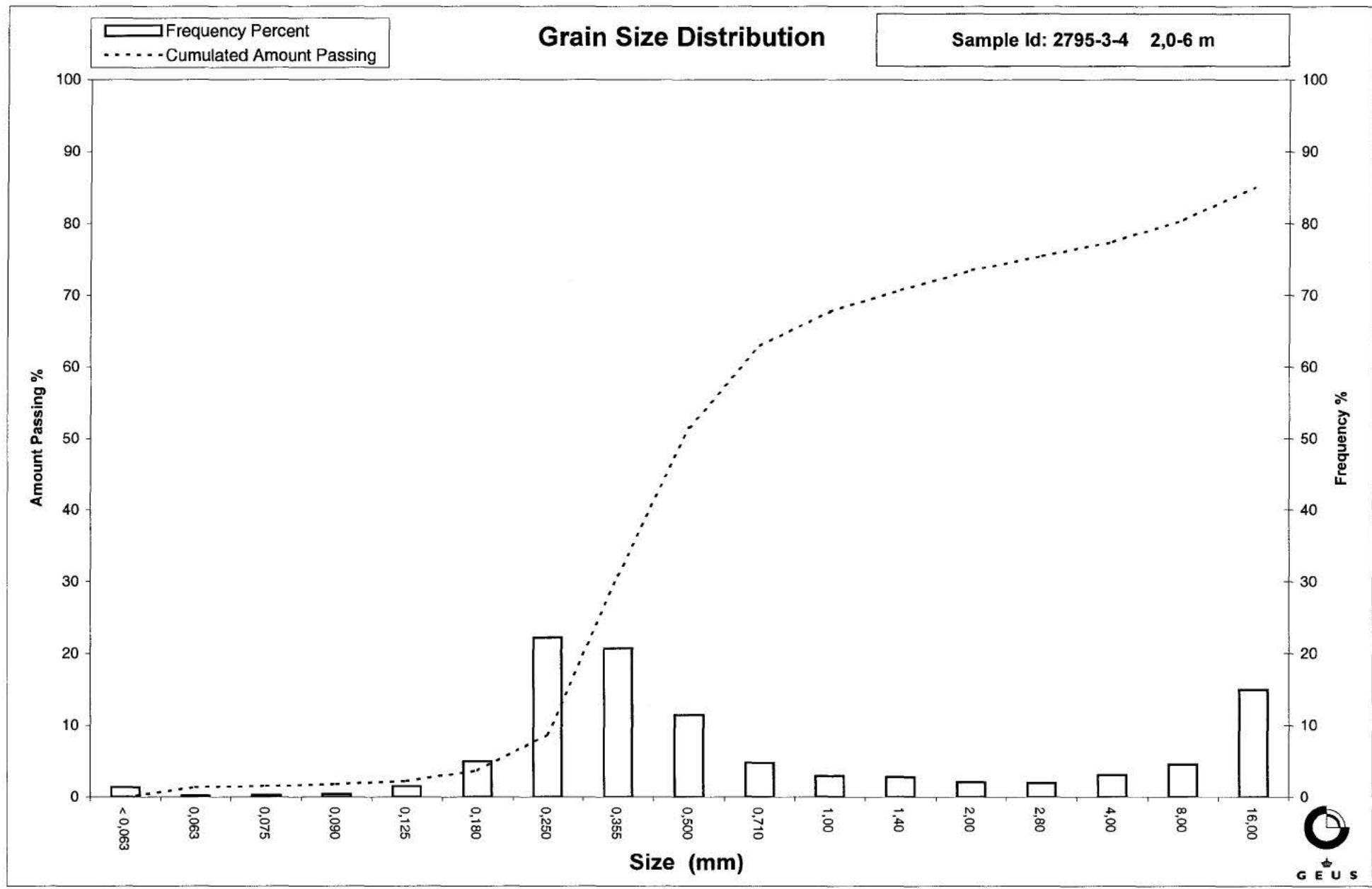
Kurtosis ($\phi 95\% - \phi 5\% / (2,44 * (\phi 75\% - \phi 25\%))$) (Folk and Ward 1957)

Skewness ($\phi 16\% + \phi 84\% - 2 * \phi 50\% / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\% / (2 * (\phi 95\% - \phi 5\%))$) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

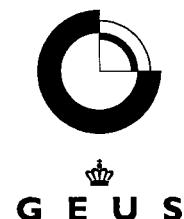
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Grain Size Distribution

Geotechnical

Sample Id: 2796-1 0,2-0,8 m
Lab. Id: 20696
SE: 26
Subject: 94. 2796
Date: November 2002
Executed: K.F/I.N
Remarks:



Total Weight 646,8 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 14,07 | 2,18 | 97,82 |
| 4,00 | -2,00 | 4,68 | 0,72 | 97,10 |
| 2,80 | -1,49 | 3,57 | 0,55 | 96,55 |
| 2,00 | -1,00 | 2,01 | 0,31 | 96,24 |
| 1,40 | -0,49 | 2,07 | 0,32 | 95,92 |
| 1,00 | 0,00 | 3,60 | 0,56 | 95,36 |
| 0,710 | 0,49 | 14,02 | 2,17 | 93,19 |
| 0,500 | 1,00 | 61,03 | 9,43 | 83,76 |
| 0,355 | 1,49 | 122,60 | 18,95 | 64,80 |
| 0,250 | 2,00 | 181,61 | 28,08 | 36,73 |
| 0,180 | 2,47 | 88,89 | 13,74 | 22,98 |
| 0,125 | 3,00 | 59,32 | 9,17 | 13,81 |
| 0,090 | 3,47 | 23,04 | 3,56 | 10,25 |
| 0,075 | 3,74 | 10,55 | 1,63 | 8,62 |
| 0,063 | 3,99 | 7,25 | 1,12 | 7,50 |
| < 0,063 | > 3,99 | 48,49 | 7,50 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 7,50 |
| Sand, fine | (0,063 mm - 0,200 mm): 19,41 |
| Sand, medium | (0,2 mm - 0,6 mm): 61,34 |
| Sand, coarse | (0,6 mm - 2 mm): 7,99 |
| Gravel | (> 2 mm): 3,76 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,95 | 0,07 |
| 16% | 84% | 0,51 | 0,98 |
| 25% | 75% | 0,43 | 1,21 |
| 40% | 60% | 0,34 | 1,57 |
| Median 50% | 50% | 0,30 | 1,74 |
| 75% | 25% | 0,19 | 2,39 |
| 84% | 16% | 0,14 | 2,86 |
| 90% | 10% | 0,09 | 3,51 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,86 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,84 |

The analysis is executed according to DS 405.9
extended by sieves to the ½ phi scale

Size Classes and Percentiles
are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

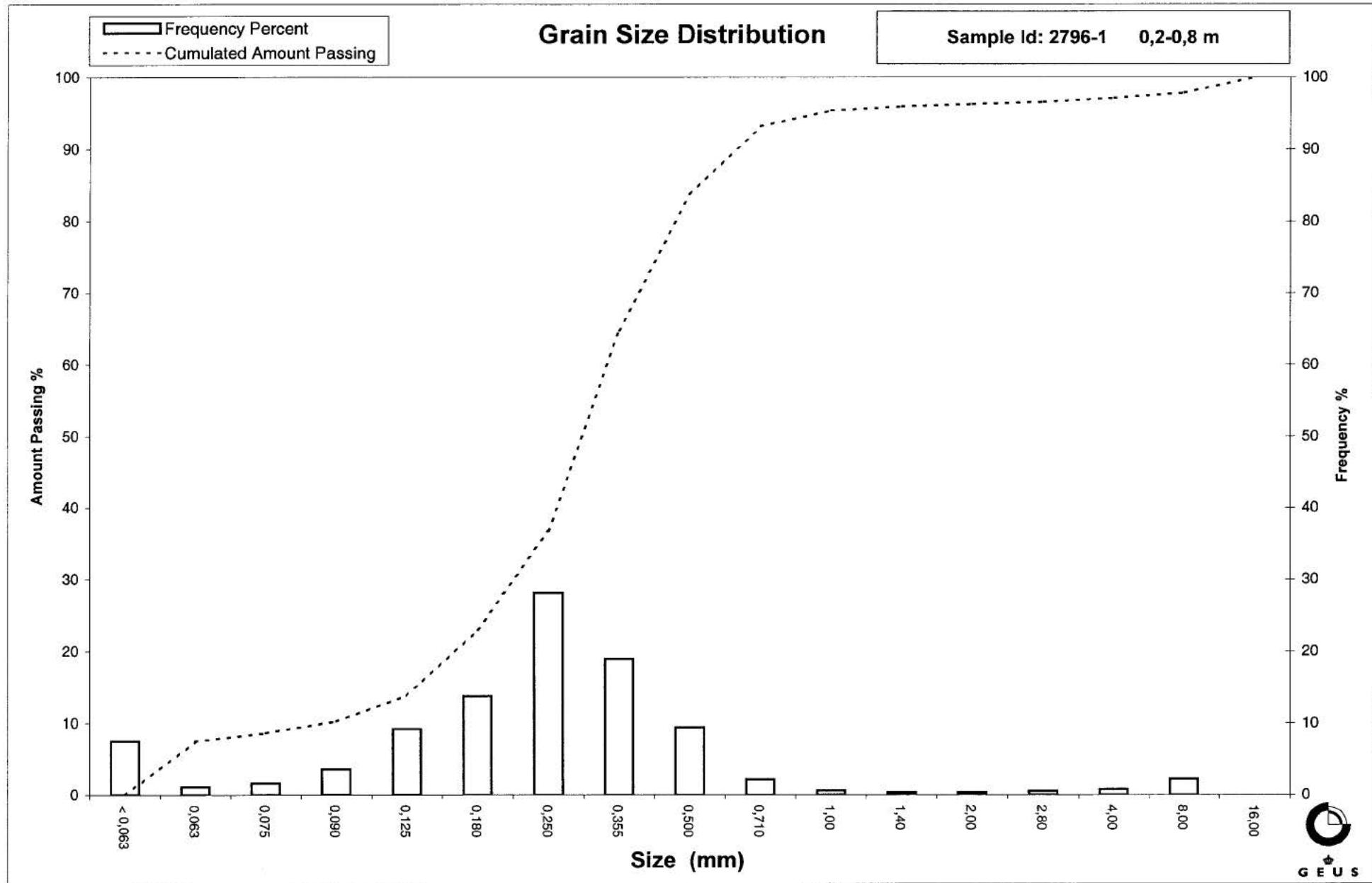
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2796-2-4 0,8-6 m
Lab. Id: 20697
SE: 55
Subject: 94. 2796
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 1045,09 g

Size Fractions

| size mm | size Φ | Weight g | Weight % | Cumulated amount passing % |
|------------|----------------|-------------|-------------|-------------------------------------|
| 16,00 | -4,00 | 101,63 | 9,72 | 90,28 |
| 8,00 | -3,00 | 14,70 | 1,41 | 88,87 |
| 4,00 | -2,00 | 15,68 | 1,50 | 87,37 |
| 2,80 | -1,49 | 13,38 | 1,28 | 86,09 |
| 2,00 | -1,00 | 23,57 | 2,26 | 83,83 |
| 1,40 | -0,49 | 48,80 | 4,67 | 79,16 |
| 1,00 | 0,00 | 111,99 | 10,72 | 68,45 |
| 0,710 | 0,49 | 207,56 | 19,86 | 48,59 |
| 0,500 | 1,00 | 195,87 | 18,74 | 29,85 |
| 0,355 | 1,49 | 124,17 | 11,88 | 17,96 |
| 0,250 | 2,00 | 114,04 | 10,91 | 7,05 |
| 0,180 | 2,47 | 28,37 | 2,71 | 4,34 |
| 0,125 | 3,00 | 12,26 | 1,17 | 3,16 |
| 0,090 | 3,47 | 4,66 | 0,45 | 2,72 |
| 0,075 | 3,74 | 2,21 | 0,21 | 2,51 |
| 0,063 | 3,99 | 1,80 | 0,17 | 2,33 |
| < 0,063 | > 3,99 | 24,40 | 2,33 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 2,33 |
| Sand, fine | (0,063 mm - 0,200 mm): 2,78 |
| Sand, medium | (0,2 mm - 0,6 mm): 33,66 |
| Sand, coarse | (0,6 mm - 2 mm): 45,06 |
| Gravel | (> 2 mm): 16,17 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|--------|
| Amount in sieve | Amount passing | ----- | ----- |
| 5% | 95% | ----- | ----- |
| 16% | 84% | 2,06 | -1,04 |
| 25% | 75% | 1,24 | -0,32 |
| 40% | 60% | 0,88 | 0,19 |
| Median 50% | 50% | 0,73 | 0,45 |
| 75% | 25% | 0,44 | 1,18 |
| 84% | 16% | 0,34 | 1,57 |
| 90% | 10% | 0,28 | 1,84 |
| 95% | 5% | 0,20 | 2,34 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 0,33 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,15 |

The analysis is executed according to DS 405.9 extended by sieves to the $\frac{1}{2}$ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi 16\% + \phi 84\% + \phi 50\%) / 3$ (Folk and Ward 1957)

Sorting $(\phi 84\% - \phi 16\%) / 4 + (\phi 95\% - \phi 5\%) / 6,6$ (Folk and Ward 1957)

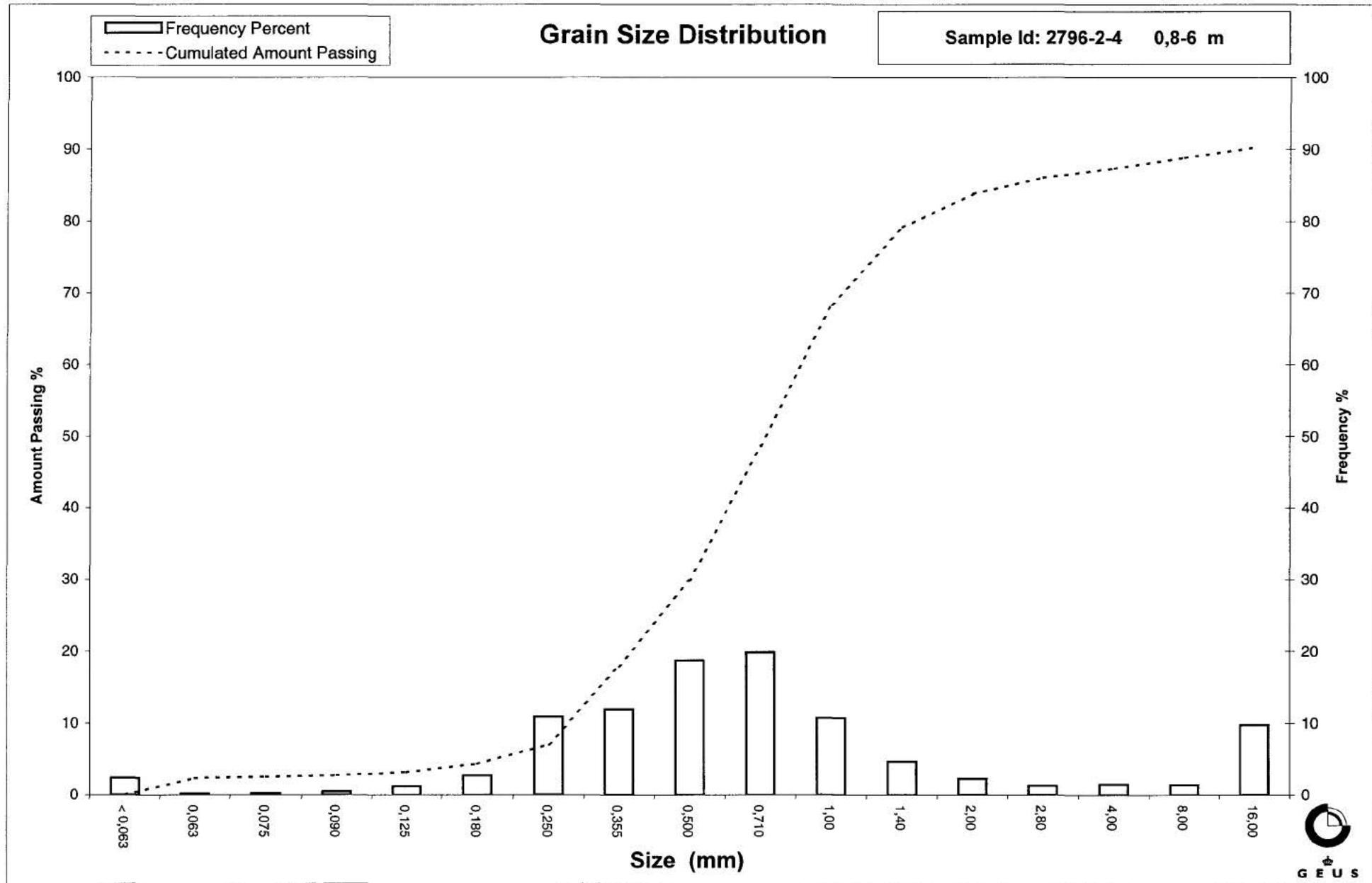
Kurtosis $(\phi 95\% - \phi 5\%) / (2,44 * (\phi 75\% - \phi 25\%))$ (Folk and Ward 1957)

Skewness $(\phi 16\% + \phi 84\% - 2 * \phi 50\%) / (2 * (\phi 84\% - \phi 16\%)) + (\phi 5\% + \phi 95\% - 2 * \phi 50\%) / (2 * (\phi 95\% - \phi 5\%))$ (Folk and Ward 1957)

Uniformity Coefficient $(d60\% / d10\%)$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

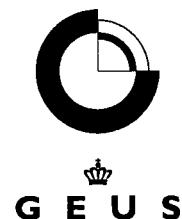
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Grain Size Distribution

Geotechnical

Sample Id: 2796-1 0,2-5 m
Lab. Id: 20698
SE: 48
Subject: 94. 2797
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 772,98 g

Size Fractions

| Size | size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 145,80 | 18,86 | 81,14 |
| 8,00 | -3,00 | 66,60 | 8,62 | 72,52 |
| 4,00 | -2,00 | 25,74 | 3,33 | 69,19 |
| 2,80 | -1,49 | 16,89 | 2,19 | 67,01 |
| 2,00 | -1,00 | 16,14 | 2,09 | 64,92 |
| 1,40 | -0,49 | 17,05 | 2,21 | 62,71 |
| 1,00 | 0,00 | 32,72 | 4,23 | 58,48 |
| 0,710 | 0,49 | 49,90 | 6,46 | 52,02 |
| 0,500 | 1,00 | 87,64 | 11,34 | 40,69 |
| 0,355 | 1,49 | 108,89 | 14,09 | 26,60 |
| 0,250 | 2,00 | 91,77 | 11,87 | 14,73 |
| 0,180 | 2,47 | 41,00 | 5,30 | 9,42 |
| 0,125 | 3,00 | 28,52 | 3,69 | 5,73 |
| 0,090 | 3,47 | 18,56 | 2,40 | 3,33 |
| 0,075 | 3,74 | 7,08 | 0,92 | 2,42 |
| 0,063 | 3,99 | 5,08 | 0,66 | 1,76 |
| < 0,063 | > 3,99 | 13,61 | 1,76 | 0,00 |

Sieve Analysis

Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|-----------------------------|
| Silt and clay | (< 0,063 mm): 1,76 |
| Sand, fine | (0,063 mm - 0,200 mm): 9,18 |
| Sand, medium | (0,2 mm - 0,6 mm): 35,15 |
| Sand, coarse | (0,6 mm - 2 mm): 18,83 |
| Gravel | (> 2 mm): 35,08 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | ----- | ----- |
| 16% | 84% | ----- | ----- |
| 25% | 75% | 10,30 | -3,36 |
| 40% | 60% | 1,14 | -0,19 |
| Median 50% | 50% | 0,67 | 0,57 |
| 75% | 25% | 0,34 | 1,55 |
| 84% | 16% | 0,26 | 1,94 |
| 90% | 10% | 0,19 | 2,41 |
| 95% | 5% | 0,11 | 3,13 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,25 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 6,10 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

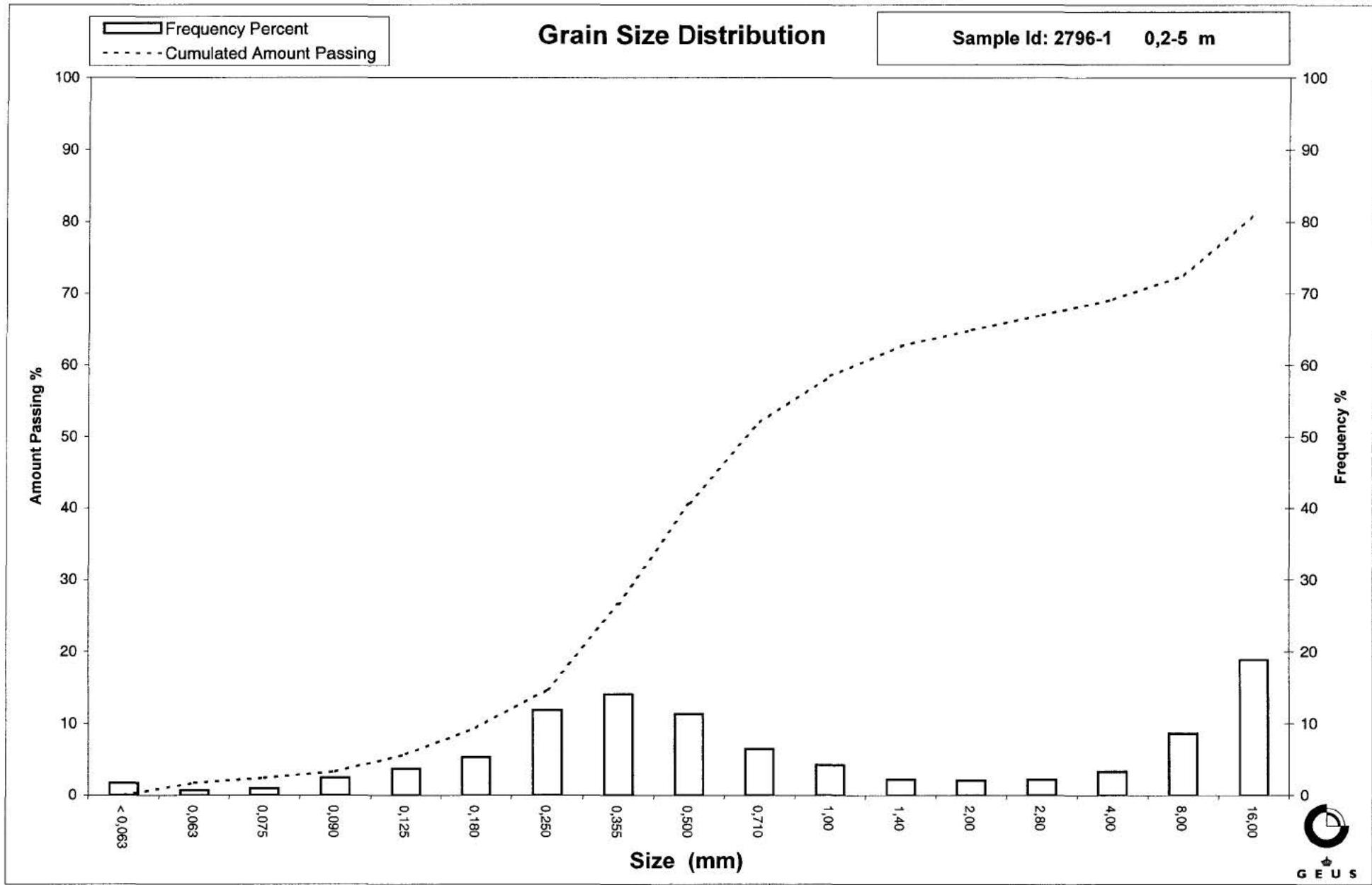
Kurtosis ($\phi_{95\%} - \phi_{5\%} / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness ($(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Geotechnical

Sample Id: 2797-2-4 0,5-6 m
Lab. Id: 20699
SE: 51
Subject: 94. 2797
Date: November 2002
Executed: K.F/I.N
Remarks: For mat < 16 mm



Total Weight 703,275 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 10,23 | 1,45 | 98,55 |
| 4,00 | -2,00 | 3,28 | 0,47 | 98,08 |
| 2,80 | -1,49 | 2,45 | 0,35 | 97,73 |
| 2,00 | -1,00 | 3,40 | 0,48 | 97,25 |
| 1,40 | -0,49 | 6,89 | 0,98 | 96,27 |
| 1,00 | 0,00 | 13,79 | 1,96 | 94,31 |
| 0,710 | 0,49 | 25,63 | 3,64 | 90,66 |
| 0,500 | 1,00 | 75,14 | 10,68 | 79,98 |
| 0,355 | 1,49 | 198,34 | 28,20 | 51,78 |
| 0,250 | 2,00 | 211,93 | 30,13 | 21,64 |
| 0,180 | 2,47 | 68,93 | 9,80 | 11,84 |
| 0,125 | 3,00 | 28,64 | 4,07 | 7,77 |
| 0,090 | 3,47 | 16,80 | 2,39 | 5,38 |
| 0,075 | 3,74 | 8,83 | 1,26 | 4,12 |
| 0,063 | 3,99 | 5,15 | 0,73 | 3,39 |
| < 0,063 | > 3,99 | 23,86 | 3,39 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|---------------|------------------------------|
| Silt and clay | (< 0,063 mm): 3,39 |
| Sand, fine | (0,063 mm - 0,200 mm): 11,25 |
| Sand, medium | (0,2 mm - 0,6 mm): 70,43 |
| Sand, coarse | (0,6 mm - 2 mm): 12,18 |
| Gravel | (> 2 mm): 2,75 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,14 | -0,19 |
| 16% | 84% | 0,58 | 0,79 |
| 25% | 75% | 0,47 | 1,08 |
| 40% | 60% | 0,40 | 1,33 |
| Median 50% | 50% | 0,35 | 1,52 |
| 75% | 25% | 0,26 | 1,93 |
| 84% | 16% | 0,21 | 2,25 |
| 90% | 10% | 0,16 | 2,69 |
| 95% | 5% | 0,09 | 3,55 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,52 |
| Sorting | 0,93 |
| Skewness | 0,04 |
| Kurtosis | 1,79 |
| Uniformity Coefficient | 2,56 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean ($\phi_{16\%} + \phi_{84\%} + \phi_{50\%}$) / 3 (Folk and Ward 1957)

Sorting ($\phi_{84\%} - \phi_{16\%}$) / 4 + ($\phi_{95\%} - \phi_{5\%}$) / 6,6 (Folk and Ward 1957)

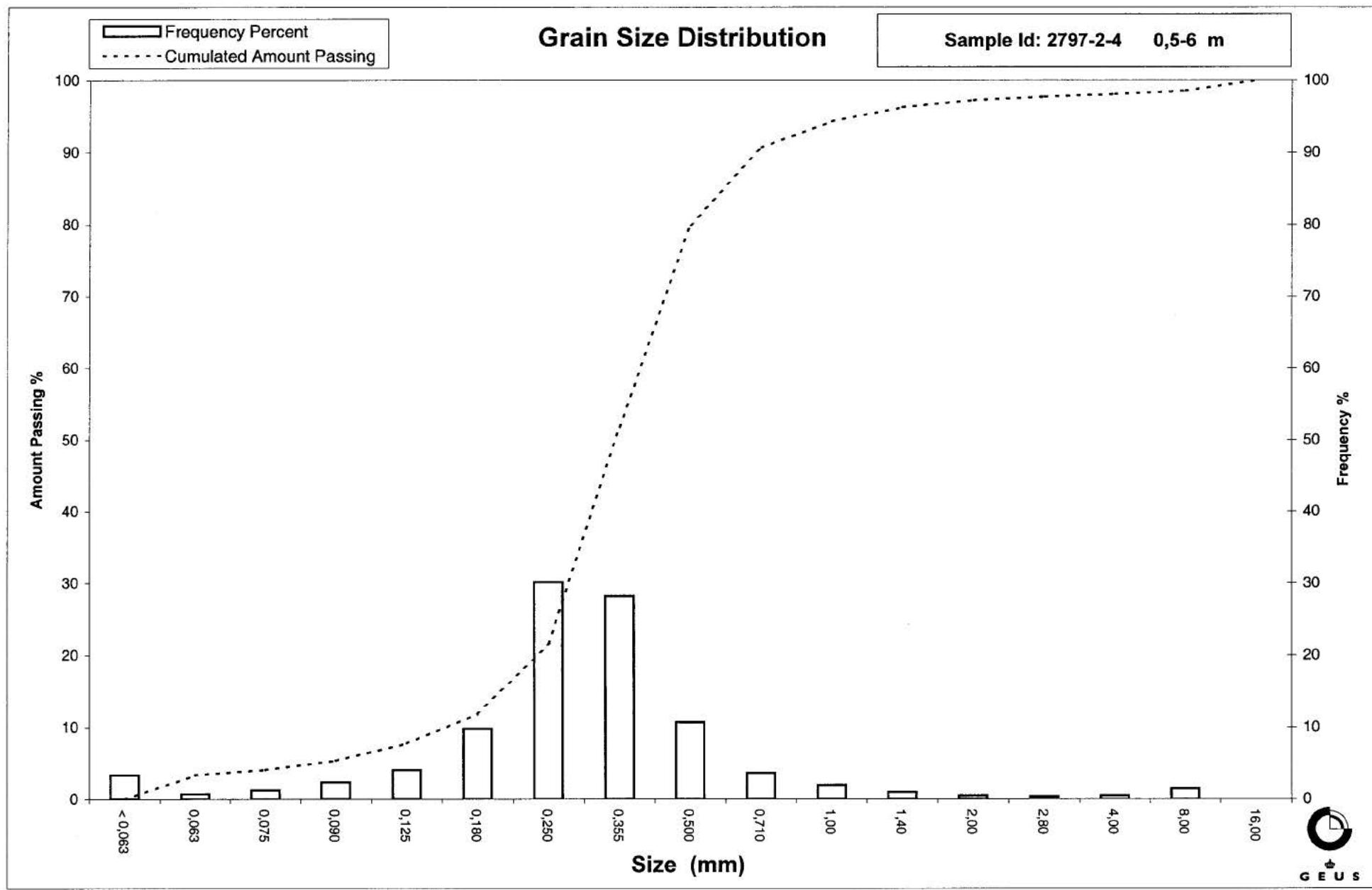
Kurtosis ($\phi_{95\%} - \phi_{5\%}$) / (2,44 * ($\phi_{75\%} - \phi_{25\%}$)) (Folk and Ward 1957)

Skewness ($\phi_{16\%} + \phi_{84\%} - 2\phi_{50\%}$) / (2 * ($\phi_{84\%} - \phi_{16\%}$)) + ($\phi_{5\%} + \phi_{95\%} - 2\phi_{50\%}$) / (2 * ($\phi_{95\%} - \phi_{5\%}$)) (Folk and Ward 1957)

Uniformity Coefficient ($d_{60\%} / d_{10\%}$) (dgr-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Bilag 3

Sandækvivalent udført efter Dansk Standard : DS 405.10

Resultater er angivet i hele procent.

| DGU-nr. | Prøve nr. | Dybde | SE % | DGU-nr. | Prøve nr. | Dybde | SE % |
|----------|-----------|----------|---------|----------|-----------|---------|---------|
| 94. 2761 | 2761-1-4 | 0,5-3 | 70 | 94. 2779 | 2779-1-3 | 0,2-3 | 36 * |
| | 2761-5-6 | 3,2-4,3 | 62 | | 2779-4 | 3,0-4 | 31 * |
| | 2761-7 | 4,3-4,8 | 50 | 94. 2780 | 2780-1-3 | 0,2-6 | 73 |
| | 2761-8-10 | 4,8-6 | 36 | 94. 2781 | 2781-1 | 0,2-2 | 83 |
| 94. 2762 | 2762-1 | 0,5-1 | 74 | | 2781-2-3 | 2,2-4 | 88 |
| | 2762-2 | 1,10-1,5 | 6 | | 2781-4 | 4,0-6 | 89 |
| | 2762-3-4 | 1,5-2,75 | 85 | 94. 2782 | 2782-1 | 0,2-2 | 74 |
| | 2762-5 | 4-5,0 | 84 | | 2782-2 | 2,3-3,1 | 74 |
| 94. 2763 | 2763-1 | 0,2-0,5 | 85 | | 2782-3-6 | 3,1-6 | 82 |
| | 2763-2 | 0,5-1 | 90 | 94. 2783 | 2783-1-2 | 0,2-2,1 | 22 |
| | 2763-3 | 1-1,5 | 42 | | 2783-3 | 2,1-3,5 | 20 * |
| | 2763-4-6 | 2,25-4 | 50 | | 2783-4-5 | 3,5-6 | 36 |
| | 2763-7-9 | 4,5-7 | 87 | 94. 2784 | 2784-1-2 | 0,2-4,4 | 29 * |
| 94. 2764 | 2764-1-2 | 0,5-1,7 | 44 | | 2784-3 | 4,4-6 | 82 |
| | 2764-3 | 2-2,4 | 33 | 94. 2785 | 2785-1-2 | 0,2-3,6 | 49 * |
| | 2764-4-6 | 2,4-4 | 26 | | 2785-3-4 | 3,6-4,9 | 83 * |
| | 2764-7-9 | 4-6 | 41 | | 2785-5 | 4,9-6 | 65 * |
| 94. 2765 | 2765-1 | 1-1,5 | 35 | 94. 2786 | 2786-1-3 | 0,2-6 | 53 |
| | 2765-2-3 | 4,3-6 | 31 | 94. 2787 | 2787-1 | 1,1-2 | 32 * |
| 94. 2766 | 2766-1 | 0,3-2 | 68 | | 2787-2-3 | 2,1-3,3 | 70 |
| | 2766-2 | 2-2,8 | 27 | | 2787-4-5 | 3,3-4,8 | 72 |
| | 2766-3-4 | 2,8-5,5 | 29 | | 2787-6-7 | 4,8-6 | 81 |
| | 2766-5 | 5,5-6 | 39 | 94. 2788 | 2788-1-2 | 0,8-4 | 55 |
| | 2767-1 | 0,5-1,5 | 82 | | 2788-3 | 4,0-6 | 42 |
| 94. 2767 | 2767-2-3 | 1,5-3,0 | 81 | 94. 2789 | 2789-1 | 0,2-2 | 62 |
| | 2767-4 | 3,0-4 | 81 | | 2789-2 | 2,2-3,3 | 82 |
| | 2768-1 | 0,3-1 | 11 | | 2789-3-4 | 3,3-6,0 | 86 |
| 94. 2768 | 2768-2 | 1-1,4 | 42 | 94. 2790 | 2790-1-2 | 0,2-3,3 | 32 * |
| | 2768-3-4 | 1,4-3 | 80 | | 2790-3 | 3,3-3,7 | 30 * |
| | 2768-5 | 3,0-4 | 84 | | 2790-4 | 4,1-5,1 | 35 * |
| | 2769-1-3 | 0,5-6 | 39 | | 2790-5 | 5,1-6 | 76 |
| 94. 2770 | 2770-1-2 | 0,5-2 | 82 | 94. 2791 | 2791-1-2 | 0,2-4 | 47 * |
| | 2770-3 | 2-3,8 | 89 | | 2791-3 | 4,0-6 | 8 |
| | 2770-4 | 4,0-5,0 | 86 | 94. 2792 | 2792-1 | 0,2-2 | 19 * |
| | 2771-1-3 | 1,0-6 | 86 | | 2792-2-4 | 2,0-4,0 | 31 |
| 94. 2772 | 2772-1 | 1-1,9 | 42 | 94. 2793 | 2793-1 | 0,2-2,6 | 78 |
| | 2772-2 | 2-4,0 | 77 | | 2793-2-4 | 2,6-4,3 | 51 |
| | 2772-3 | 4-5,2 | 75 | | 2793-5 | 4,3-5,7 | 82 |
| | 2772-4 | 5,2-6 | 78 | | 2793-6 | 5,7-6 | 58 |
| 94. 2773 | 2773-1-3 | 0,5-3,6 | 64 | 94. 2794 | 2794-1-3 | 0,6-6 | 40 * |
| | 2773-4-5 | 3,6-6 | 84 | 94. 2795 | 2795-1-2 | 0,2-2 | 76 |
| 94. 2774 | 2774-1-4 | 1,0-6 | 81 | | 2795-3-4 | 2,0-6 | 45 * |
| 94. 2775 | 2775-1-2 | 0,2-2 | 82 | 94. 2796 | 2796-1 | 0,2-0,8 | 26 * |
| | 2775-3-4 | 2,7-4 | 57 | | 2796-2-4 | 0,8-6 | 55 * |
| | 2775-5-6 | 4-6 | 71 | 94. 2797 | 2797-1 | 0,2-0,5 | 48 |
| | 2776-1-3 | 0,2-4 | 76 | | 2797-2-4 | 0,5-6 | 51 * |
| 94. 2777 | 2776-4-5 | 4,7-6 | 78 | | | | |
| | 2777-1-3 | 0,5-4 | 86 | | | | |
| 94. 2778 | 2777-4-5 | 4,1-6 | 84 | | | | |
| | 2778-1-3 | 0,2-4 | 79 | | | | |

Bemærk: SE mærket med * skyldes uklar skillelinje