

Datarapport: Kornstørrelsesfordeling Laboratorieanalyser for Rhode Nielsen A/S

Kornkurver af sand fra Læsø til Gøteborg havn 2017
Last 9, 17, 25, 33, 42, 51, 58, 69, 75

Pernille Stockmarr



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Prøvebehandling

GEUS har foretaget analyser på 36 sedimentprøver fra Læsø. Ved modtagelsen af prøverne er de blevet registreret med følgende 5 kategorier:

- dato
- lokalitet
- fortløbende laboratorienummer
- rekvirent
- analysekrav

Analysemetoder

Sigteanalyse:

Totalprøven er tørret og sigtet gennem en sigtesøjle 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 DS/EN 933-1 idet der er indføjet flere sigter end der beskrives i denne standard.

Resultater

I bilag 1 er vist kornkurverne for sedimentprøverne. Kornkurven viser fordeling af sand, silt og ler i prøverne.

Referencer

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

DS/EN 933-1. Kornstørrelsesfordeling bestemt ved sigteanalyse. Dansk Standardiseringsråd, Kbh. 2004.

Kornstørrelsesfordeling af sand fra Læsø til Gøteborg havn

Labnr.	Mærkning
170128	Last 9/1
170129	Last 9/2
170130	Last 9/3
170131	Last 9/4
170132	Last 17/1
170133	Last 17/2
170134	Last 17/3
170135	Last 17/4
170136	Last 25/1
170137	Last 25/2
170138	Last 25/3
170139	Last 25/4
170140	Last 33/1
170141	Last 33/2
170142	Last 33/3
170143	Last 33/4
170144	Last 42/1
170145	Last 42/2
170146	Last 42/3
170147	Last 42/4
170348	Last 51/1
170349	Last 51/2
170350	Last 51/3
170351	Last 51/4
170352	Last 58/1
170353	Last 58/2
170354	Last 58/3
170355	Last 58/4
170356	Last 69/1
170357	Last 69/2
170358	Last 69/3
170359	Last 69/4
170360	Last 75/1
170361	Last 75/2
170362	Last 75/3
170363	Last 75/4

Bilag 1

Grain Size Distribution

Geotechnical

Sample Id: last 9/1
Lab. Id: 170128
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 164,51 g

Size Fractions

Size	Size	Weight	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	0,37	0,22	99,78
2,80	-1,49	1,45	0,88	98,89
2,00	-1,00	2,37	1,44	97,45
1,40	-0,49	3,25	1,98	95,48
1,00	0,00	7,59	4,61	90,86
0,710	0,49	10,24	6,22	84,64
0,500	1,00	23,74	14,43	70,21
0,355	1,49	59,68	36,28	33,93
0,250	2,00	46,64	28,35	5,58
0,180	2,47	6,91	4,20	1,38
0,125	3,00	1,13	0,69	0,69
0,090	3,47	0,29	0,18	0,52
0,075	3,74	0,04	0,02	0,49
0,063	3,99	0,00	0,00	0,49
< 0,063	> 3,99	0,81	0,49	0,00

Gravel

Sand

Sieve Analysis

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,49
Sand, fine (0,063 mm - 0,200 mm):	2,09
Sand, medium (0,2 mm - 0,6 mm):	74,50
Sand, coarse (0,6 mm - 2 mm):	20,37
Gravel (> 2 mm):	2,55
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	φ
Amount in sieve	Amount passing		
5%	95%	1,36	-0,44
16%	84%	0,70	0,51
25%	75%	0,57	0,81
40%	60%	0,46	1,12
Median 50%	50%	0,42	1,25
75%	25%	0,32	1,64
84%	16%	0,29	1,79
90%	10%	0,27	1,91
95%	5%	0,24	2,06

Moments Statistics

Mean	1,19
Sorting	0,70
Skewness	-0,26
Kurtosis	1,24
Uniformity Coefficient	1,72

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

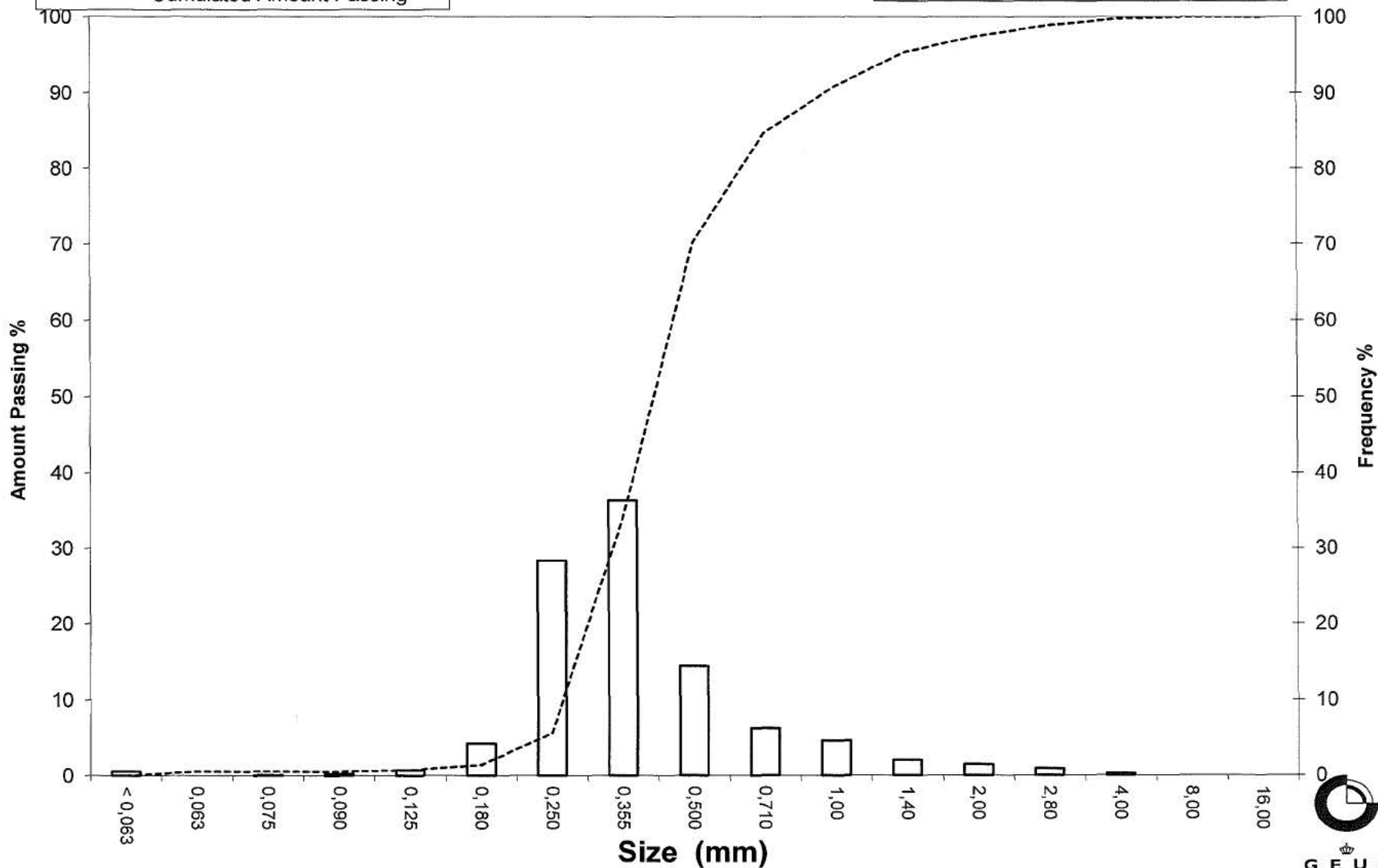
Mean, sorting, skewness and kurtosis are based on

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 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: last 9/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 9/2
 Lab. Id: 170129
 Submitter: Rohde Nielsen
 Subject: Sand fra Læsø
 Date: 17-10-2017
 Executed: PS
 Remarks:



Total Weight 164,89 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	0,46	0,28	99,72
2,80	-1,49	0,90	0,55	99,18
2,00	-1,00	2,17	1,32	97,86
1,40	-0,49	3,12	1,89	95,97
1,00	0,00	5,21	3,16	92,81
0,710	0,49	8,76	5,31	87,49
0,500	1,00	23,40	14,19	73,30
0,355	1,49	62,60	37,96	35,34
0,250	2,00	48,53	29,43	5,91
0,180	2,47	7,18	4,35	1,55
0,125	3,00	1,31	0,79	0,76
0,090	3,47	0,30	0,18	0,58
0,075	3,74	0,05	0,03	0,55
0,063	3,99	0,00	0,00	0,55
< 0,063	> 3,99	0,90	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):	2,25
Sand, medium (0,2 mm - 0,6 mm):	77,26
Sand, coarse (0,6 mm - 2 mm):	17,80
Gravel (> 2 mm):	2,14
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,28	-0,35
16%	84%	0,66	0,60
25%	75%	0,53	0,93
40%	60%	0,45	1,15
Median 50%	50%	0,41	1,28
75%	25%	0,32	1,65
84%	16%	0,29	1,81
90%	10%	0,26	1,92
95%	5%	0,24	2,09

Moments Statistics

Mean	1,23
Sorting	0,67
Skewness	-0,24
Kurtosis	1,38
Uniformity Coefficient	1,70

The analysis is executed according to DS 405.9 extended by sieves to the 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)

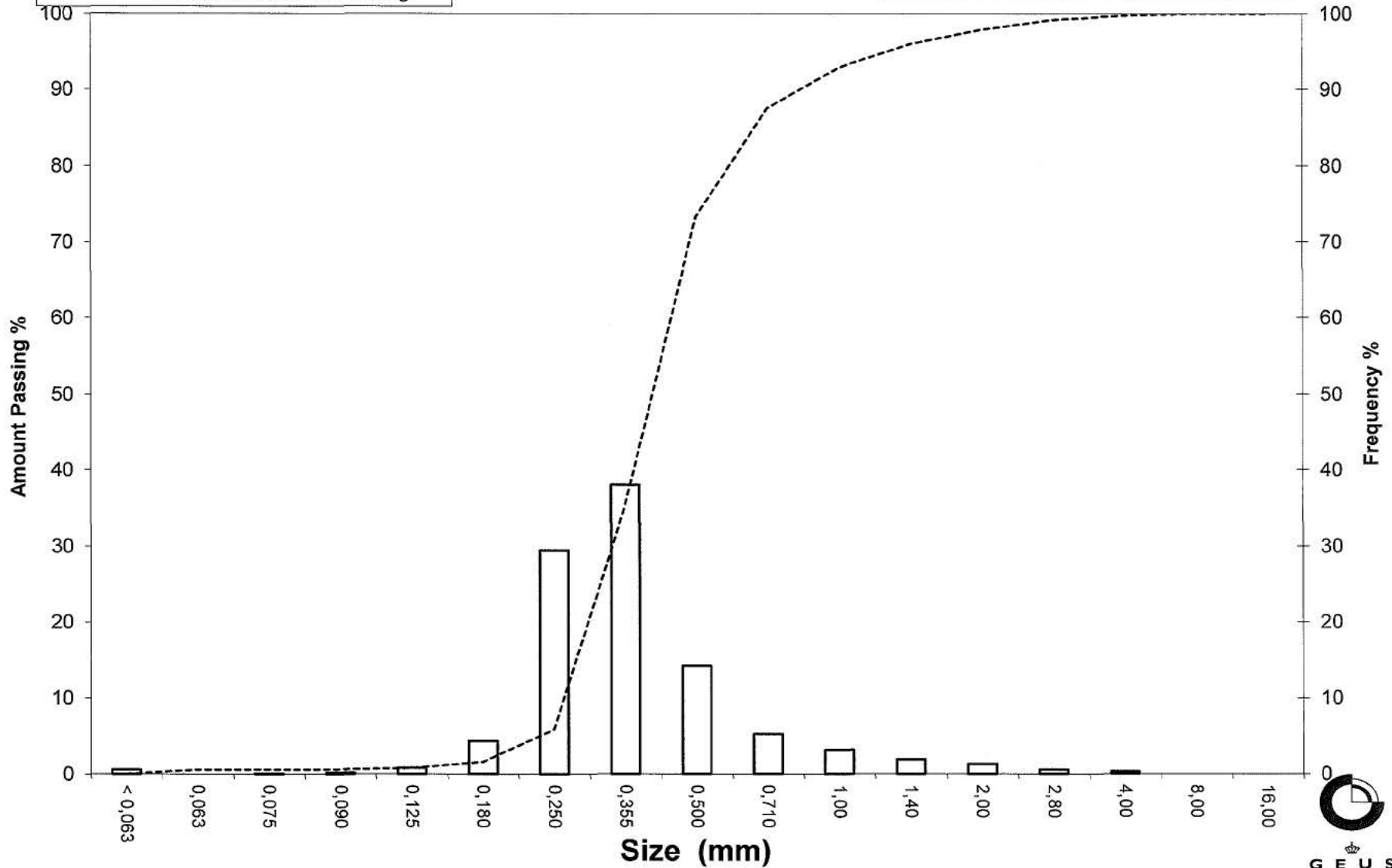
Mean, sorting, skewness and kurtosis are based on

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Grain Size Distribution

Sample Id: last 9/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 9/3
Lab. Id: 170130
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 163,88 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	0,46	0,28	99,72
2,80	-1,49	0,78	0,48	99,24
2,00	-1,00	2,44	1,49	97,75
1,40	-0,49	2,96	1,81	95,95
1,00	0,00	6,59	4,02	91,93
0,710	0,49	8,79	5,36	86,56
0,500	1,00	22,71	13,86	72,71
0,355	1,49	60,32	36,81	35,90
0,250	2,00	48,79	29,77	6,13
0,180	2,47	7,42	4,53	1,60
0,125	3,00	1,22	0,74	0,85
0,090	3,47	0,30	0,18	0,67
0,075	3,74	0,03	0,02	0,65
0,063	3,99	0,00	0,00	0,65
< 0,063	> 3,99	1,07	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):	2,24
Sand, medium (0,2 mm - 0,6 mm):	76,41
Sand, coarse (0,6 mm - 2 mm):	18,45
Gravel (> 2 mm):	2,25
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,31	-0,38
16%	84%	0,67	0,58
25%	75%	0,53	0,90
40%	60%	0,45	1,15
Median 50%	50%	0,41	1,28
75%	25%	0,32	1,66
84%	16%	0,28	1,81
90%	10%	0,26	1,92
95%	5%	0,23	2,10

Moments Statistics

Mean	1,22
Sorting	0,69
Skewness	-0,24
Kurtosis	1,35
Uniformity Coefficient	1,71

The analysis is executed according to DS 405.9 extended by sieves to the 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)

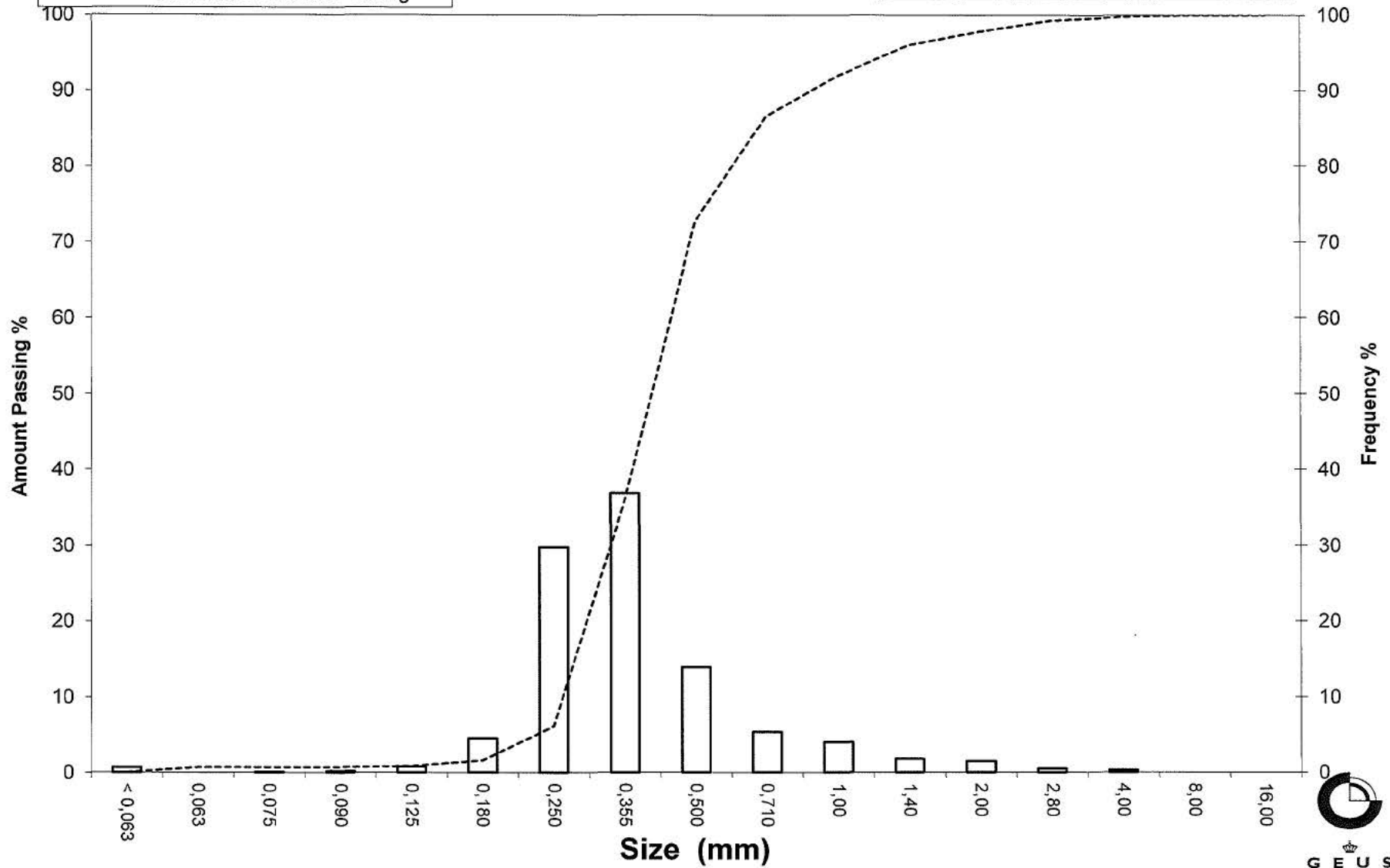
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 9/3

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 9/4
Lab. Id: 170131
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 164,47 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	0,07	99,93
2,80	-1,49	1,70	1,03	98,90
2,00	-1,00	3,00	1,82	97,08
1,40	-0,49	4,77	2,90	94,18
1,00	0,00	6,96	4,23	89,94
0,710	0,49	10,37	6,31	83,64
0,500	1,00	24,97	15,18	68,46
0,355	1,49	60,98	37,08	31,38
0,250	2,00	43,41	26,39	4,99
0,180	2,47	6,12	3,72	1,26
0,125	3,00	1,06	0,64	0,62
0,090	3,47	0,24	0,15	0,47
0,075	3,74	0,02	0,01	0,46
0,063	3,99	0,00	0,00	0,46
< 0,063	> 3,99	0,76	0,46	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,46
Sand, fine (0,063 mm - 0,200 mm):	1,87
Sand, medium (0,2 mm - 0,6 mm):	73,36
Sand, coarse (0,6 mm - 2 mm):	21,39
Gravel (> 2 mm):	2,92
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,57	-0,65
16%	84%	0,73	0,46
25%	75%	0,59	0,76
40%	60%	0,47	1,10
Median 50%	50%	0,43	1,22
75%	25%	0,33	1,60
84%	16%	0,29	1,77
90%	10%	0,27	1,89
95%	5%	0,25	2,00

Moments Statistics

Mean	1,15
Sorting	0,73
Skewness	-0,29
Kurtosis	1,29
Uniformity Coefficient	1,73

The analysis is executed according to DS 405.9 extended by sieves to the 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)

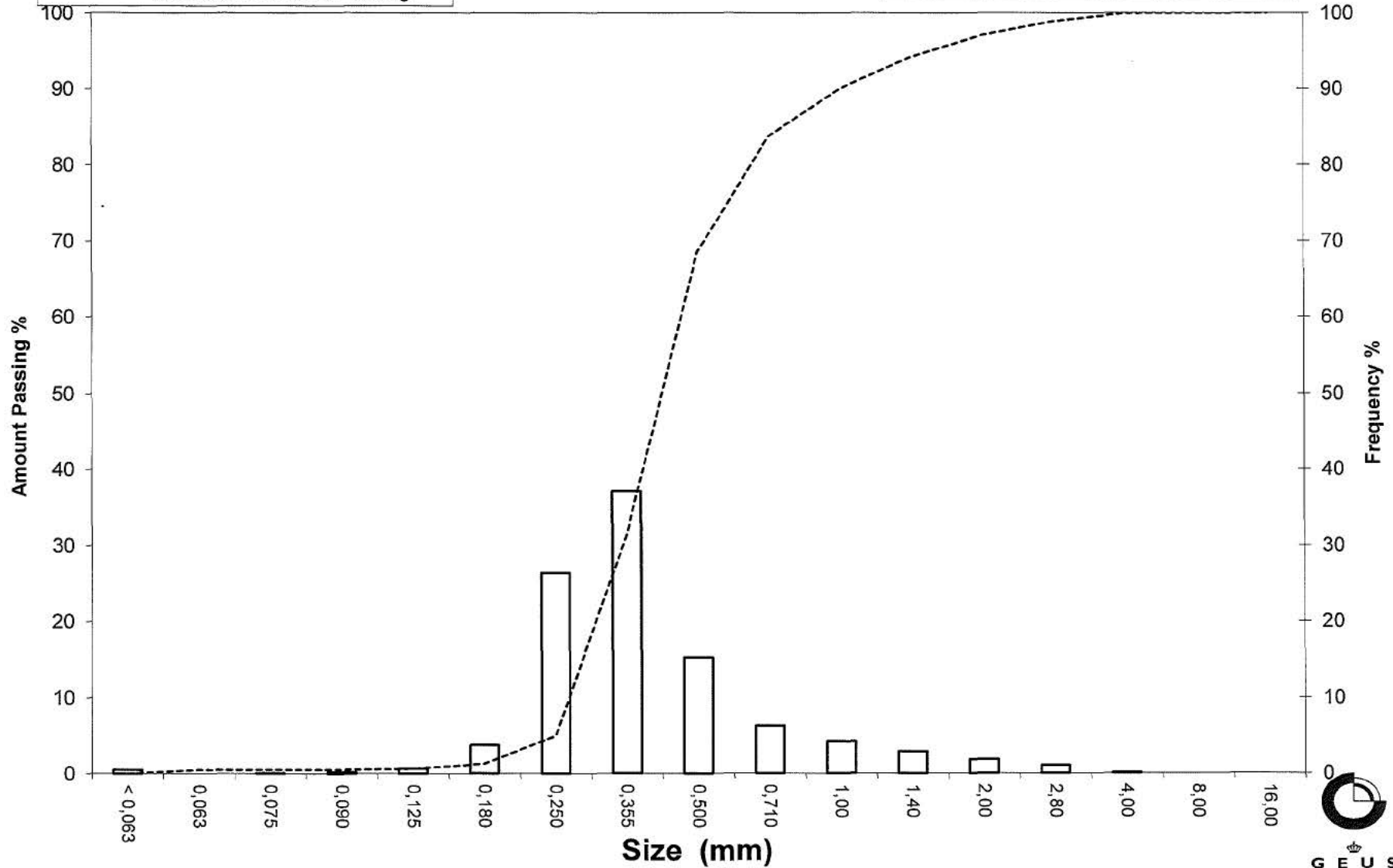
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 9/4

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 17/1
Lab. Id: 170132
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 164,09 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	0,23	0,14	99,86
2,80	-1,49	2,14	1,30	98,56
2,00	-1,00	2,84	1,73	96,82
1,40	-0,49	3,30	2,01	94,81
1,00	0,00	8,53	5,20	89,62
0,710	0,49	10,56	6,44	83,18
0,500	1,00	23,40	14,26	68,92
0,355	1,49	58,88	35,88	33,04
0,250	2,00	45,52	27,74	5,30
0,180	2,47	6,77	4,13	1,17
0,125	3,00	1,05	0,64	0,53
0,090	3,47	0,27	0,16	0,37
0,075	3,74	0,02	0,01	0,35
0,063	3,99	0,00	0,00	0,35
< 0,063	> 3,99	0,58	0,35	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,35
Sand, fine (0,063 mm - 0,200 mm):	2,00
Sand, medium (0,2 mm - 0,6 mm):	73,36
Sand, coarse (0,6 mm - 2 mm):	21,11
Gravel (> 2 mm):	3,18
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,46	-0,54
16%	84%	0,75	0,42
25%	75%	0,59	0,76
40%	60%	0,46	1,11
Median 50%	50%	0,42	1,24
75%	25%	0,32	1,62
84%	16%	0,29	1,78
90%	10%	0,27	1,90
95%	5%	0,24	2,03

Moments Statistics

Mean	1,15
Sorting	0,73
Skewness	-0,29
Kurtosis	1,22
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

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 $(d_{60\%} / d_{10\%})$ (dgg-Bulletin 1988)

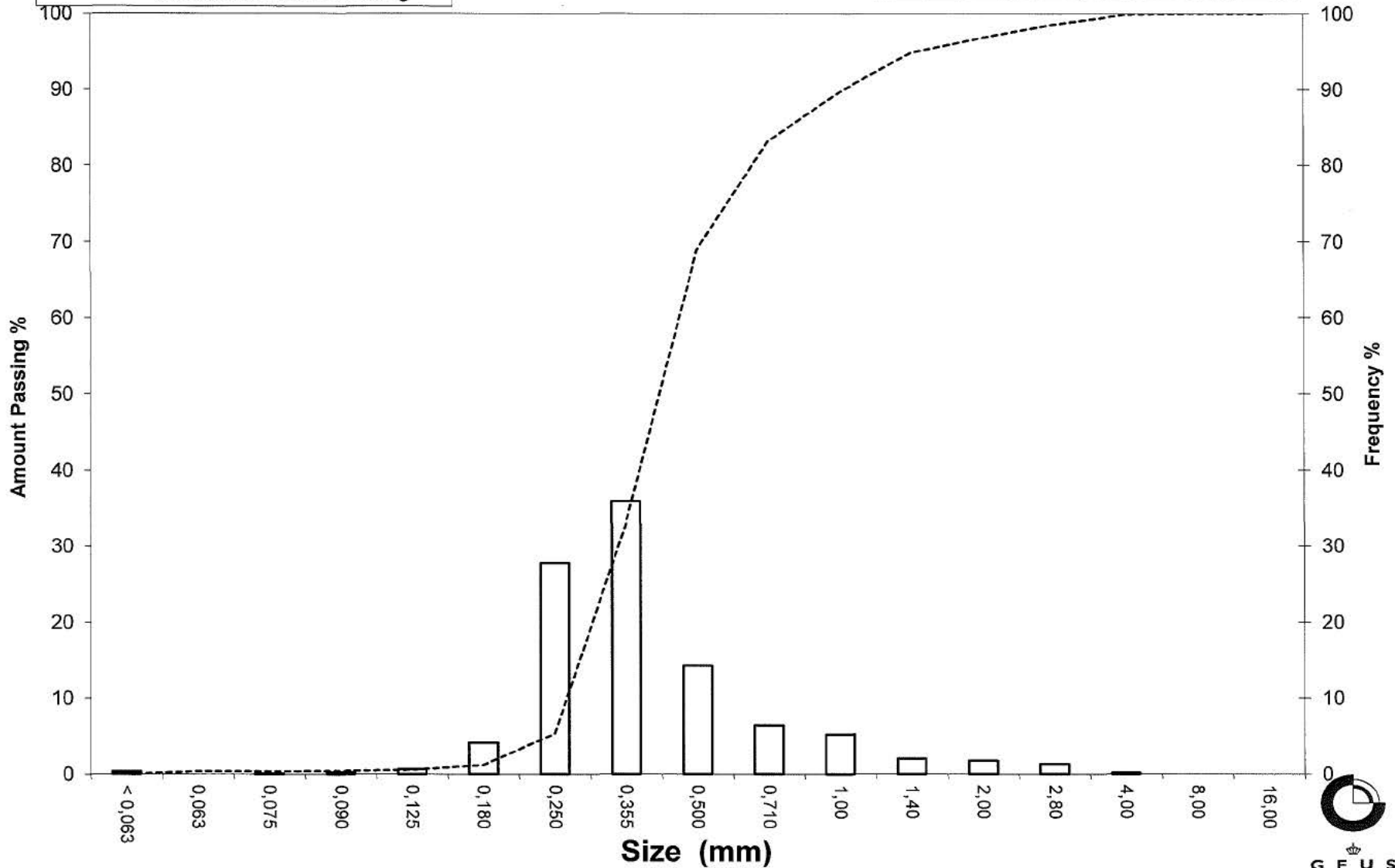
Mean, sorting, skewness and kurtosis are based on

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

Grain Size Distribution

Sample Id: last 17/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 17/2
 Lab. Id: 170133
 Submitter: Rohde Nielsen
 Subject: Sand fra Læsø
 Date: 17-10-2017
 Executed: PS
 Remarks:



Total Weight 162,98 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	0,16	0,10	99,90
2,80	-1,49	1,47	0,90	99,00
2,00	-1,00	2,55	1,56	97,44
1,40	-0,49	3,95	2,42	95,01
1,00	0,00	6,24	3,83	91,18
0,710	0,49	9,43	5,79	85,40
0,500	1,00	23,32	14,31	71,09
0,355	1,49	61,03	37,45	33,64
0,250	2,00	46,14	28,31	5,33
0,180	2,47	6,70	4,11	1,22
0,125	3,00	1,21	0,74	0,48
0,090	3,47	0,29	0,18	0,30
0,075	3,74	0,05	0,03	0,27
0,063	3,99	0,00	0,00	0,27
< 0,063	> 3,99	0,44	0,27	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	0,27
Sand, fine (0,063 mm - 0,200 mm)	2,13
Sand, medium (0,2 mm - 0,6 mm)	75,51
Sand, coarse (0,6 mm - 2 mm)	19,53
Gravel (> 2 mm)	2,56
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,40	-0,48
16%	84%	0,69	0,54
25%	75%	0,56	0,84
40%	60%	0,46	1,13
Median 50%	50%	0,42	1,26
75%	25%	0,32	1,63
84%	16%	0,29	1,79
90%	10%	0,27	1,90
95%	5%	0,24	2,03

Moments Statistics

Mean	1,19
Sorting	0,69
Skewness	-0,27
Kurtosis	1,31
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)

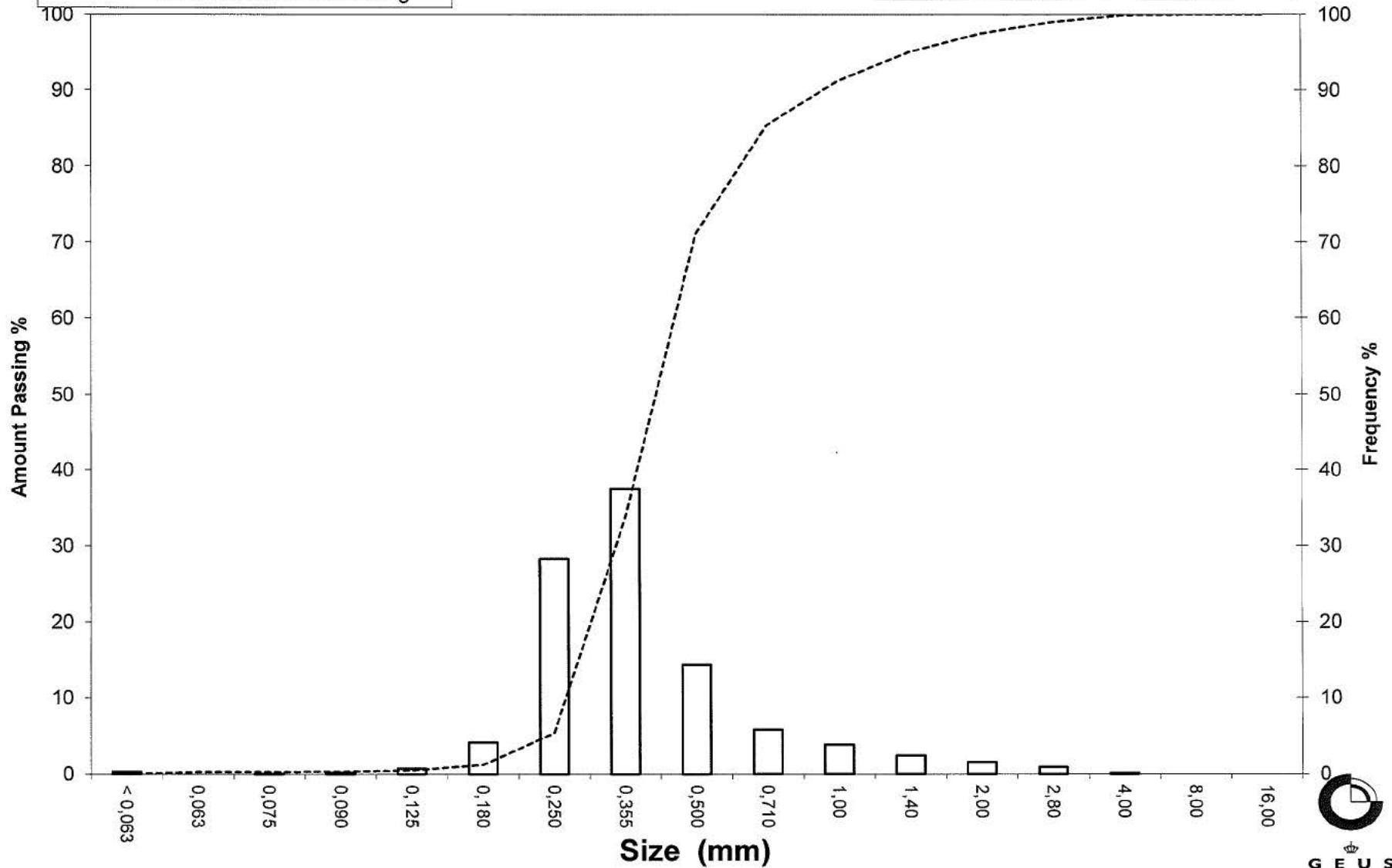
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 17/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 17/3
Lab. Id: 170134
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 163,71 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	0,00	0,00	100,00
4,00	-2,00	0,92	0,56	99,44
2,80	-1,49	1,48	0,90	98,53
2,00	-1,00	3,04	1,86	96,68
1,40	-0,49	3,86	2,36	94,32
1,00	0,00	8,73	5,33	88,99
0,710	0,49	11,04	6,74	82,24
0,500	1,00	24,20	14,78	67,46
0,355	1,49	58,21	35,56	31,90
0,250	2,00	43,96	26,85	5,05
0,180	2,47	6,53	3,99	1,06
0,125	3,00	1,02	0,62	0,44
0,090	3,47	0,27	0,16	0,27
0,075	3,74	0,03	0,02	0,26
0,063	3,99	0,00	0,00	0,26
< 0,063	> 3,99	0,42	0,26	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,26
Sand, fine (0,063 mm - 0,200 mm):	1,95
Sand, medium (0,2 mm - 0,6 mm):	72,30
Sand, coarse (0,6 mm - 2 mm):	22,18
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%	1,57	-0,65
16%	84%	0,79	0,35
25%	75%	0,61	0,72
40%	60%	0,47	1,09
Median 50%	50%	0,43	1,22
75%	25%	0,33	1,61
84%	16%	0,29	1,77
90%	10%	0,27	1,89
95%	5%	0,25	2,01

Moments Statistics

Mean	1,11
Sorting	0,76
Skewness	-0,32
Kurtosis	1,23
Uniformity Coefficient	1,74

The analysis is executed according to DS 405.9 extended by sieves to the 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)

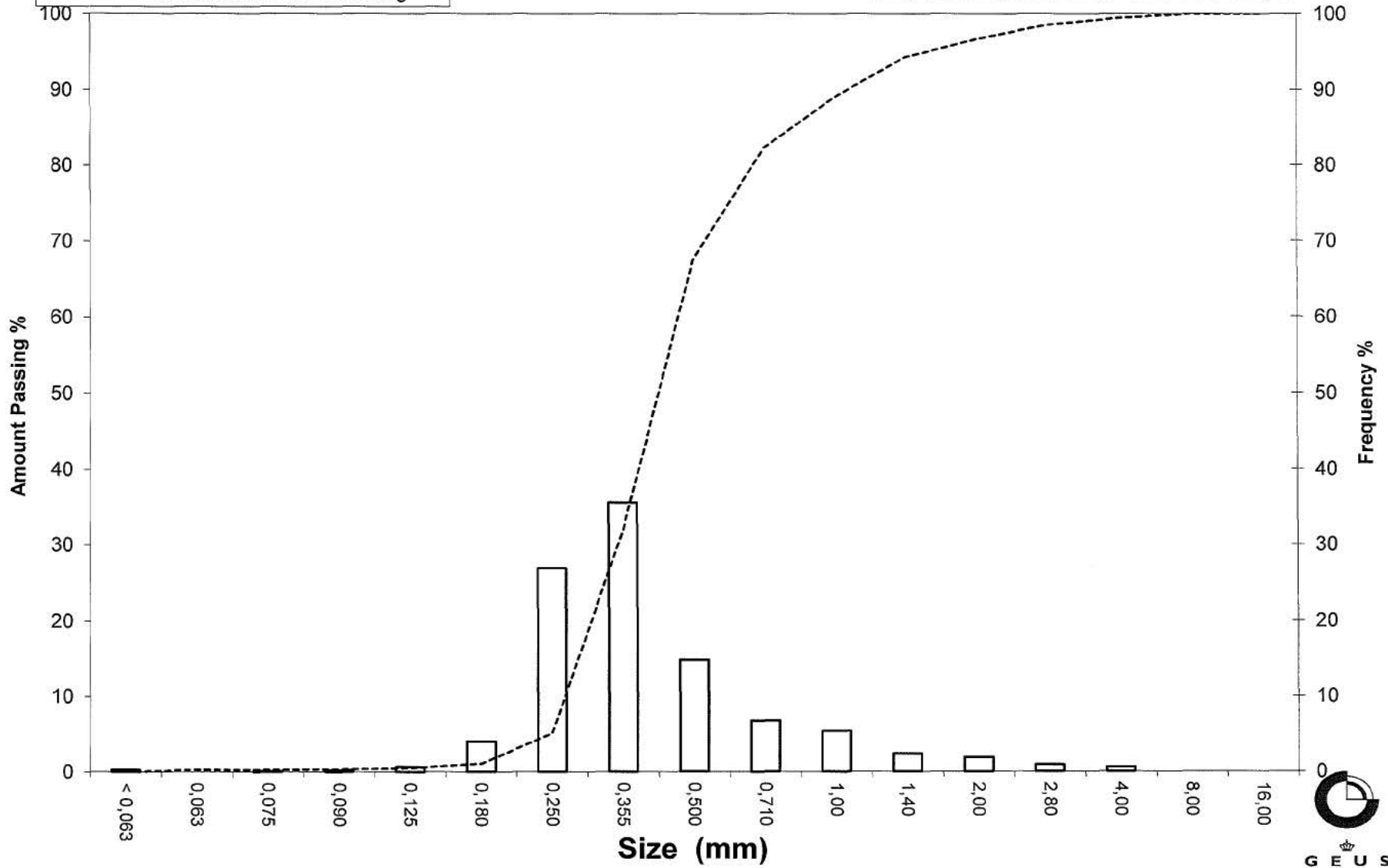
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 17/3

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 17/4
Lab. Id: 170135
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 162,67 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	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	0,46	0,28	99,72
2,80	-1,49	1,58	0,97	98,75
2,00	-1,00	2,36	1,45	97,30
1,40	-0,49	4,16	2,56	94,74
1,00	0,00	6,74	4,14	90,59
0,710	0,49	9,46	5,82	84,78
0,500	1,00	23,38	14,37	70,41
0,355	1,49	59,76	36,74	33,67
0,250	2,00	45,80	28,16	5,51
0,180	2,47	6,93	4,26	1,25
0,125	3,00	1,28	0,79	0,47
0,090	3,47	0,30	0,18	0,28
0,075	3,74	0,04	0,02	0,26
0,063	3,99	0,00	0,00	0,26
< 0,063	> 3,99	0,42	0,26	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,26
Sand, fine (0,063 mm - 0,200 mm):	2,21
Sand, medium (0,2 mm - 0,6 mm):	74,78
Sand, coarse (0,6 mm - 2 mm):	20,04
Gravel (> 2 mm):	2,70
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	1,46	-0,55
16%	84%	0,70	0,52
25%	75%	0,57	0,82
40%	60%	0,46	1,12
Median 50%	50%	0,42	1,25
75%	25%	0,32	1,63
84%	16%	0,29	1,79
90%	10%	0,27	1,91
95%	5%	0,24	2,05

Moments Statistics

Mean	1,19
Sorting	0,71
Skewness	-0,27
Kurtosis	1,31
Uniformity Coefficient	1,72

The analysis is executed according to DS 405.9 extended by sieves to the 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)

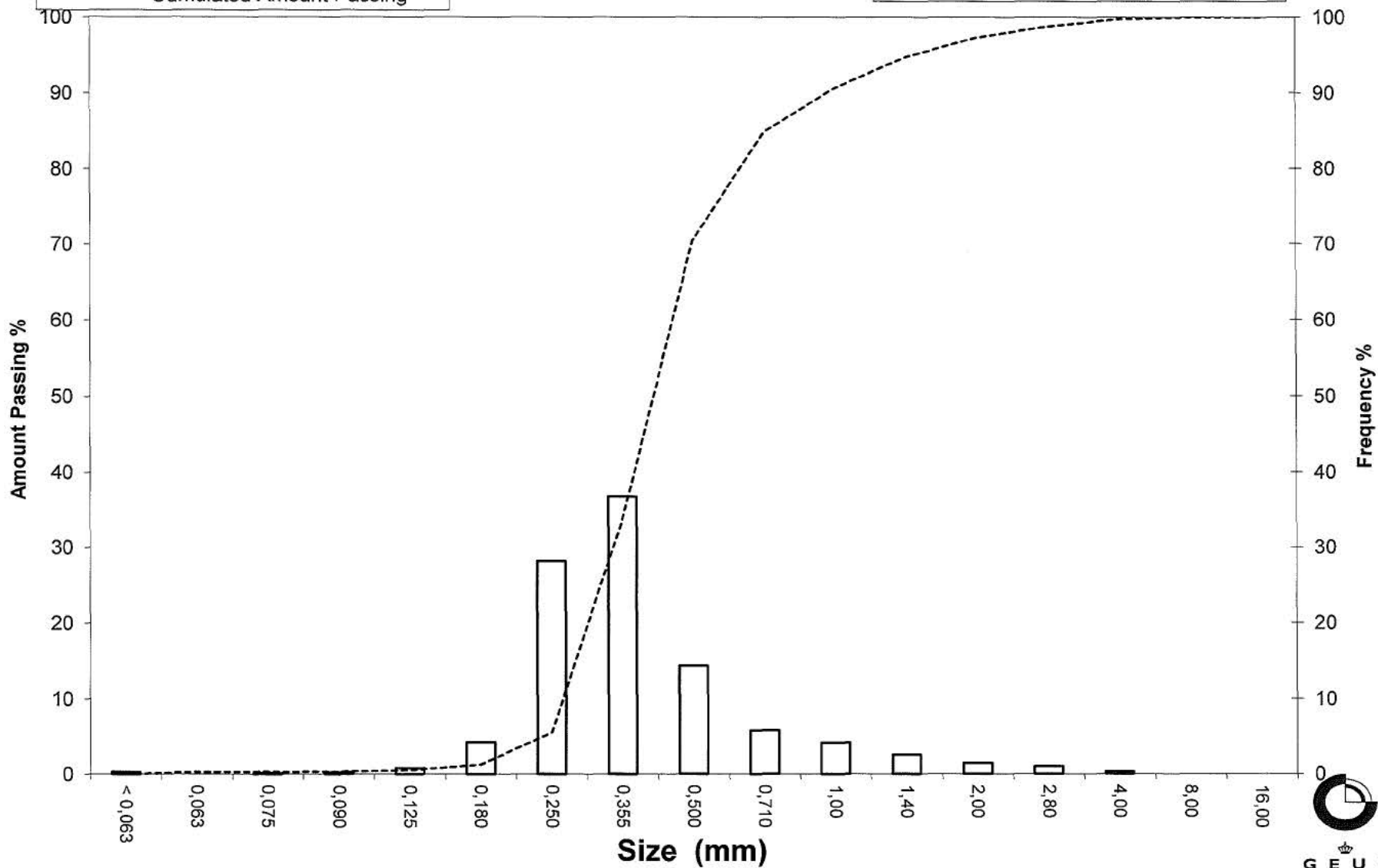
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 17/4

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 25/1
Lab. Id: 170136
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-1017
Executed: PS
Remarks:



Total Weight 159,2 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	0,01	0,01	99,99
2,80	-1,49	0,18	0,11	99,88
2,00	-1,00	0,00	0,00	99,88
1,40	-0,49	0,10	0,06	99,82
1,00	0,00	0,75	0,47	99,35
0,710	0,49	1,71	1,07	98,27
0,500	1,00	9,17	5,76	92,51
0,355	1,49	54,20	34,05	58,47
0,250	2,00	70,92	44,55	13,92
0,180	2,47	17,28	10,85	3,07
0,125	3,00	3,35	2,10	0,96
0,090	3,47	0,74	0,46	0,50
0,075	3,74	0,07	0,04	0,45
0,063	3,99	0,00	0,00	0,45
< 0,063	> 3,99	0,72	0,45	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,45
Sand, fine (0,063 mm - 0,200 mm):	5,71
Sand, medium (0,2 mm - 0,6 mm):	89,09
Sand, coarse (0,6 mm - 2 mm):	4,63
Gravel (> 2 mm):	0,12
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,59	0,76
16%	84%	0,46	1,11
25%	75%	0,43	1,23
40%	60%	0,36	1,47
Median 50%	50%	0,34	1,58
75%	25%	0,28	1,86
84%	16%	0,25	1,97
90%	10%	0,22	2,15
95%	5%	0,19	2,38

Moments Statistics

Mean	1,55
Sorting	0,46
Skewness	-0,05
Kurtosis	1,06
Uniformity Coefficient	1,61

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 $(d_{60\%} / d_{10\%})$ (dgg-Bulletin 1988)

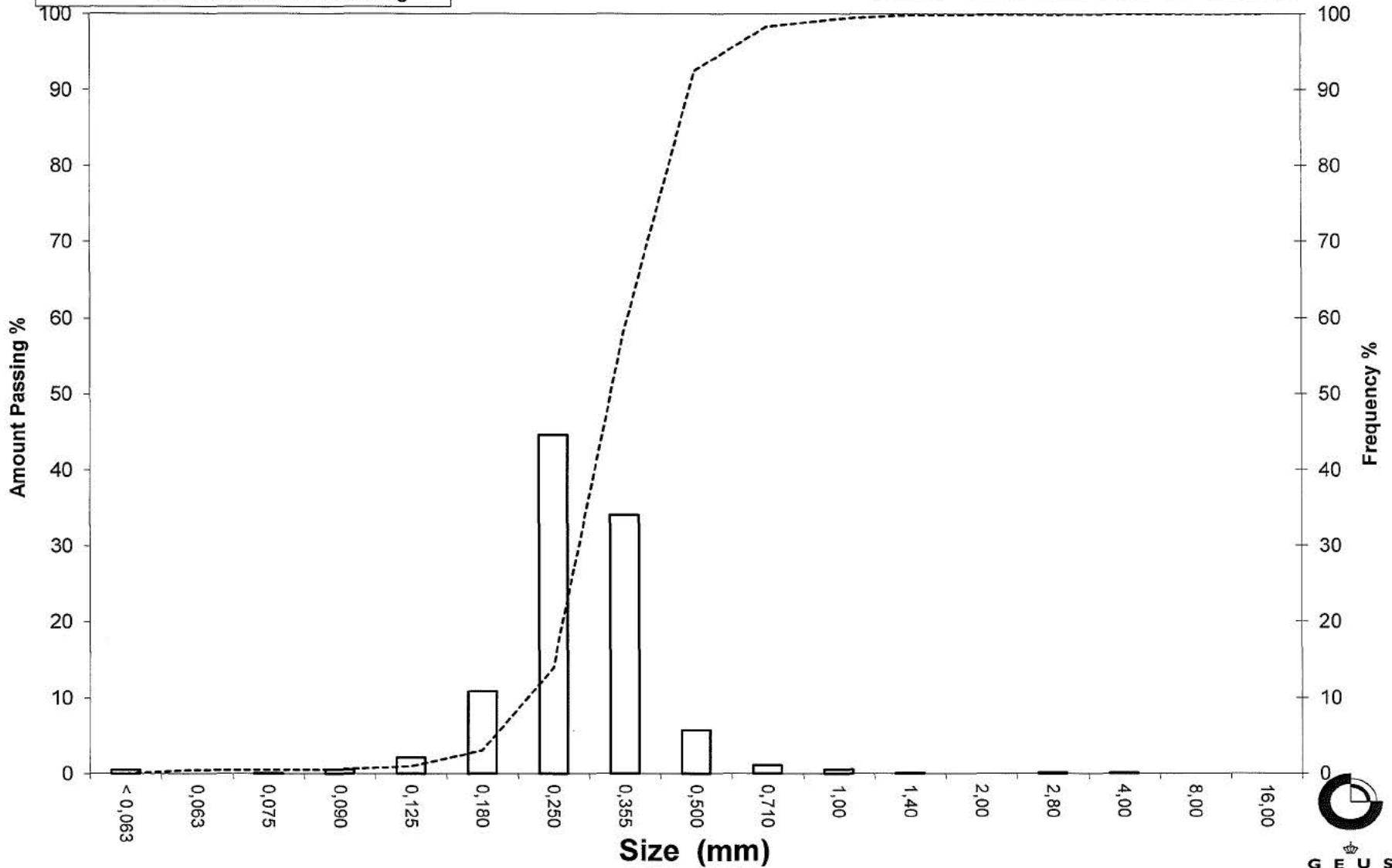
Mean, sorting, skewness and kurtosis are based on

Øster Voldgade 10 1350 København K
 Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: last 25/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 25/2
Lab. Id: 170137
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-1017
Executed: PS
Remarks:



Total Weight 158,65 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	0,07	0,04	99,96
2,80	-1,49	0,00	0,00	99,96
2,00	-1,00	0,10	0,06	99,89
1,40	-0,49	0,12	0,08	99,82
1,00	0,00	0,73	0,46	99,36
0,710	0,49	2,01	1,27	98,09
0,500	1,00	10,50	6,62	91,47
0,355	1,49	58,55	36,91	54,57
0,250	2,00	68,28	43,04	11,53
0,180	2,47	14,20	8,95	2,58
0,125	3,00	2,82	1,78	0,80
0,090	3,47	0,61	0,38	0,42
0,075	3,74	0,06	0,04	0,38
0,063	3,99	0,00	0,00	0,38
< 0,063	> 3,99	0,60	0,38	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,38
Sand, fine (0,063 mm - 0,200 mm):	4,76
Sand, medium (0,2 mm - 0,6 mm):	89,49
Sand, coarse (0,6 mm - 2 mm):	5,27
Gravel (> 2 mm):	0,11
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,61	0,71
16%	84%	0,47	1,09
25%	75%	0,44	1,20
40%	60%	0,38	1,41
Median 50%	50%	0,34	1,54
75%	25%	0,28	1,82
84%	16%	0,26	1,94
90%	10%	0,24	2,07
95%	5%	0,20	2,33

Moments Statistics

Mean	1,52
Sorting	0,46
Skewness	-0,05
Kurtosis	1,07
Uniformity Coefficient	1,58

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

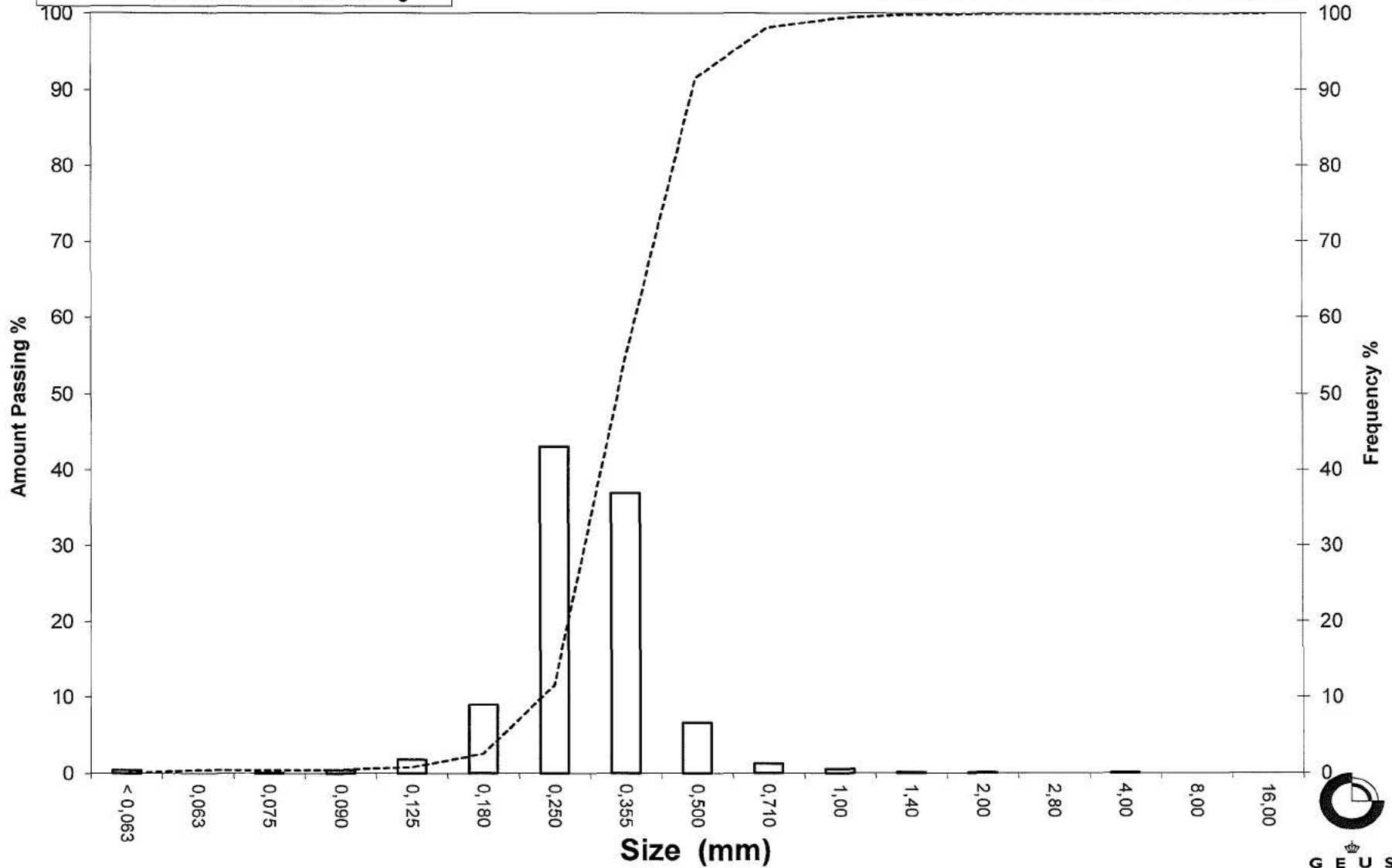
Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%}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

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 25/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 25/3
Lab. Id: 170138
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-1017
Executed: PS
Remarks:



Total Weight 158,21 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	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	0,02	0,01	99,99
2,80	-1,49	0,01	0,01	99,98
2,00	-1,00	0,00	0,00	99,98
1,40	-0,49	0,10	0,06	99,92
1,00	0,00	0,84	0,53	99,39
0,710	0,49	1,99	1,26	98,13
0,500	1,00	9,63	6,09	92,04
0,355	1,49	56,08	35,45	56,60
0,250	2,00	70,19	44,37	12,23
0,180	2,47	15,26	9,65	2,59
0,125	3,00	2,82	1,78	0,80
0,090	3,47	0,67	0,42	0,38
0,075	3,74	0,06	0,04	0,34
0,063	3,99	0,00	0,00	0,34
< 0,063	> 3,99	0,54	0,34	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,34
Sand, fine (0,063 mm - 0,200 mm):	5,00
Sand, medium (0,2 mm - 0,6 mm):	89,60
Sand, coarse (0,6 mm - 2 mm):	5,04
Gravel (> 2 mm):	0,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,60	0,73
16%	84%	0,47	1,10
25%	75%	0,43	1,22
40%	60%	0,37	1,44
Median 50%	50%	0,34	1,56
75%	25%	0,28	1,84
84%	16%	0,26	1,95
90%	10%	0,23	2,10
95%	5%	0,20	2,34

Moments Statistics

Mean	1,54
Sorting	0,46
Skewness	-0,06
Kurtosis	1,07
Uniformity Coefficient	1,58

The analysis is executed according to DS 405.9 extended by sieves to the 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)

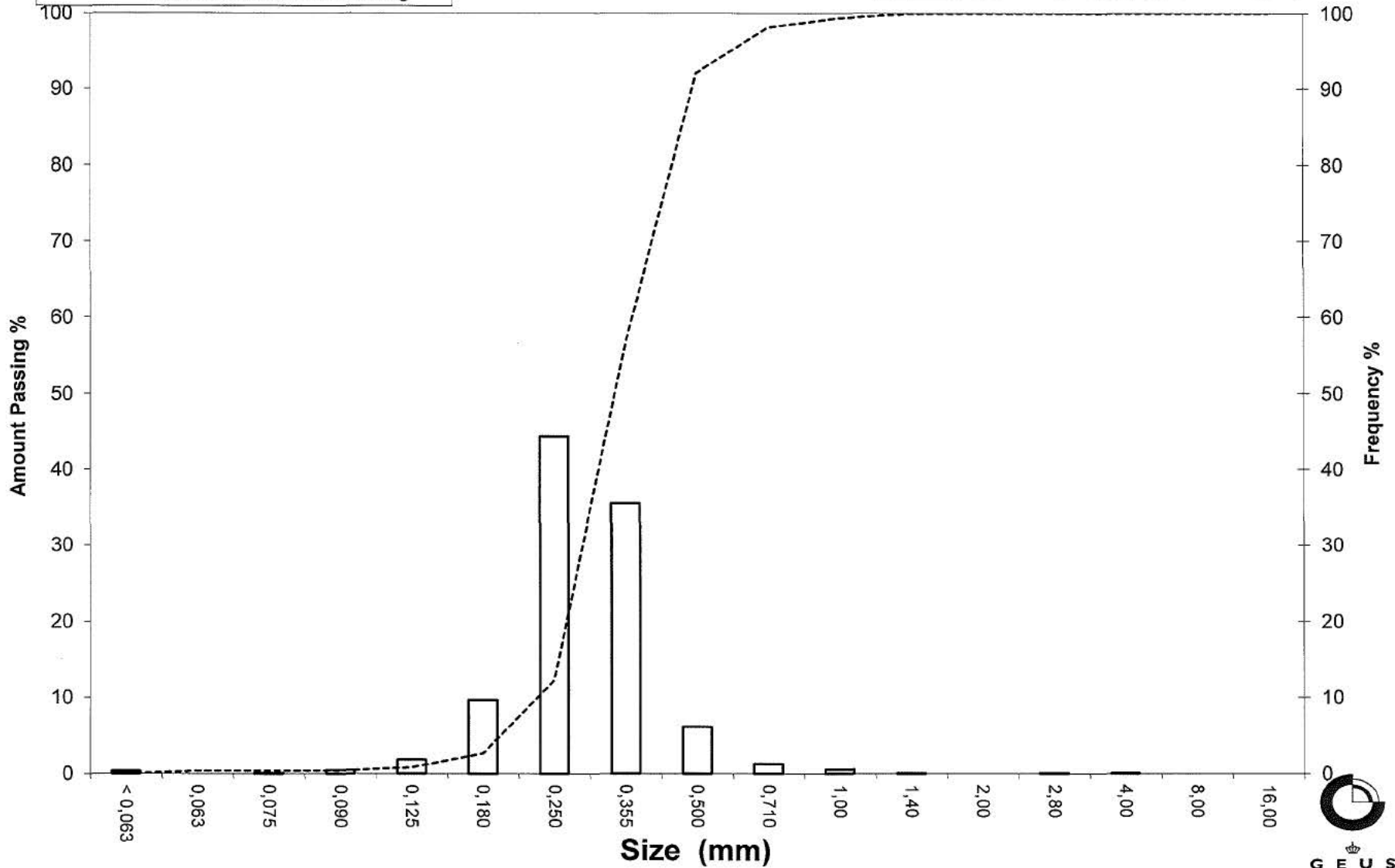
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 25/3

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 25/4
Lab. Id: 170139
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-1017
Executed: PS
Remarks:



Total Weight 158,03 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	0,06	0,04	99,96
2,00	-1,00	0,00	0,00	99,96
1,40	-0,49	0,12	0,08	99,89
1,00	0,00	0,54	0,34	99,54
0,710	0,49	1,75	1,11	98,44
0,500	1,00	9,51	6,02	92,42
0,355	1,49	57,86	36,61	55,81
0,250	2,00	69,18	43,78	12,03
0,180	2,47	14,72	9,31	2,71
0,125	3,00	2,89	1,83	0,89
0,090	3,47	0,64	0,40	0,48
0,075	3,74	0,06	0,04	0,44
0,063	3,99	0,00	0,00	0,44
< 0,063	> 3,99	0,70	0,44	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,44
Sand, fine (0,063 mm - 0,200 mm):	4,93
Sand, medium (0,2 mm - 0,6 mm):	89,91
Sand, coarse (0,6 mm - 2 mm):	4,68
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%	0,59	0,76
16%	84%	0,47	1,10
25%	75%	0,43	1,21
40%	60%	0,37	1,43
Median 50%	50%	0,34	1,55
75%	25%	0,28	1,83
84%	16%	0,26	1,95
90%	10%	0,23	2,09
95%	5%	0,20	2,34

Moments Statistics

Mean	1,53
Sorting	0,45
Skewness	-0,03
Kurtosis	1,05
Uniformity Coefficient	1,58

The analysis is executed according to DS 405.9 extended by sieves to the 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)

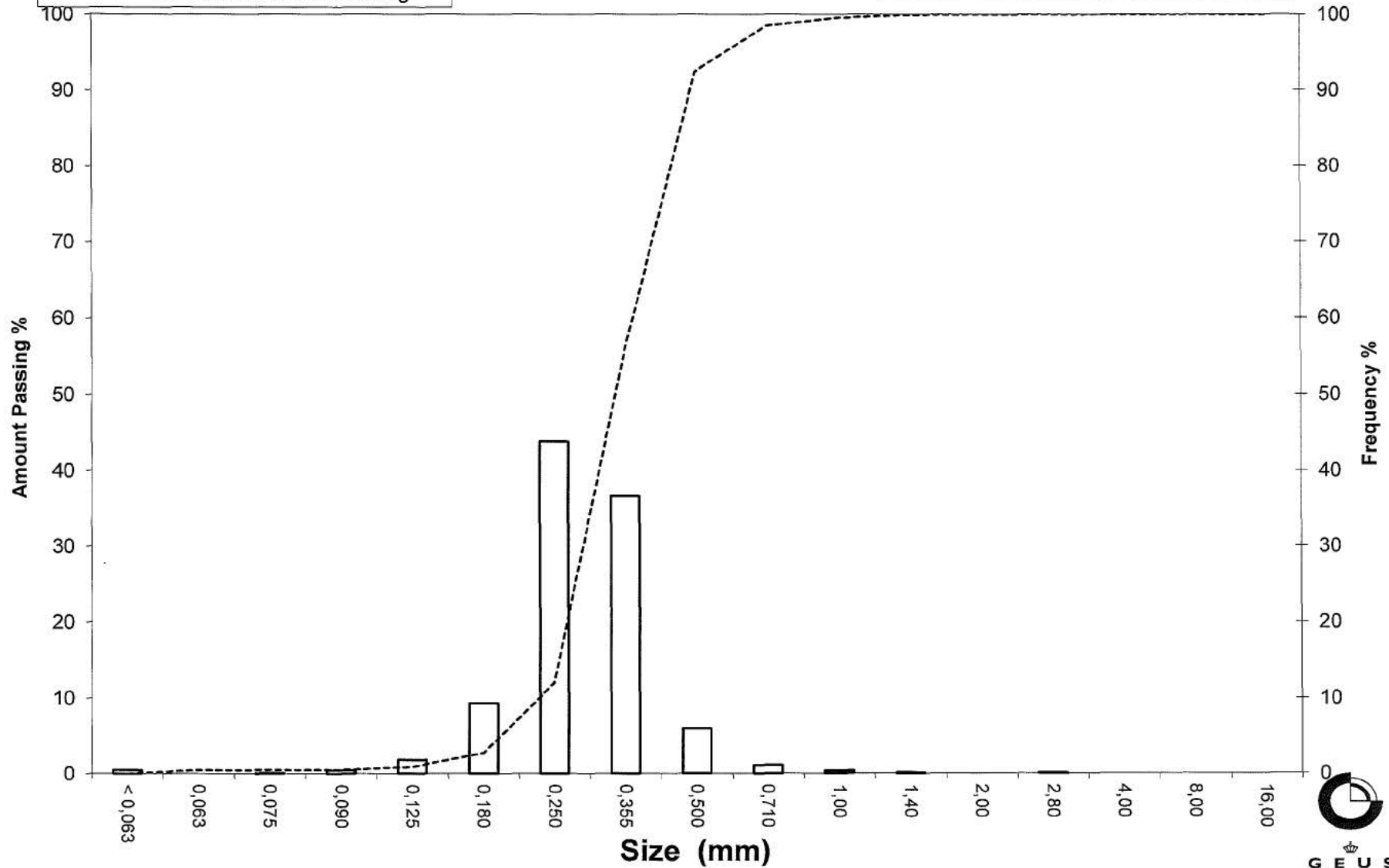
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 25/4

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 33/1
Lab. Id: 170140
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 157,62 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	0,01	0,01	99,99
2,80	-1,49	0,05	0,03	99,96
2,00	-1,00	0,07	0,04	99,92
1,40	-0,49	0,09	0,06	99,86
1,00	0,00	0,68	0,43	99,43
0,710	0,49	1,85	1,17	98,26
0,500	1,00	8,71	5,53	92,73
0,355	1,49	54,88	34,82	57,91
0,250	2,00	70,12	44,49	13,42
0,180	2,47	16,40	10,40	3,02
0,125	3,00	3,07	1,95	1,07
0,090	3,47	0,70	0,44	0,63
0,075	3,74	0,06	0,04	0,59
0,063	3,99	0,00	0,00	0,59
< 0,063	> 3,99	0,93	0,59	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,59
Sand, fine (0,063 mm - 0,200 mm):	5,40
Sand, medium (0,2 mm - 0,6 mm):	89,37
Sand, coarse (0,6 mm - 2 mm):	4,56
Gravel (> 2 mm):	0,08
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,59	0,77
16%	84%	0,46	1,11
25%	75%	0,43	1,23
40%	60%	0,36	1,46
Median 50%	50%	0,34	1,57
75%	25%	0,28	1,85
84%	16%	0,26	1,97
90%	10%	0,23	2,14
95%	5%	0,19	2,37

Moments Statistics

Mean	1,55
Sorting	0,46
Skewness	-0,04
Kurtosis	1,06
Uniformity Coefficient	1,60

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)

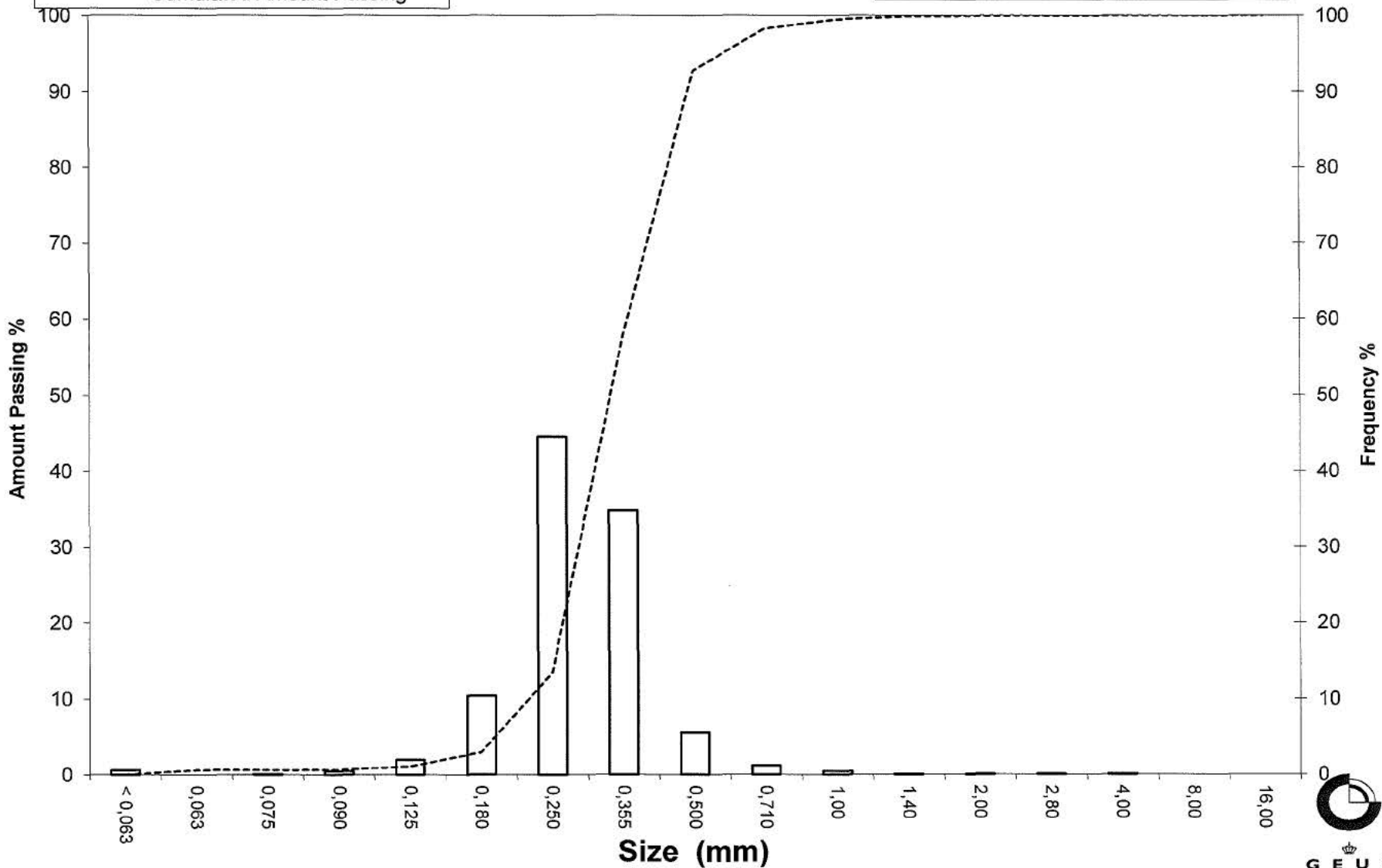
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 33/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 33/2
Lab. Id: 170141
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 157,8 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	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	0,04	0,03	99,97
2,80	-1,49	0,00	0,00	99,97
2,00	-1,00	0,03	0,02	99,96
1,40	-0,49	0,15	0,10	99,86
1,00	0,00	0,61	0,39	99,47
0,710	0,49	1,95	1,24	98,24
0,500	1,00	10,46	6,63	91,61
0,355	1,49	58,05	36,79	54,82
0,250	2,00	67,56	42,81	12,01
0,180	2,47	14,54	9,21	2,79
0,125	3,00	2,90	1,84	0,96
0,090	3,47	0,62	0,39	0,56
0,075	3,74	0,06	0,04	0,53
0,063	3,99	0,00	0,00	0,53
< 0,063	> 3,99	0,83	0,53	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,53
Sand, fine (0,063 mm - 0,200 mm):	4,90
Sand, medium (0,2 mm - 0,6 mm):	89,34
Sand, coarse (0,6 mm - 2 mm):	5,19
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%	0,61	0,72
16%	84%	0,47	1,09
25%	75%	0,43	1,20
40%	60%	0,38	1,41
Median 50%	50%	0,34	1,54
75%	25%	0,28	1,83
84%	16%	0,26	1,94
90%	10%	0,23	2,09
95%	5%	0,20	2,35

Moments Statistics

Mean	1,53
Sorting	0,46
Skewness	-0,04
Kurtosis	1,07
Uniformity Coefficient	1,60

The analysis is executed according to DS 405.9 extended by sieves to the 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)

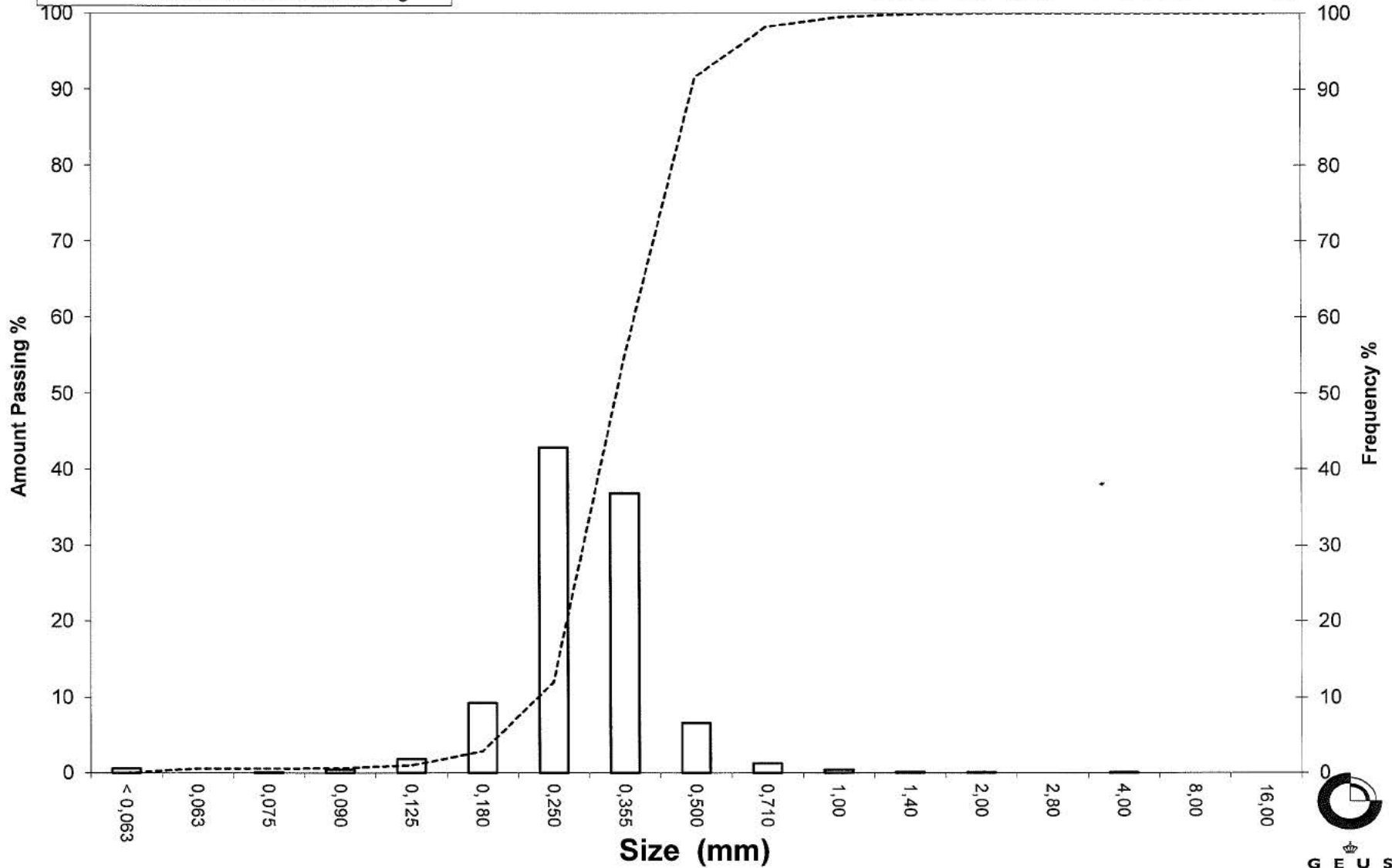
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 33/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 33/3
Lab. Id: 170142
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 158,13 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	0,02	0,01	99,99
2,80	-1,49	0,10	0,06	99,92
2,00	-1,00	0,05	0,03	99,89
1,40	-0,49	0,11	0,07	99,82
1,00	0,00	0,55	0,35	99,48
0,710	0,49	1,53	0,97	98,51
0,500	1,00	9,15	5,79	92,72
0,355	1,49	56,39	35,66	57,06
0,250	2,00	69,55	43,98	13,08
0,180	2,47	16,25	10,28	2,80
0,125	3,00	2,97	1,88	0,92
0,090	3,47	0,66	0,42	0,51
0,075	3,74	0,05	0,03	0,47
0,063	3,99	0,00	0,00	0,47
< 0,063	> 3,99	0,75	0,47	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,47
Sand, fine (0,063 mm - 0,200 mm):	5,26
Sand, medium (0,2 mm - 0,6 mm):	89,74
Sand, coarse (0,6 mm - 2 mm):	4,42
Gravel (> 2 mm):	0,11
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,58	0,78
16%	84%	0,46	1,11
25%	75%	0,43	1,22
40%	60%	0,37	1,45
Median 50%	50%	0,34	1,56
75%	25%	0,28	1,84
84%	16%	0,26	1,96
90%	10%	0,23	2,13
95%	5%	0,19	2,36

Moments Statistics

Mean	1,54
Sorting	0,45
Skewness	-0,03
Kurtosis	1,04
Uniformity Coefficient	1,60

The analysis is executed according to DS 405.9 extended by sieves to the 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)

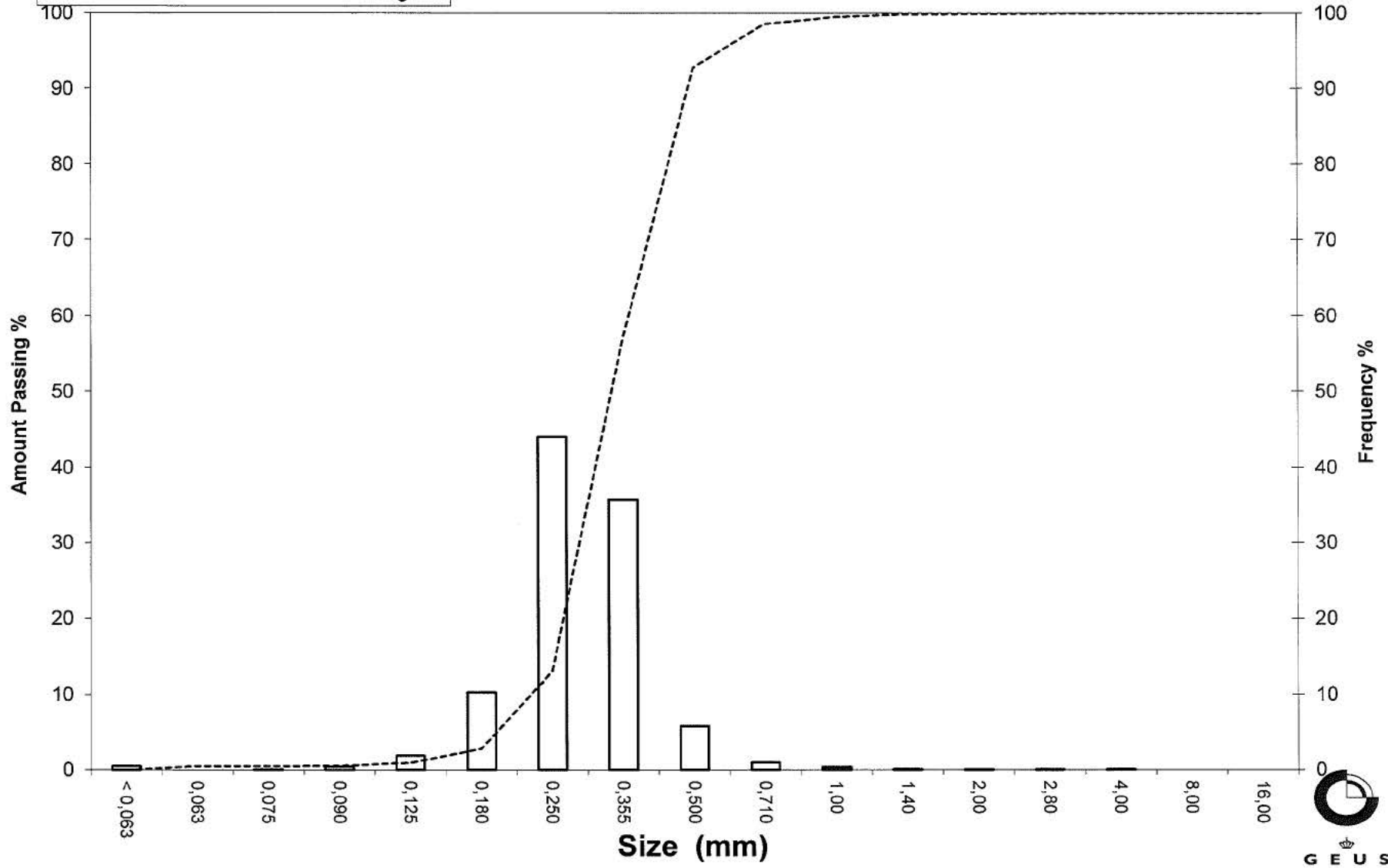
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 33/3

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 33/4
Lab. Id: 170143
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 156,06 g

Size Fractions

Size	Size	Weight		Cumulated amount passing
		g	%	
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	0,03	0,02	99,98
2,80	-1,49	0,05	0,03	99,95
2,00	-1,00	0,04	0,03	99,92
1,40	-0,49	0,17	0,11	99,81
1,00	0,00	0,55	0,35	99,46
0,710	0,49	1,55	0,99	98,47
0,500	1,00	9,48	6,07	92,39
0,355	1,49	56,80	36,40	56,00
0,250	2,00	68,00	43,57	12,42
0,180	2,47	15,03	9,63	2,79
0,125	3,00	2,95	1,89	0,90
0,090	3,47	0,61	0,39	0,51
0,075	3,74	0,05	0,03	0,48
0,063	3,99	0,00	0,00	0,48
< 0,063	> 3,99	0,75	0,48	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,48
Sand, fine (0,063 mm - 0,200 mm):	5,06
Sand, medium (0,2 mm - 0,6 mm):	89,74
Sand, coarse (0,6 mm - 2 mm):	4,64
Gravel (> 2 mm):	0,08
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,59	0,76
16%	84%	0,47	1,10
25%	75%	0,43	1,22
40%	60%	0,37	1,43
Median 50%	50%	0,34	1,55
75%	25%	0,28	1,83
84%	16%	0,26	1,95
90%	10%	0,23	2,11
95%	5%	0,20	2,35

Moments Statistics

Mean	1,54
Sorting	0,45
Skewness	-0,03
Kurtosis	1,05
Uniformity Coefficient	1,60

The analysis is executed according to DS 405.9 extended by sieves to the 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)

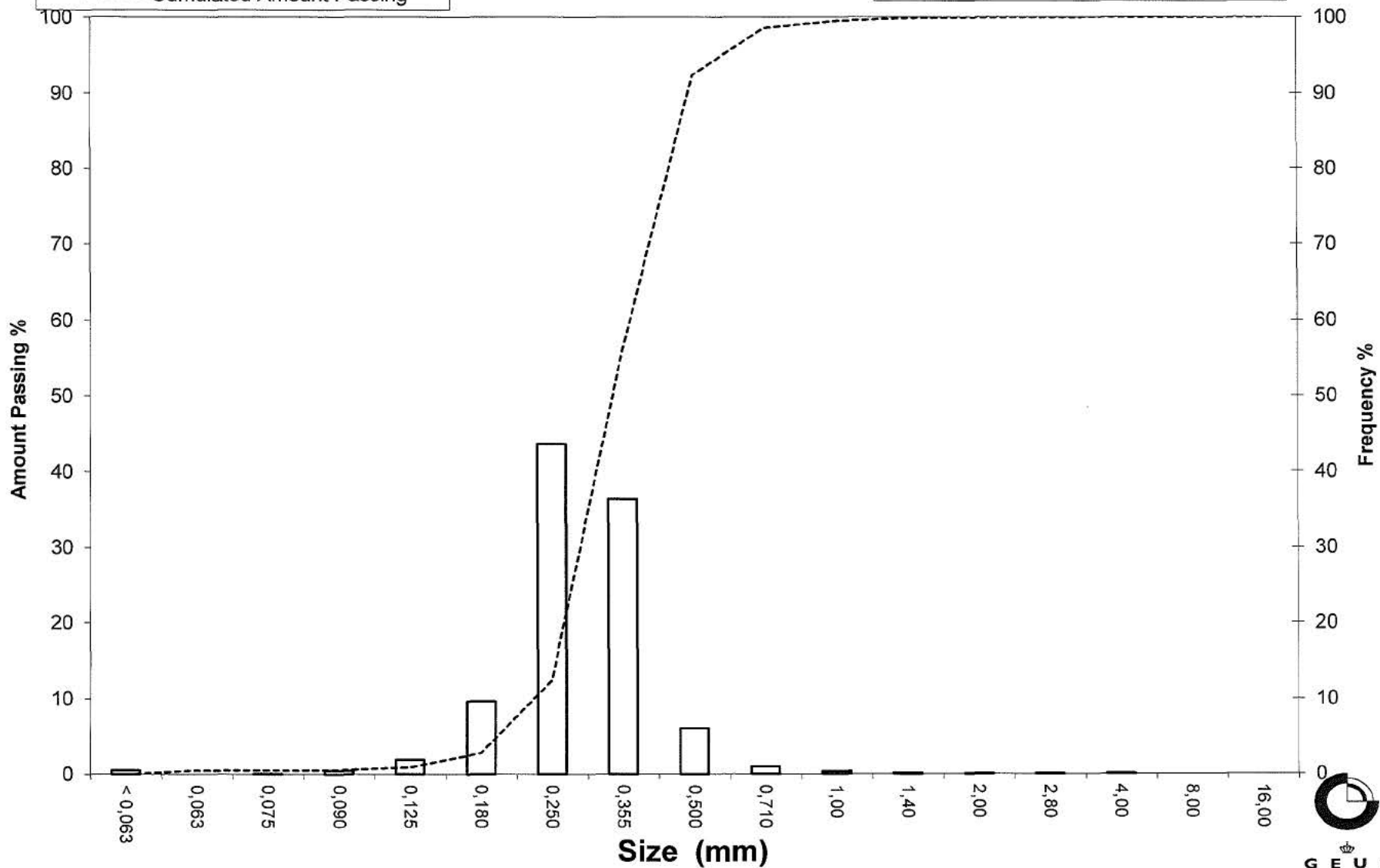
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 33/4

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 42/1
Lab. Id: 170144
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 163,47 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	0,00	0,00	100,00
2,80	-1,49	0,05	0,03	99,97
2,00	-1,00	0,32	0,20	99,77
1,40	-0,49	0,43	0,26	99,51
1,00	0,00	1,17	0,72	98,79
0,710	0,49	3,76	2,30	96,49
0,500	1,00	17,49	10,70	85,80
0,355	1,49	66,99	40,98	44,82
0,250	2,00	58,71	35,91	8,90
0,180	2,47	11,02	6,74	2,16
0,125	3,00	2,35	1,44	0,72
0,090	3,47	0,40	0,24	0,48
0,075	3,74	0,03	0,02	0,46
0,063	3,99	0,00	0,00	0,46
< 0,063	> 3,99	0,75	0,46	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,46
Sand, fine (0,063 mm - 0,200 mm):	3,63
Sand, medium (0,2 mm - 0,6 mm):	86,80
Sand, coarse (0,6 mm - 2 mm):	8,88
Gravel (> 2 mm):	0,23
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%	0,49	1,02
25%	75%	0,46	1,11
40%	60%	0,41	1,29
Median 50%	50%	0,37	1,42
75%	25%	0,30	1,75
84%	16%	0,27	1,88
90%	10%	0,25	1,98
95%	5%	0,21	2,26

Moments Statistics

Mean	1,44
Sorting	0,47
Skewness	0,03
Kurtosis	1,09
Uniformity Coefficient	1,61

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)

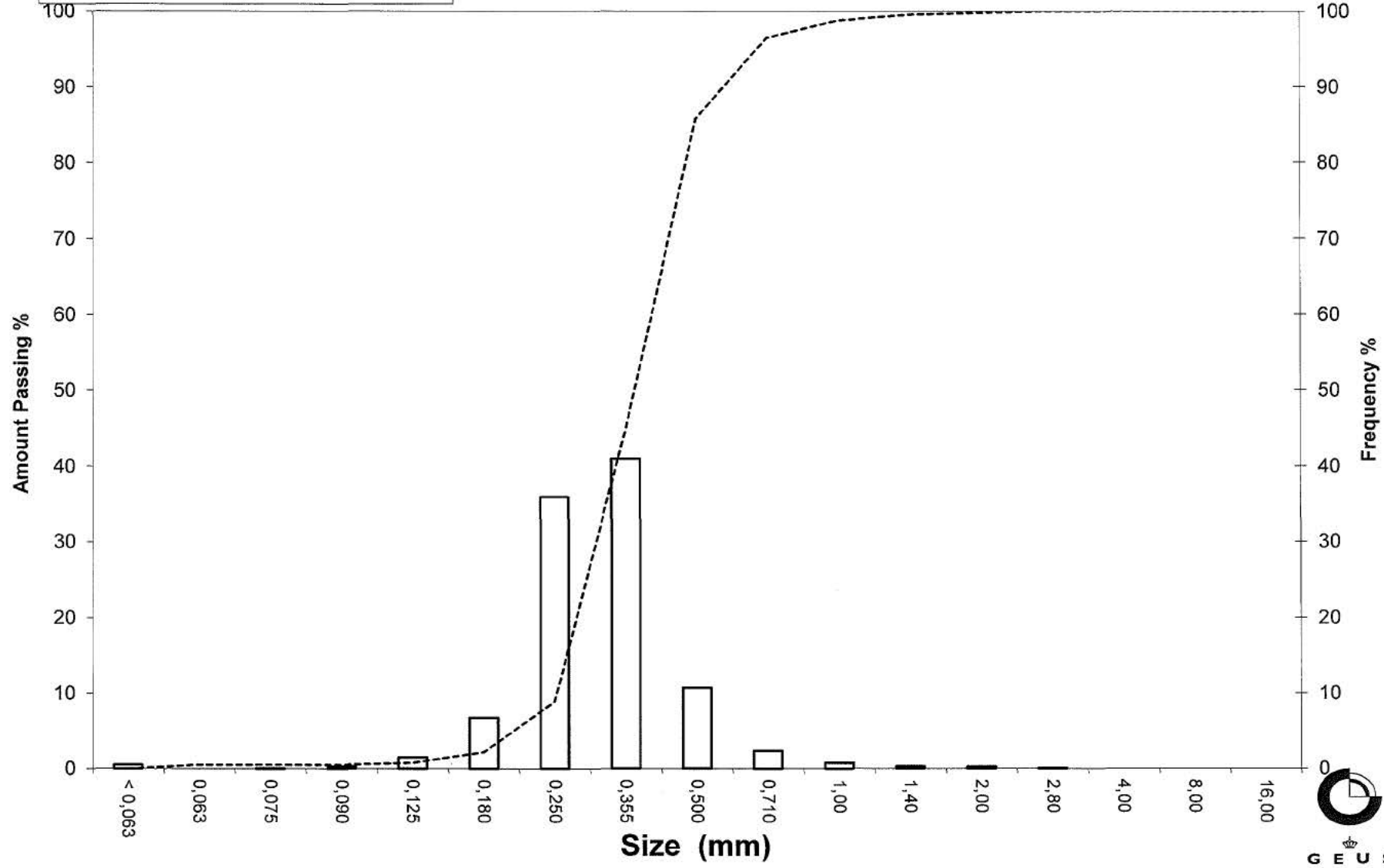
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 42/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 42/2
Lab. Id: 170145
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 163,52 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	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	0,09	0,06	99,94
2,80	-1,49	0,28	0,17	99,77
2,00	-1,00	0,68	0,42	99,36
1,40	-0,49	0,65	0,40	98,96
1,00	0,00	2,04	1,25	97,71
0,710	0,49	4,13	2,53	95,19
0,500	1,00	17,76	10,86	84,33
0,355	1,49	64,73	39,59	44,74
0,250	2,00	58,78	35,95	8,79
0,180	2,47	11,08	6,78	2,02
0,125	3,00	2,25	1,38	0,64
0,090	3,47	0,44	0,27	0,37
0,075	3,74	0,03	0,02	0,35
0,063	3,99	0,00	0,00	0,35
< 0,063	> 3,99	0,58	0,35	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,35
Sand, fine (0,063 mm - 0,200 mm):	3,60
Sand, medium (0,2 mm - 0,6 mm):	85,54
Sand, coarse (0,6 mm - 2 mm):	9,86
Gravel (> 2 mm):	0,64
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%	0,50	1,00
25%	75%	0,47	1,10
40%	60%	0,41	1,28
Median 50%	50%	0,37	1,42
75%	25%	0,30	1,75
84%	16%	0,27	1,88
90%	10%	0,25	1,98
95%	5%	0,21	2,25

Moments Statistics

Mean	1,43
Sorting	0,48
Skewness	0,00
Kurtosis	1,10
Uniformity Coefficient	1,62

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

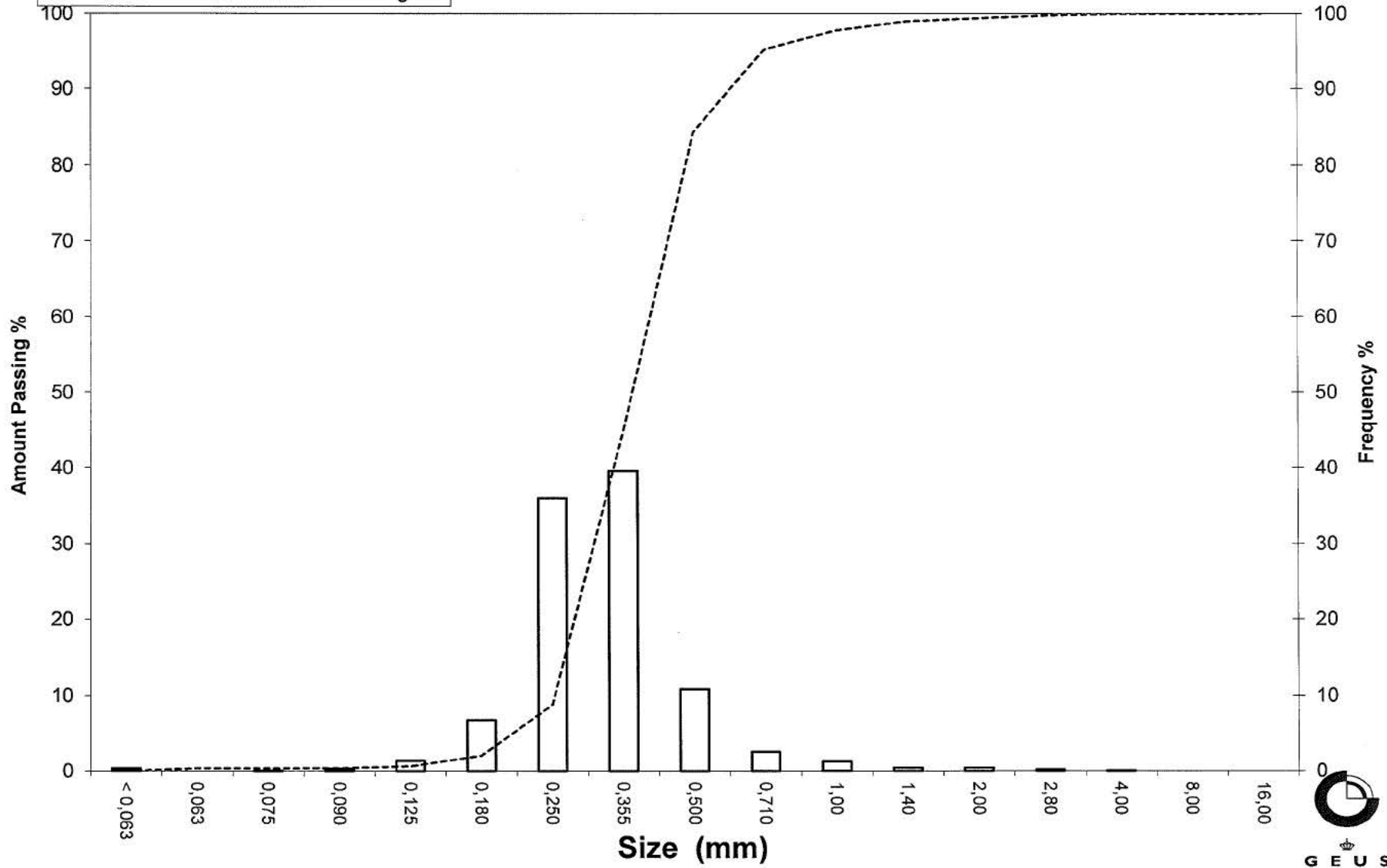
Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%}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

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 42/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 42/3
Lab. Id: 170146
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 163,12 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount
mm	Φ	g	%	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	0,29	0,18	99,82
2,00	-1,00	0,25	0,15	99,67
1,40	-0,49	0,69	0,42	99,25
1,00	0,00	1,51	0,93	98,32
0,710	0,49	3,79	2,32	96,00
0,500	1,00	16,89	10,35	85,64
0,355	1,49	66,76	40,93	44,72
0,250	2,00	58,98	36,16	8,56
0,180	2,47	10,88	6,67	1,89
0,125	3,00	2,36	1,45	0,44
0,090	3,47	0,42	0,26	0,18
0,075	3,74	0,04	0,02	0,16
0,063	3,99	0,00	0,00	0,16
< 0,063	> 3,99	0,26	0,16	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,16
Sand, fine (0,063 mm - 0,200 mm):	3,63
Sand, medium (0,2 mm - 0,6 mm):	86,78
Sand, coarse (0,6 mm - 2 mm):	9,10
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%	0,69	0,54
16%	84%	0,49	1,02
25%	75%	0,46	1,11
40%	60%	0,41	1,29
Median 50%	50%	0,37	1,42
75%	25%	0,30	1,75
84%	16%	0,27	1,88
90%	10%	0,25	1,98
95%	5%	0,21	2,23

Moments Statistics

Mean	1,44
Sorting	0,47
Skewness	0,01
Kurtosis	1,10
Uniformity Coefficient	1,61

The analysis is executed according to DS 405.9 extended by sieves to the 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)

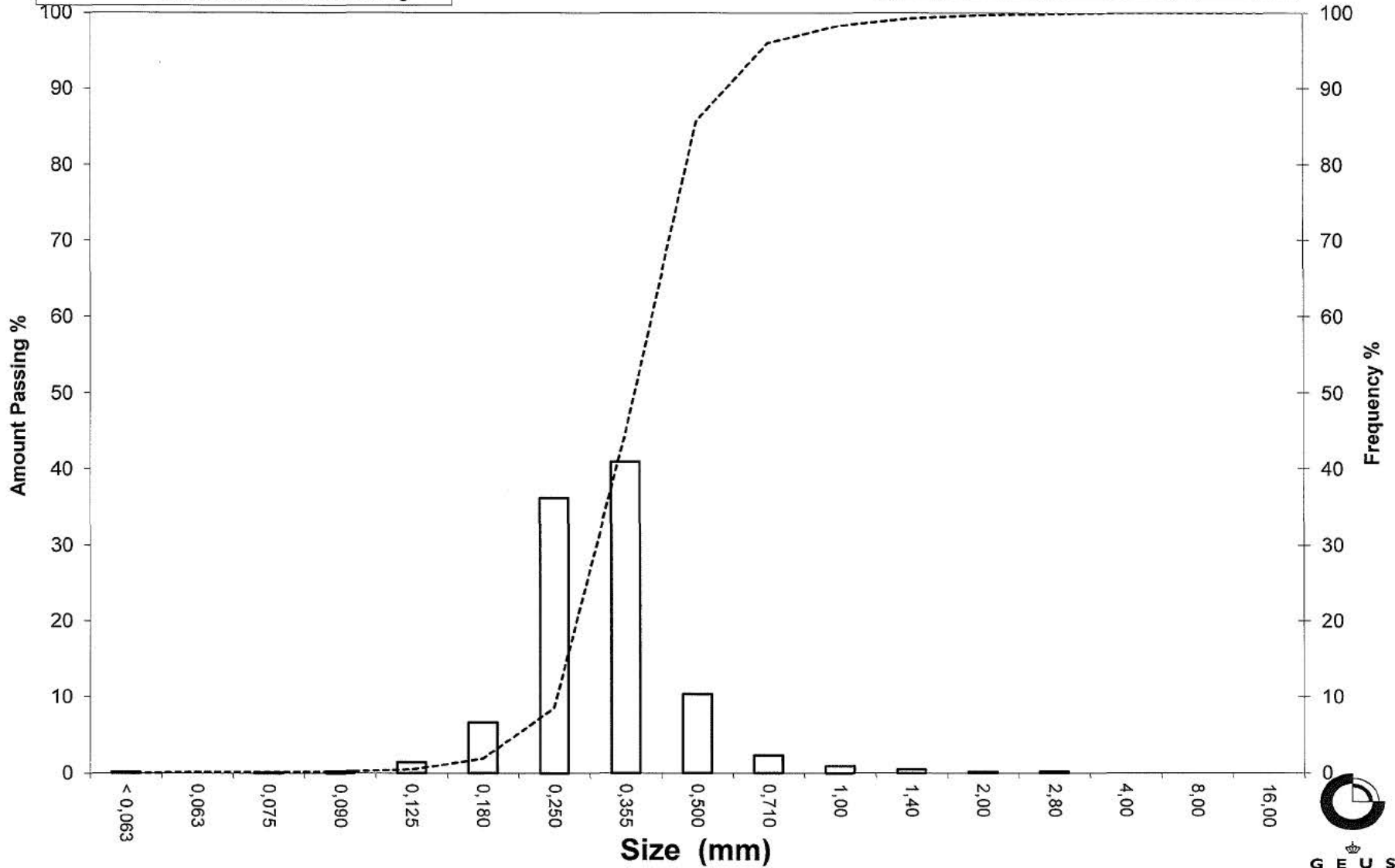
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 42/3

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: last 42/4
Lab. Id: 170147
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 17-10-2017
Executed: PS
Remarks:



Total Weight 163,03 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	0,20	0,12	99,88
2,00	-1,00	0,37	0,23	99,65
1,40	-0,49	0,46	0,28	99,37
1,00	0,00	1,91	1,17	98,20
0,710	0,49	4,12	2,53	95,67
0,500	1,00	16,03	9,83	85,84
0,355	1,49	63,30	38,83	47,01
0,250	2,00	61,75	37,88	9,13
0,180	2,47	11,84	7,26	1,87
0,125	3,00	2,29	1,40	0,47
0,090	3,47	0,46	0,28	0,18
0,075	3,74	0,04	0,02	0,16
0,063	3,99	0,00	0,00	0,16
< 0,063	> 3,99	0,26	0,16	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,16
Sand, fine (0,063 mm - 0,200 mm):	3,79
Sand, medium (0,2 mm - 0,6 mm):	86,57
Sand, coarse (0,6 mm - 2 mm):	9,13
Gravel (> 2 mm):	0,35
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,70	0,52
16%	84%	0,49	1,02
25%	75%	0,46	1,12
40%	60%	0,40	1,31
Median 50%	50%	0,37	1,45
75%	25%	0,29	1,77
84%	16%	0,27	1,89
90%	10%	0,25	1,99
95%	5%	0,21	2,25

Moments Statistics

Mean	1,45
Sorting	0,48
Skewness	-0,03
Kurtosis	1,10
Uniformity Coefficient	1,60

The analysis is executed according to DS 405.9 extended by sieves to the 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)

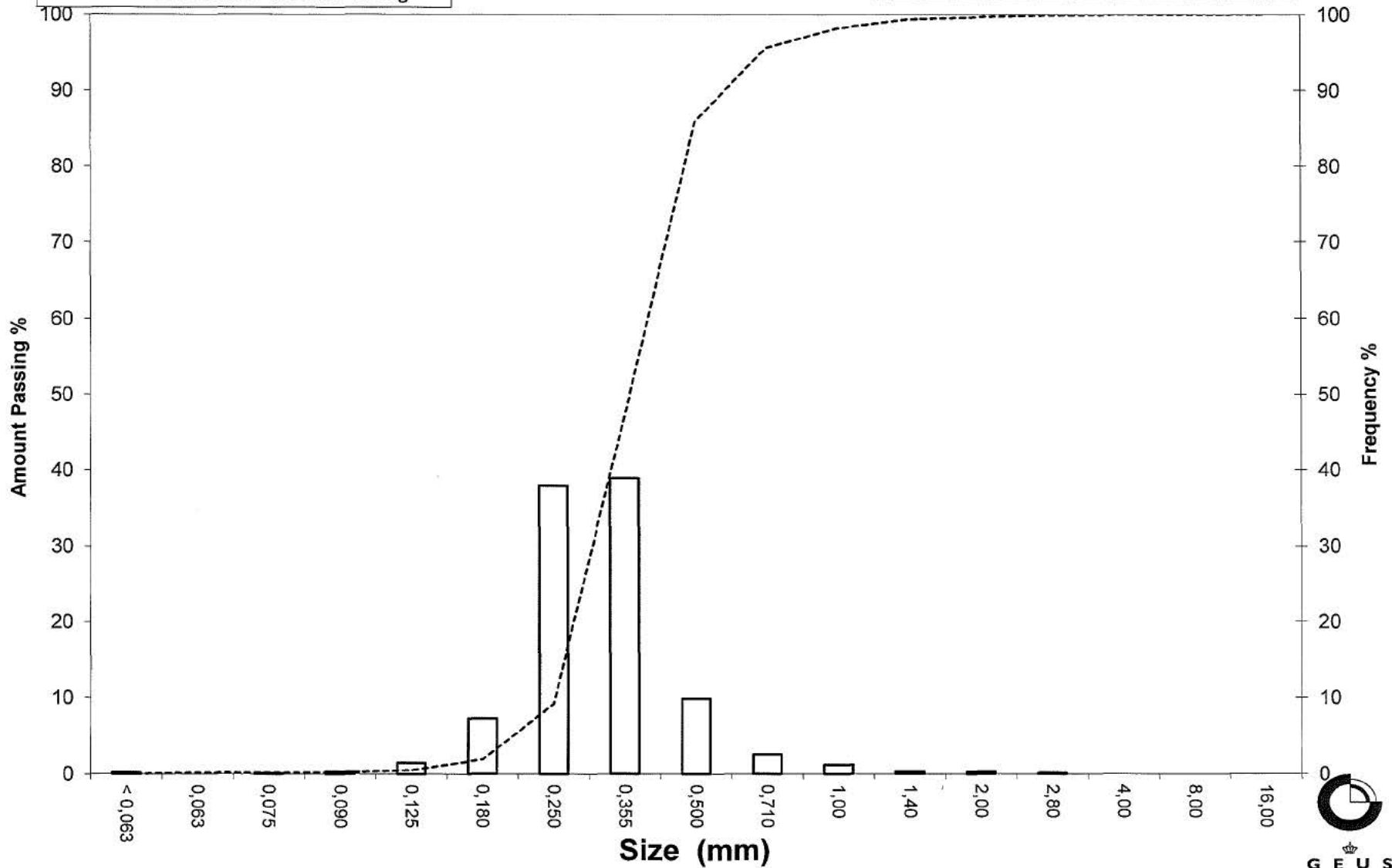
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: last 42/4

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 51/1
Lab. Id: 170348
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 126,08 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	0,36	0,29	99,71
2,00	-1,00	0,54	0,43	99,29
1,40	-0,49	0,78	0,62	98,67
1,00	0,00	2,39	1,90	96,77
0,710	0,49	3,76	2,98	93,79
0,500	1,00	12,94	10,26	83,53
0,355	1,49	45,14	35,80	47,72
0,250	2,00	47,73	37,86	9,87
0,180	2,47	9,17	7,27	2,59
0,125	3,00	2,00	1,59	1,01
0,090	3,47	0,53	0,42	0,59
0,075	3,74	0,08	0,06	0,52
0,063	3,99	0,00	0,00	0,52
< 0,063	> 3,99	0,66	0,52	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,52
Sand, fine (0,063 mm - 0,200 mm):	4,15
Sand, medium (0,2 mm - 0,6 mm):	83,74
Sand, coarse (0,6 mm - 2 mm):	10,87
Gravel (> 2 mm):	0,71
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,83	0,27
16%	84%	0,51	0,97
25%	75%	0,47	1,10
40%	60%	0,40	1,31
Median 50%	50%	0,36	1,46
75%	25%	0,29	1,78
84%	16%	0,27	1,91
90%	10%	0,25	2,00
95%	5%	0,20	2,30

Moments Statistics

Mean	1,44
Sorting	0,54
Skewness	-0,10
Kurtosis	1,23
Uniformity Coefficient	1,62

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)

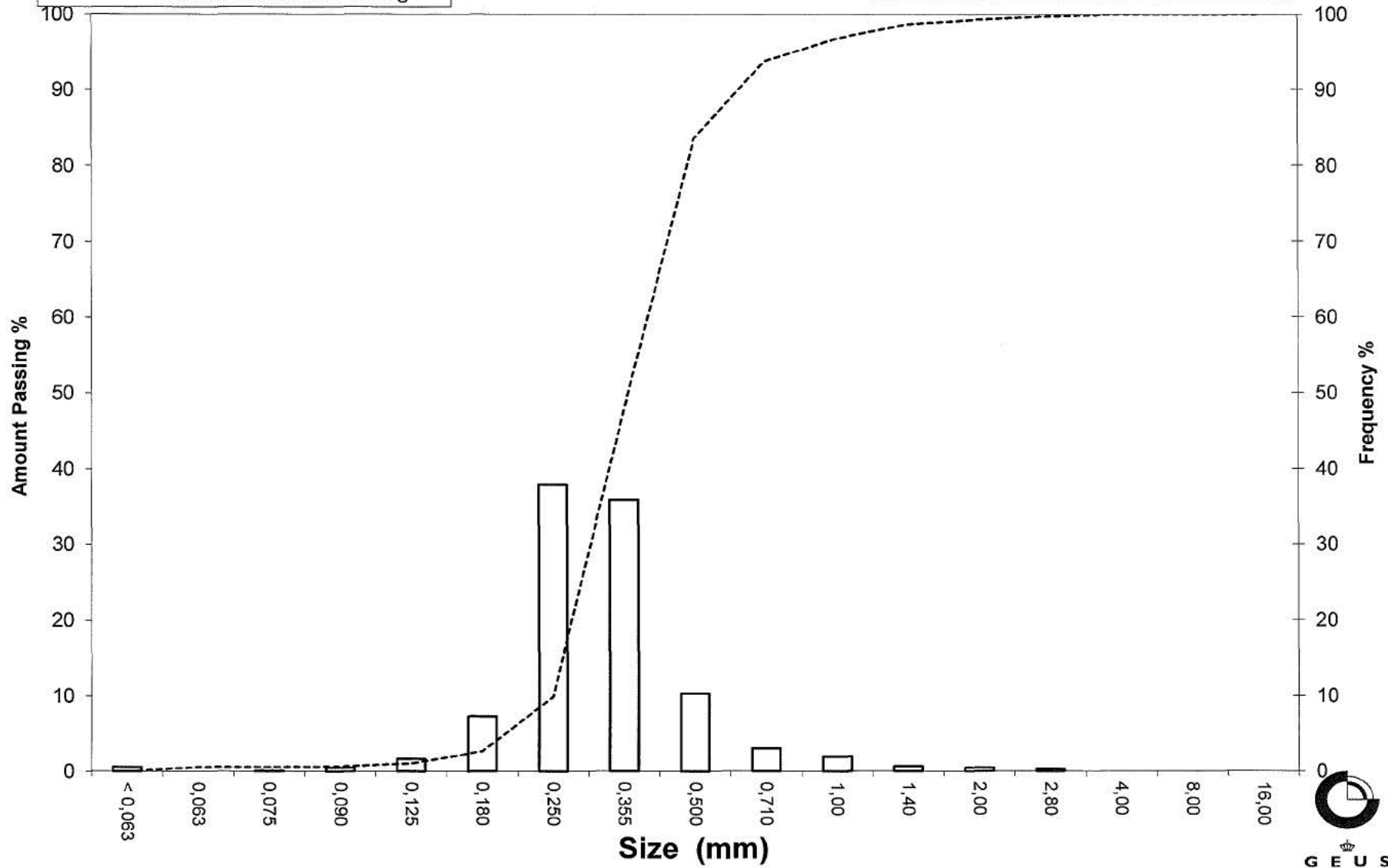
Mean, sorting, skewness and kurtosis are based on

Øster Voldgade 10 1350 København K
 Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: Last 51/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 51/2
Lab. Id: 170349
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 130,1 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	0,08	0,06	99,94
2,80	-1,49	0,21	0,16	99,78
2,00	-1,00	0,53	0,41	99,37
1,40	-0,49	0,99	0,76	98,61
1,00	0,00	2,63	2,02	96,59
0,710	0,49	4,84	3,72	92,87
0,500	1,00	14,80	11,38	81,49
0,355	1,49	49,23	37,84	43,65
0,250	2,00	46,28	35,57	8,08
0,180	2,47	8,16	6,27	1,81
0,125	3,00	1,84	1,41	0,39
0,090	3,47	0,41	0,32	0,08
0,075	3,74	0,05	0,04	0,04
0,063	3,99	0,00	0,00	0,04
< 0,063	> 3,99	0,05	0,04	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,04
Sand, fine (0,063 mm - 0,200 mm):	3,56
Sand, medium (0,2 mm - 0,6 mm):	83,31
Sand, coarse (0,6 mm - 2 mm):	12,46
Gravel (> 2 mm):	0,63
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,88	0,19
16%	84%	0,55	0,87
25%	75%	0,48	1,07
40%	60%	0,42	1,26
Median 50%	50%	0,38	1,40
75%	25%	0,30	1,74
84%	16%	0,27	1,87
90%	10%	0,26	1,97
95%	5%	0,22	2,21

Moments Statistics

Mean	1,38
Sorting	0,56
Skewness	-0,12
Kurtosis	1,25
Uniformity Coefficient	1,63

The analysis is executed according to DS 405.9 extended by sieves to the 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)

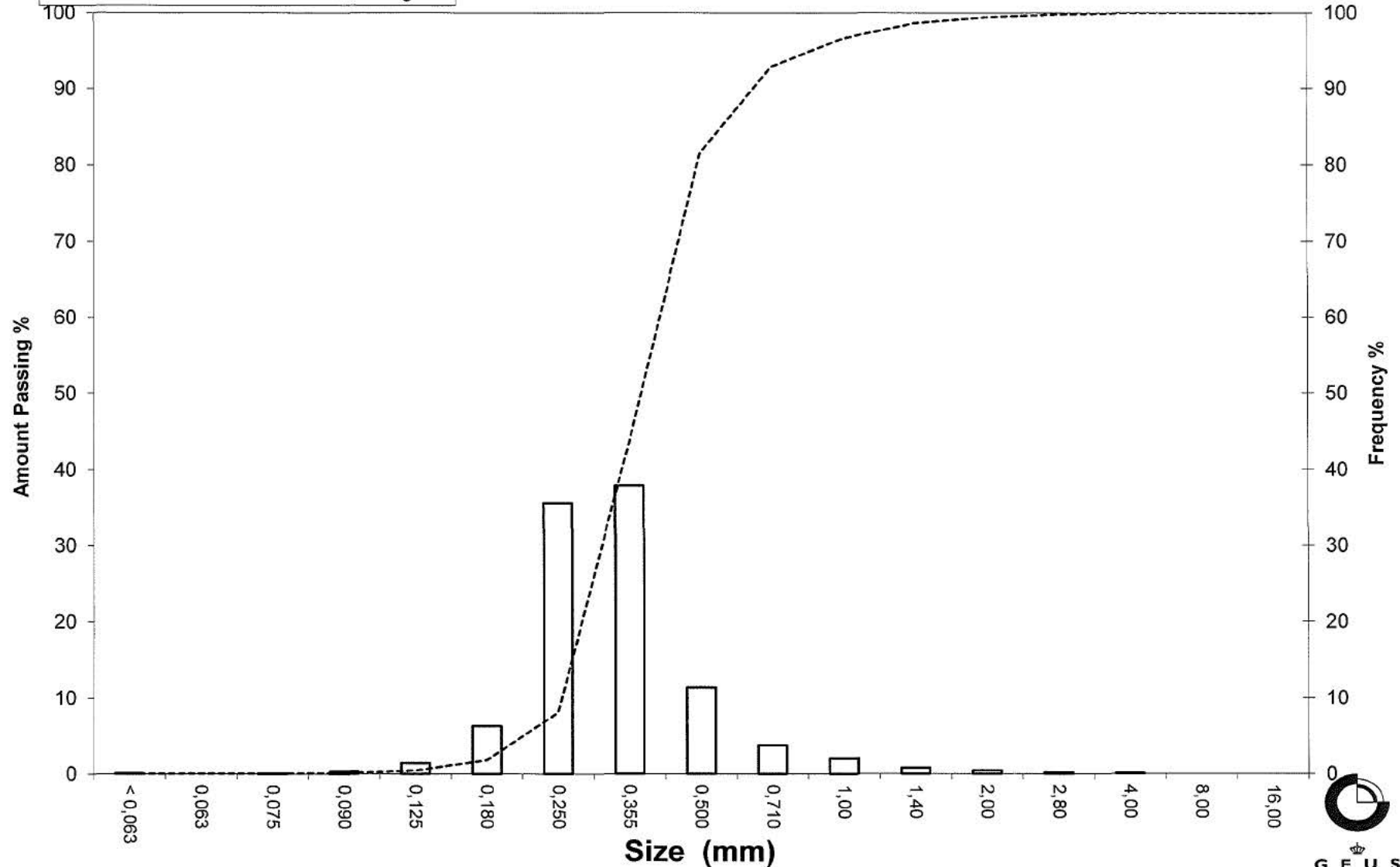
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 51/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 51/3
 Lab. Id: 170350
 Submitter: Rohde Nielsen
 Subject: Sand fra Læsø
 Date: 15-11-2017
 Executed: PS
 Remarks:



Total Weight 126,94 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	0,02	0,02	99,98
2,00	-1,00	0,64	0,50	99,48
1,40	-0,49	1,01	0,80	98,68
1,00	0,00	2,77	2,18	96,50
0,710	0,49	5,09	4,01	92,49
0,500	1,00	14,25	11,23	81,27
0,355	1,49	46,00	36,24	45,03
0,250	2,00	46,11	36,32	8,70
0,180	2,47	8,34	6,57	2,13
0,125	3,00	1,62	1,28	0,86
0,090	3,47	0,39	0,31	0,55
0,075	3,74	0,05	0,04	0,51
0,063	3,99	0,00	0,00	0,51
< 0,063	> 3,99	0,65	0,51	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	0,51
Sand, fine (0,063 mm - 0,200 mm)	3,50
Sand, medium (0,2 mm - 0,6 mm)	82,60
Sand, coarse (0,6 mm - 2 mm)	12,87
Gravel (> 2 mm)	0,52
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,89	0,17
16%	84%	0,55	0,86
25%	75%	0,47	1,07
40%	60%	0,41	1,27
Median 50%	50%	0,37	1,42
75%	25%	0,30	1,75
84%	16%	0,27	1,88
90%	10%	0,25	1,98
95%	5%	0,21	2,25

Moments Statistics

Mean	1,39
Sorting	0,57
Skewness	-0,14
Kurtosis	1,26
Uniformity Coefficient	1,64

The analysis is executed according to DS 405.9 extended by sieves to the 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)

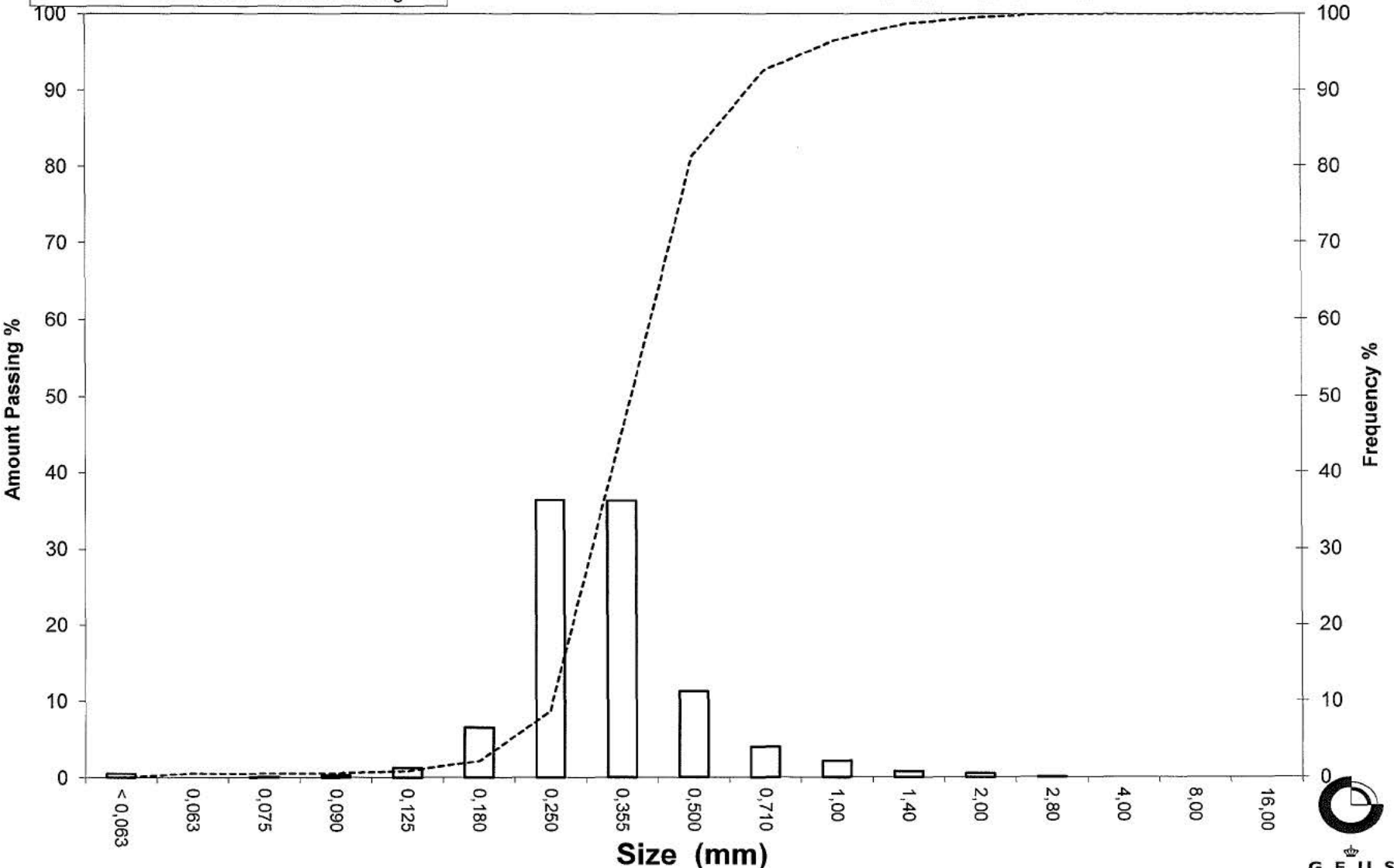
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 51/3

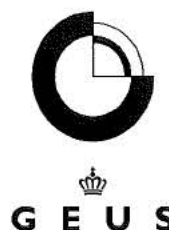
Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 51/4
Lab. Id: 170351
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks: > 2,8 mm består af skaller



Total Weight 127,71 g

Size Fractions

Size	Size	Weight	Weight	Cumulated amount passing
16,00	-4,00	0,00	0,00	100,00
8,00	-3,00	0,18	0,14	99,86
4,00	-2,00	0,01	0,01	99,85
2,80	-1,49	0,33	0,26	99,59
2,00	-1,00	0,63	0,49	99,10
1,40	-0,49	1,64	1,28	97,82
1,00	0,00	3,52	2,76	95,06
0,710	0,49	13,15	10,30	84,76
0,500	1,00	47,90	37,51	47,26
0,355	1,49	48,82	38,23	9,03
0,250	2,00	8,47	6,63	2,40
0,180	2,47	2,04	1,60	0,80
0,125	3,00	0,47	0,37	0,43
0,090	3,47	0,05	0,04	0,39
0,075	3,74	0,01	0,01	0,38
0,063	3,99	0,00	0,00	0,38
< 0,063	> 3,99	0,49	0,38	0,00

Gravel

Sand

Sieve Analysis

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm)	0,38
Sand, fine (0,063 mm - 0,200 mm)	0,87
Sand, medium (0,2 mm - 0,6 mm)	63,86
Sand, coarse (0,6 mm - 2 mm)	33,98
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%	1,00	0,00
16%	84%	0,71	0,50
25%	75%	0,66	0,61
40%	60%	0,57	0,81
Median 50%	50%	0,52	0,96
75%	25%	0,42	1,27
84%	16%	0,38	1,39
90%	10%	0,36	1,48
95%	5%	0,29	1,78

Moments Statistics

Mean	0,95
Sorting	0,49
Skewness	-0,05
Kurtosis	1,11
Uniformity Coefficient	1,59

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)

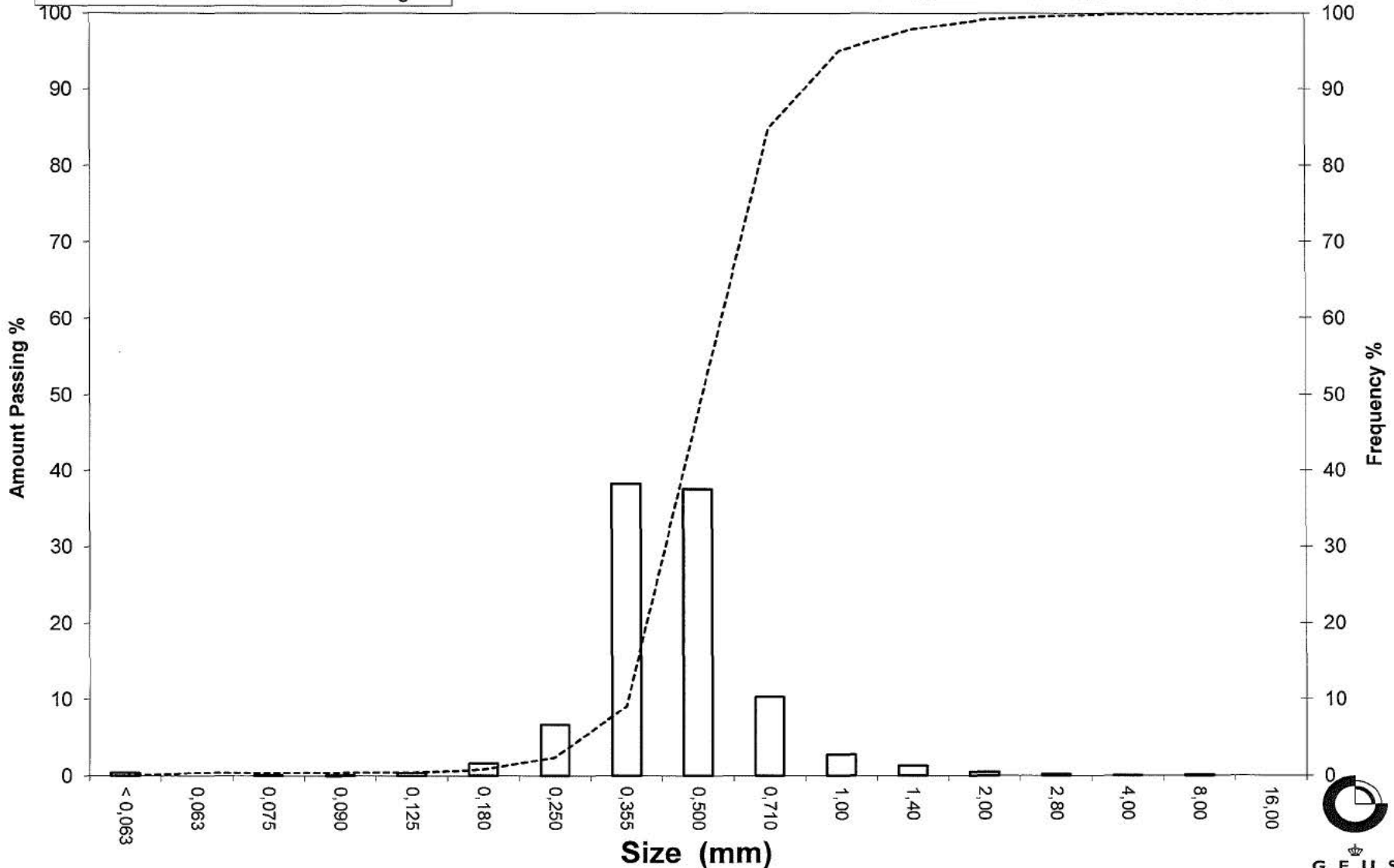
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 51/4

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 58/1
Lab. Id: 170352
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 122,57 g

Size Fractions

Size	Size	Weight		Cumulated amount passing
		g	%	
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	0,03	0,02	99,98
2,00	-1,00	0,23	0,19	99,79
1,40	-0,49	0,44	0,36	99,43
1,00	0,00	1,73	1,41	98,02
0,710	0,49	4,32	3,52	94,49
0,500	1,00	17,72	14,46	80,04
0,355	1,49	39,07	31,88	48,16
0,250	2,00	36,99	30,18	17,98
0,180	2,47	14,73	12,02	5,96
0,125	3,00	5,32	4,34	1,62
0,090	3,47	1,00	0,82	0,81
0,075	3,74	0,10	0,08	0,73
0,063	3,99	0,01	0,01	0,72
< 0,063	> 3,99	0,88	0,72	0,00

Gravel

Sand

Sieve Analysis

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,72
Sand, fine (0,063 mm - 0,200 mm):	8,68
Sand, medium (0,2 mm - 0,6 mm):	77,52
Sand, coarse (0,6 mm - 2 mm):	12,87
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%	0,75	0,41
16%	84%	0,56	0,84
25%	75%	0,48	1,07
40%	60%	0,41	1,29
Median 50%	50%	0,36	1,46
75%	25%	0,27	1,87
84%	16%	0,24	2,07
90%	10%	0,20	2,30
95%	5%	0,17	2,58

Moments Statistics

Mean	1,46
Sorting	0,63
Skewness	0,01
Kurtosis	1,11
Uniformity Coefficient	2,01

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)

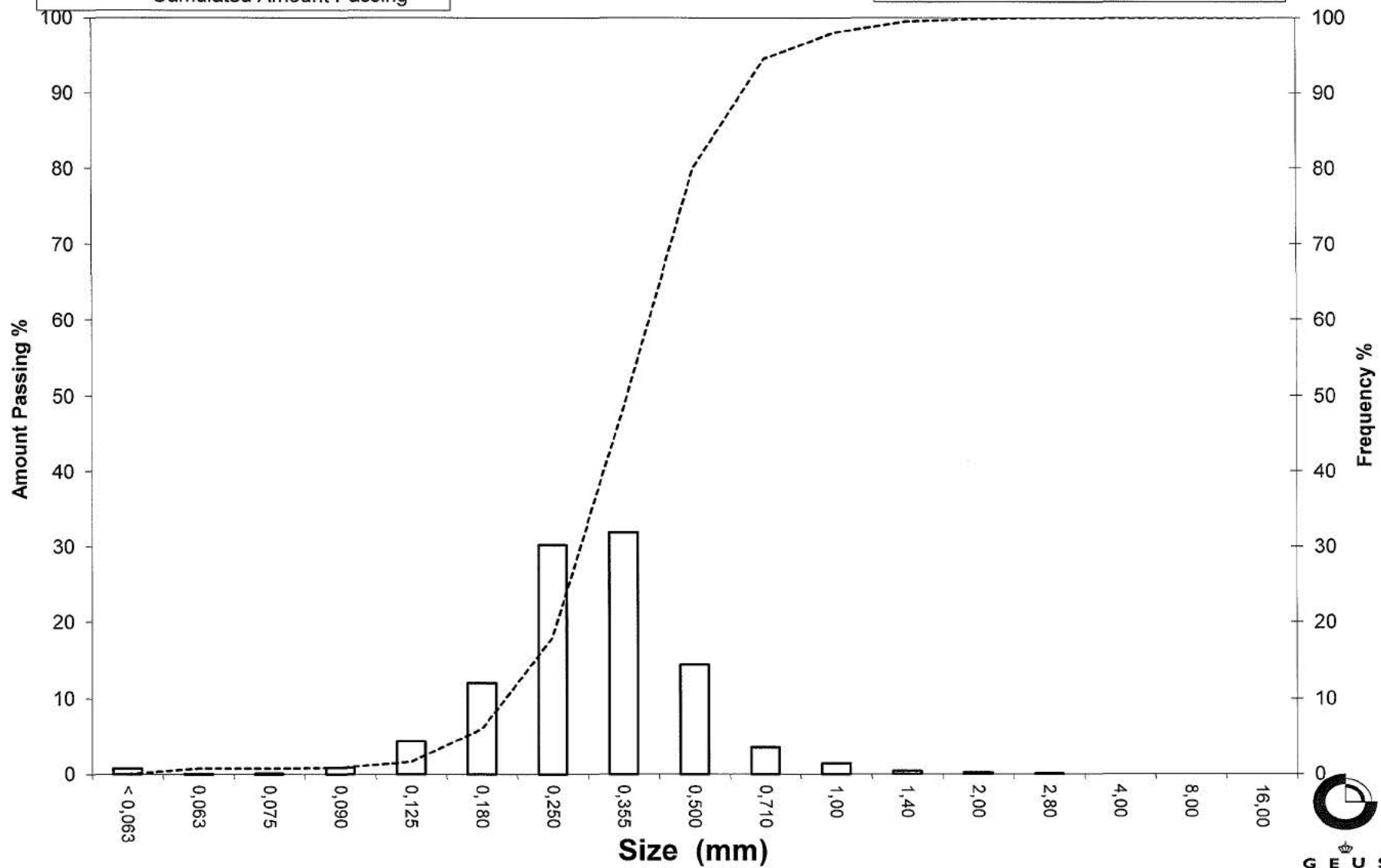
Mean, sorting, skewness and kurtosis are based on

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

Grain Size Distribution

Sample Id: Last 58/1

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 58/2
Lab. Id: 170353
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 124,73 g

Size Fractions

Size	Size	Weight	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	0,31	0,25	99,75
1,40	-0,49	0,66	0,53	99,22
1,00	0,00	1,72	1,38	97,84
0,710	0,49	4,38	3,51	94,33
0,500	1,00	20,01	16,04	78,29
0,355	1,49	41,29	33,10	45,19
0,250	2,00	36,12	28,96	16,23
0,180	2,47	13,53	10,85	5,38
0,125	3,00	5,30	4,25	1,13
0,090	3,47	0,89	0,71	0,42
0,075	3,74	0,10	0,08	0,34
0,063	3,99	0,02	0,02	0,32
< 0,063	> 3,99	0,40	0,32	0,00

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,32
Sand, fine (0,063 mm - 0,200 mm):	8,16
Sand, medium (0,2 mm - 0,6 mm):	77,45
Sand, coarse (0,6 mm - 2 mm):	13,82
Gravel (> 2 mm):	0,25
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,77	0,39
16%	84%	0,57	0,80
25%	75%	0,49	1,04
40%	60%	0,42	1,25
Median 50%	50%	0,38	1,41
75%	25%	0,28	1,83
84%	16%	0,25	2,01
90%	10%	0,21	2,25
95%	5%	0,18	2,51

Moments Statistics

Mean	1,41
Sorting	0,62
Skewness	0,01
Kurtosis	1,11
Uniformity Coefficient	2,00

The analysis is executed according to DS 405.9 extended by sieves to the 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)

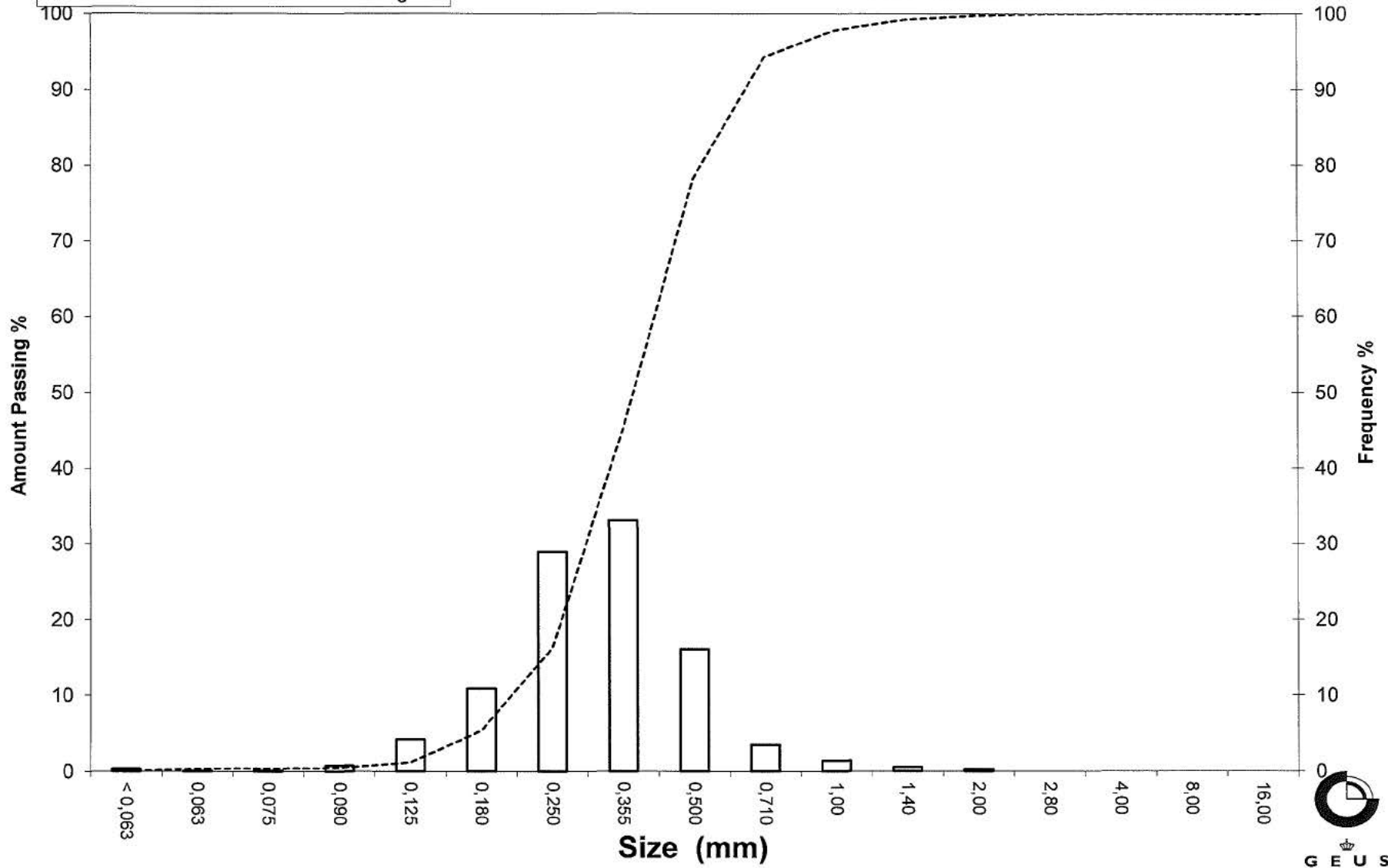
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 58/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 58/3
Lab. Id: 170354
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 124,27 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	0,10	0,08	99,92
2,00	-1,00	0,45	0,36	99,56
1,40	-0,49	0,51	0,41	99,15
1,00	0,00	2,08	1,67	97,47
0,710	0,49	4,39	3,53	93,94
0,500	1,00	19,12	15,39	78,55
0,355	1,49	39,68	31,93	46,62
0,250	2,00	36,71	29,54	17,08
0,180	2,47	14,30	11,51	5,58
0,125	3,00	5,13	4,13	1,45
0,090	3,47	0,99	0,80	0,65
0,075	3,74	0,09	0,07	0,58
0,063	3,99	0,02	0,02	0,56
< 0,063	> 3,99	0,70	0,56	0,00

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,56
Sand, fine (0,063 mm - 0,200 mm):	8,30
Sand, medium (0,2 mm - 0,6 mm):	77,02
Sand, coarse (0,6 mm - 2 mm):	13,68
Gravel (> 2 mm):	0,44
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,80	0,33
16%	84%	0,57	0,80
25%	75%	0,48	1,05
40%	60%	0,42	1,27
Median 50%	50%	0,37	1,43
75%	25%	0,28	1,85
84%	16%	0,24	2,04
90%	10%	0,21	2,27
95%	5%	0,17	2,54

Moments Statistics

Mean	1,42
Sorting	0,64
Skewness	-0,01
Kurtosis	1,13
Uniformity Coefficient	2,01

The analysis is executed according to DS 405.9 extended by sieves to the 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)

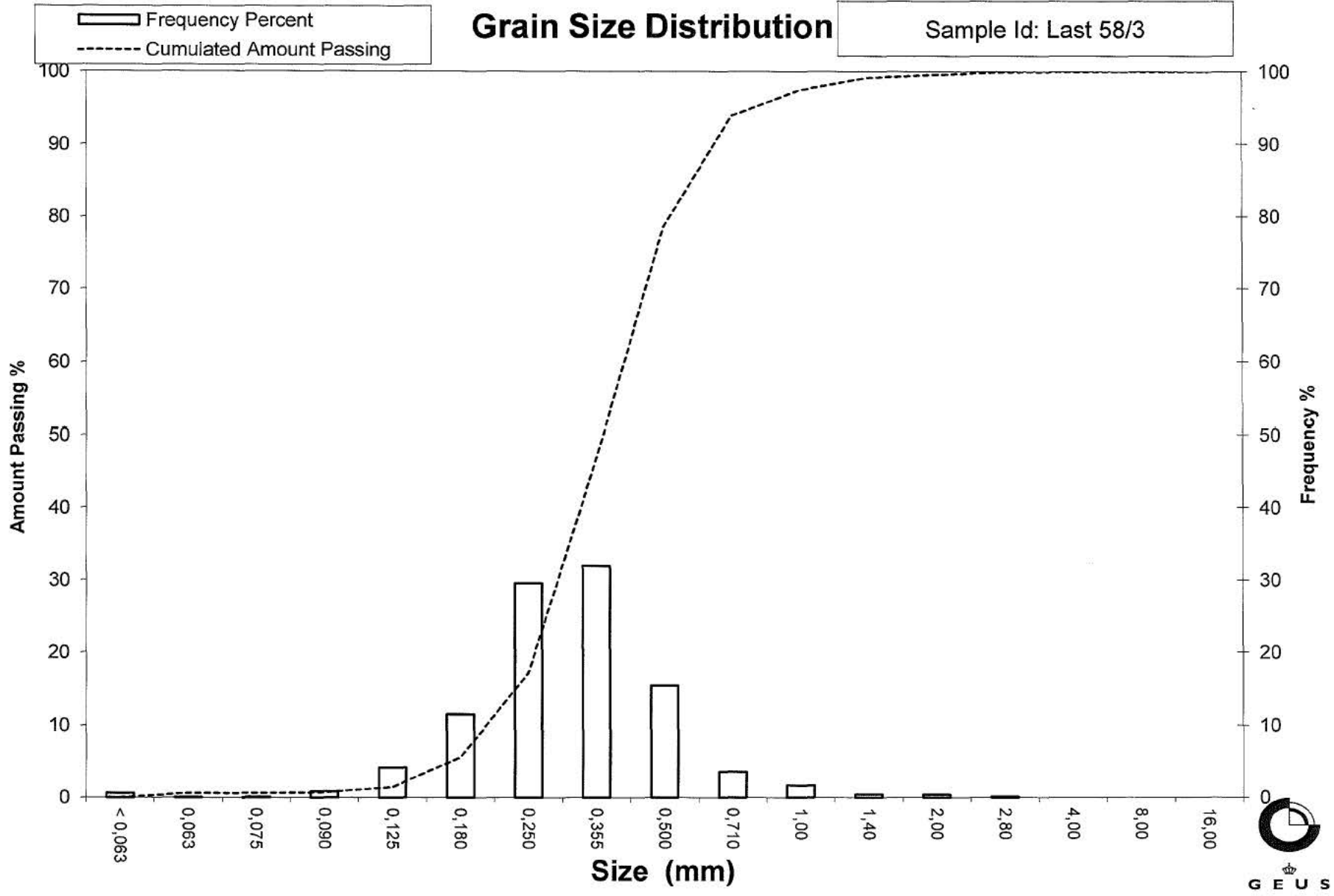
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

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

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 58/3



Grain Size Distribution

Geotechnical

Sample Id: Last 58/4
Lab. Id: 170355
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks: > 2,8 mm består af skaller



Total Weight 125,58 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	0,00	0,00	100,00
4,00	-2,00	0,10	0,08	99,92
2,80	-1,49	0,06	0,05	99,87
2,00	-1,00	0,15	0,12	99,75
1,40	-0,49	0,85	0,68	99,08
1,00	0,00	1,86	1,48	97,60
0,710	0,49	4,85	3,86	93,73
0,500	1,00	19,54	15,56	78,17
0,355	1,49	39,59	31,53	46,65
0,250	2,00	37,02	29,48	17,17
0,180	2,47	14,22	11,32	5,84
0,125	3,00	5,42	4,32	1,53
0,090	3,47	0,92	0,73	0,80
0,075	3,74	0,09	0,07	0,72
0,063	3,99	0,02	0,02	0,71
< 0,063	> 3,99	0,89	0,71	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,71
Sand, fine (0,063 mm - 0,200 mm):	8,37
Sand, medium (0,2 mm - 0,6 mm):	76,50
Sand, coarse (0,6 mm - 2 mm):	14,17
Gravel (> 2 mm):	0,25
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,81	0,31
16%	84%	0,58	0,79
25%	75%	0,49	1,04
40%	60%	0,42	1,26
Median 50%	50%	0,37	1,43
75%	25%	0,28	1,85
84%	16%	0,24	2,04
90%	10%	0,21	2,28
95%	5%	0,17	2,56

Moments Statistics

Mean	1,42
Sorting	0,65
Skewness	-0,01
Kurtosis	1,15
Uniformity Coefficient	2,02

The analysis is executed according to DS 405.9 extended by sieves to the 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)

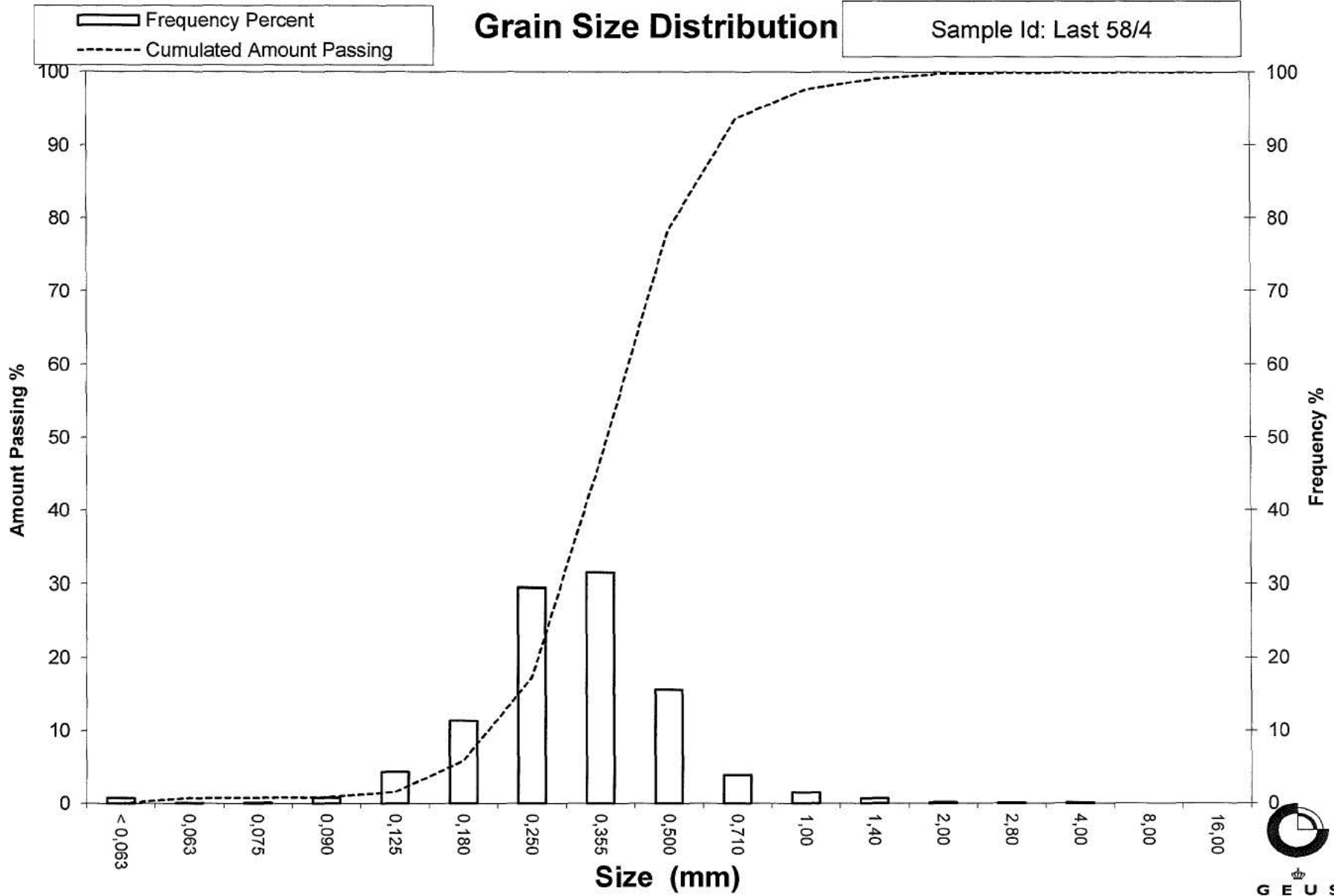
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

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 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: Last 58/4



Grain Size Distribution

Geotechnical

Sample Id: Last 69/1
Lab. Id: 170356
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks: > 2,8 mm består af skaller



Total Weight 133,76 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	0,28	0,21	99,79
4,00	-2,00	0,01	0,01	99,78
2,80	-1,49	0,10	0,07	99,71
2,00	-1,00	0,59	0,44	99,27
1,40	-0,49	0,92	0,69	98,58
1,00	0,00	3,65	2,73	95,85
0,710	0,49	5,28	3,95	91,90
0,500	1,00	16,79	12,55	79,35
0,355	1,49	52,50	39,25	40,10
0,250	2,00	42,89	32,06	8,04
0,180	2,47	7,11	5,32	2,72
0,125	3,00	2,33	1,74	0,98
0,090	3,47	0,80	0,60	0,38
0,075	3,74	0,08	0,06	0,32
0,063	3,99	0,01	0,01	0,31
< 0,063	> 3,99	0,42	0,31	0,00

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,31
Sand, fine (0,063 mm - 0,200 mm):	3,93
Sand, medium (0,2 mm - 0,6 mm):	81,09
Sand, coarse (0,6 mm - 2 mm):	13,94
Gravel (> 2 mm):	0,73
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%	0,58	0,79
25%	75%	0,48	1,05
40%	60%	0,43	1,22
Median 50%	50%	0,39	1,35
75%	25%	0,31	1,71
84%	16%	0,28	1,86
90%	10%	0,26	1,96
95%	5%	0,21	2,25

Moments Statistics

Mean	1,33
Sorting	0,59
Skewness	-0,11
Kurtosis	1,33
Uniformity Coefficient	1,67

The analysis is executed according to DS 405.9 extended by sieves to the 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)

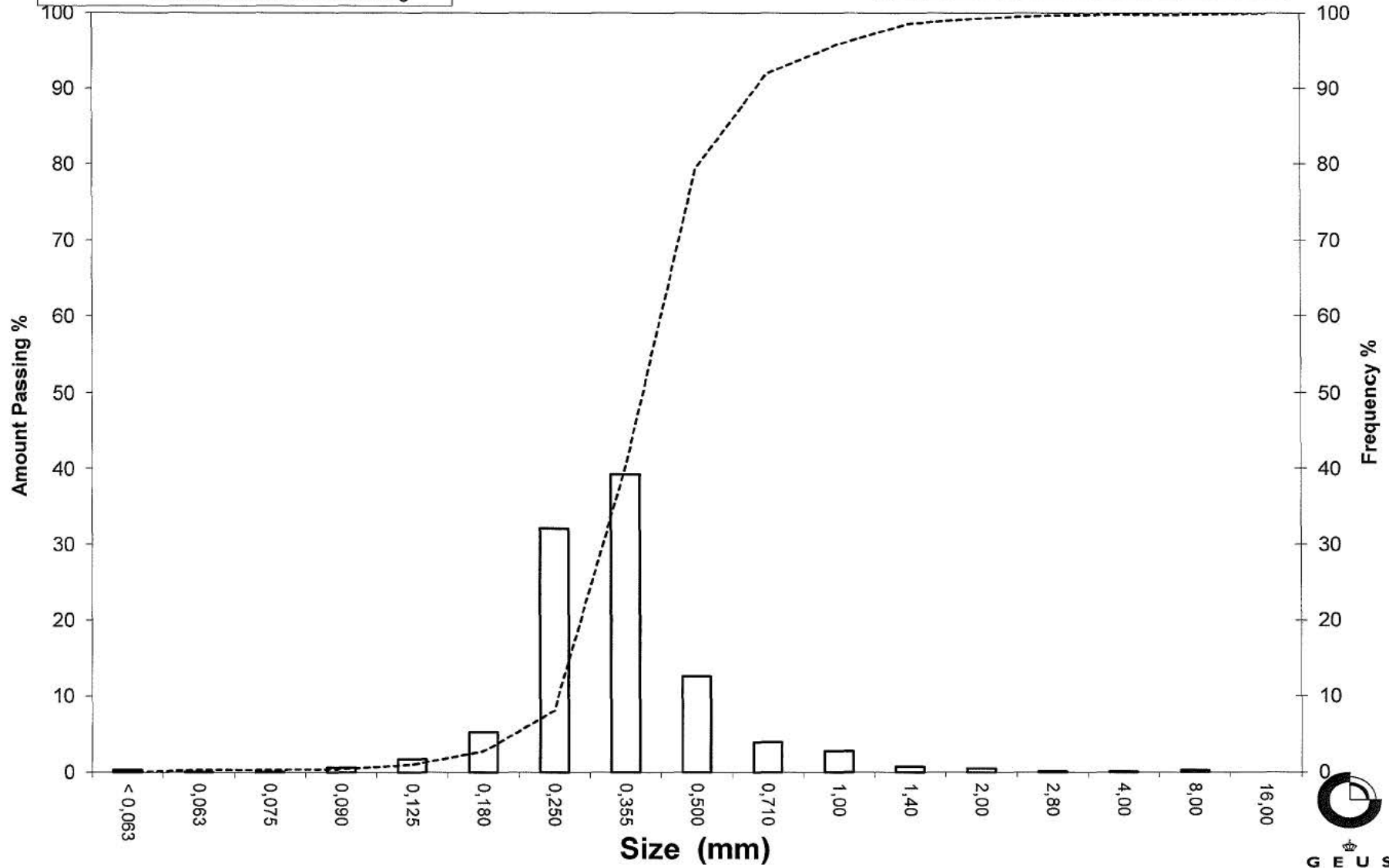
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Øster Voldgade 10 1350 København K
 Tel.: +45 38 14 20 00 Telefax: +45 38 14 20 50
 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: Last 69/1



Grain Size Distribution

Geotechnical

Sample Id: Last 69/2
Lab. Id: 170357
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 132,66 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	0,05	0,04	99,96
2,80	-1,49	0,40	0,30	99,66
2,00	-1,00	0,32	0,24	99,42
1,40	-0,49	1,26	0,95	98,47
1,00	0,00	2,84	2,14	96,33
0,710	0,49	5,32	4,01	92,32
0,500	1,00	17,20	12,97	79,35
0,355	1,49	55,18	41,60	37,76
0,250	2,00	41,58	31,34	6,41
0,180	2,47	6,31	4,76	1,66
0,125	3,00	1,42	1,07	0,59
0,090	3,47	0,42	0,32	0,27
0,075	3,74	0,04	0,03	0,24
0,063	3,99	0,00	0,00	0,24
< 0,063	> 3,99	0,32	0,24	0,00

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	0,24
Sand, fine (0,063 mm - 0,200 mm):	2,78
Sand, medium (0,2 mm - 0,6 mm):	82,51
Sand, coarse (0,6 mm - 2 mm):	13,89
Gravel (> 2 mm):	0,58
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,90	0,15
16%	84%	0,58	0,80
25%	75%	0,48	1,04
40%	60%	0,43	1,21
Median 50%	50%	0,40	1,33
75%	25%	0,31	1,68
84%	16%	0,28	1,83
90%	10%	0,26	1,93
95%	5%	0,23	2,13

Moments Statistics

Mean	1,32
Sorting	0,56
Skewness	-0,12
Kurtosis	1,28
Uniformity Coefficient	1,65

The analysis is executed according to DS 405.9 extended by sieves to the 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)

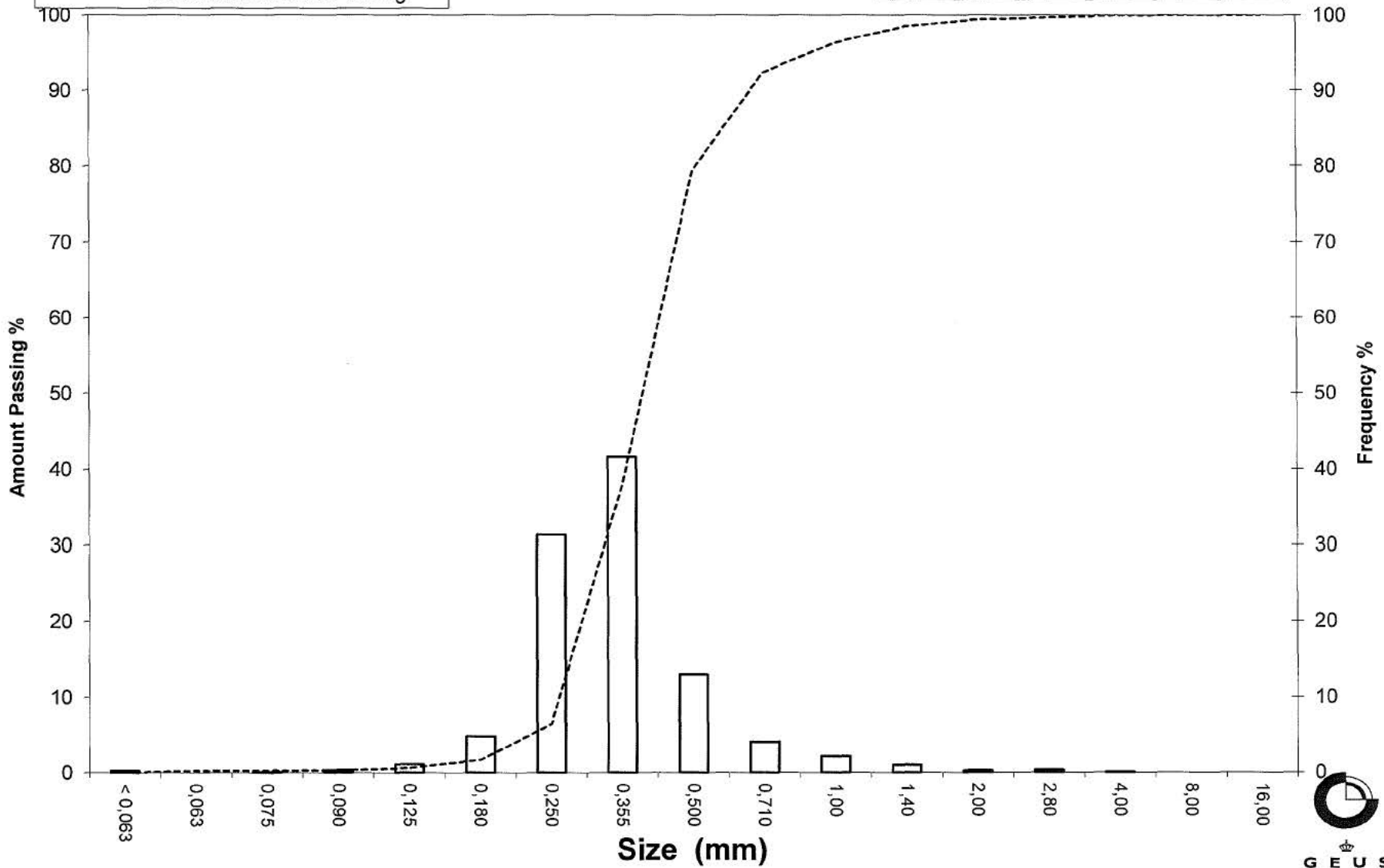
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 69/2

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 69/3
Lab. Id: 170358
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks: > 2,8 mm består af skaller



Total Weight 127,27 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	0,01	0,01	99,99
2,80	-1,49	0,14	0,11	99,88
2,00	-1,00	0,39	0,31	99,58
1,40	-0,49	1,36	1,07	98,51
1,00	0,00	3,90	3,06	95,44
0,710	0,49	5,65	4,44	91,00
0,500	1,00	15,54	12,21	78,79
0,355	1,49	49,13	38,60	40,19
0,250	2,00	42,38	33,30	6,89
0,180	2,47	6,90	5,42	1,47
0,125	3,00	1,38	1,08	0,39
0,090	3,47	0,46	0,36	0,02
0,075	3,74	0,04	0,03	-0,01
0,063	3,99	0,00	0,00	-0,01
< 0,063	> 3,99	-0,01	-0,01	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

Size Class	Weight %
Silt and clay (< 0,063 mm):	-0,01
Sand, fine (0,063 mm - 0,200 mm):	3,03
Sand, medium (0,2 mm - 0,6 mm):	81,59
Sand, coarse (0,6 mm - 2 mm):	14,97
Gravel (> 2 mm):	0,42
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%	0,59	0,76
25%	75%	0,49	1,04
40%	60%	0,43	1,22
Median 50%	50%	0,39	1,35
75%	25%	0,31	1,70
84%	16%	0,28	1,84
90%	10%	0,26	1,94
95%	5%	0,23	2,15

Moments Statistics

Mean	1,32
Sorting	0,59
Skewness	-0,17
Kurtosis	1,30
Uniformity Coefficient	1,65

The analysis is executed according to DS 405.9 extended by sieves to the 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)

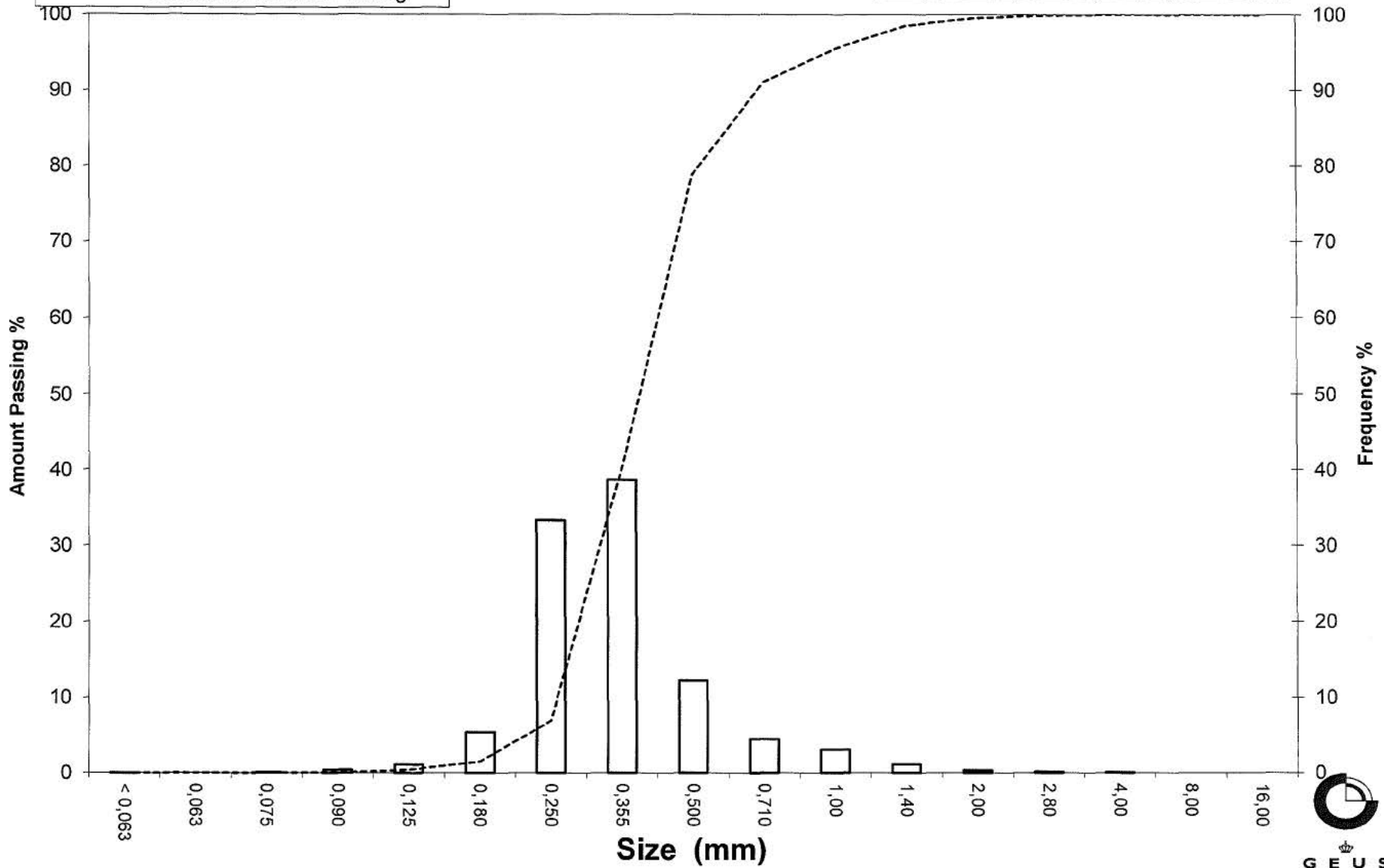
Mean, sorting, skewness and kurtosis are based on

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

Grain Size Distribution

Sample Id: Last 69/3

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Last 69/4
 Lab. Id: 170359
 Submitter: Rohde Nielsen
 Subject: Sand fra Læsø
 Date: 15-11-2017
 Executed: PS
 Remarks:



Total Weight 128,1 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	0,23	0,18	99,82
2,80	-1,49	0,22	0,17	99,65
2,00	-1,00	0,74	0,58	99,07
1,40	-0,49	1,30	1,01	98,06
1,00	0,00	3,16	2,47	95,59
0,710	0,49	5,76	4,50	91,09
0,500	1,00	17,38	13,57	77,53
0,355	1,49	51,76	40,41	37,12
0,250	2,00	39,86	31,12	6,00
0,180	2,47	6,04	4,72	1,29
0,125	3,00	1,32	1,03	0,26
0,090	3,47	0,37	0,29	-0,03
0,075	3,74	0,03	0,02	-0,05
0,063	3,99	0,00	0,00	-0,05
< 0,063	> 3,99	-0,07	-0,05	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	-0,05
Sand, fine (0,063 mm - 0,200 mm):	2,69
Sand, medium (0,2 mm - 0,6 mm):	81,35
Sand, coarse (0,6 mm - 2 mm):	15,08
Gravel (> 2 mm):	0,93
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,96	0,06
16%	84%	0,60	0,74
25%	75%	0,49	1,03
40%	60%	0,44	1,19
Median 50%	50%	0,40	1,32
75%	25%	0,31	1,67
84%	16%	0,28	1,82
90%	10%	0,26	1,92
95%	5%	0,24	2,09

Moments Statistics

Mean	1,29
Sorting	0,58
Skewness	-0,16
Kurtosis	1,29
Uniformity Coefficient	1,66

The analysis is executed according to DS 405.9 extended by sieves to the 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)

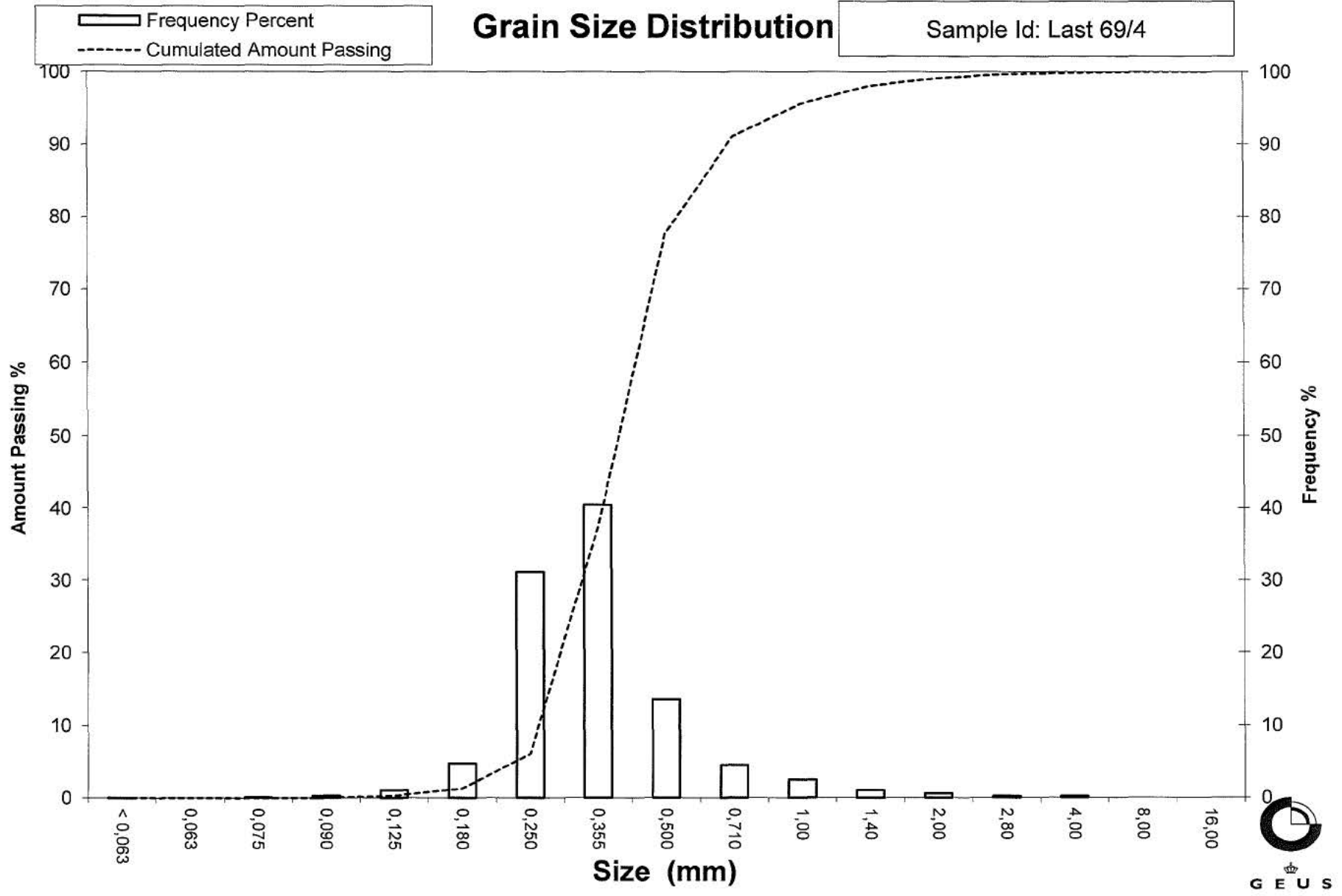
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

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 Email: GEUS@geus.dk

Grain Size Distribution

Sample Id: Last 69/4



Grain Size Distribution

Geotechnical

Sample Id: Last 75/1
Lab. Id: 170360
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 130,33 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	0,31	0,24	99,76
2,80	-1,49	0,43	0,33	99,43
2,00	-1,00	0,48	0,37	99,06
1,40	-0,49	0,75	0,58	98,49
1,00	0,00	2,52	1,93	96,55
0,710	0,49	3,79	2,91	93,65
0,500	1,00	12,18	9,35	84,30
0,355	1,49	34,23	26,26	58,04
0,250	2,00	55,12	42,29	15,74
0,180	2,47	15,64	12,00	3,74
0,125	3,00	3,46	2,65	1,09
0,090	3,47	0,60	0,46	0,63
0,075	3,74	0,05	0,04	0,59
0,063	3,99	0,00	0,00	0,59
< 0,063	> 3,99	0,77	0,59	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,59
Sand, fine (0,063 mm - 0,200 mm):	6,58
Sand, medium (0,2 mm - 0,6 mm):	81,58
Sand, coarse (0,6 mm - 2 mm):	10,31
Gravel (> 2 mm):	0,94
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,84	0,24
16%	84%	0,50	1,00
25%	75%	0,45	1,16
40%	60%	0,37	1,45
Median 50%	50%	0,34	1,58
75%	25%	0,27	1,87
84%	16%	0,25	2,00
90%	10%	0,22	2,21
95%	5%	0,19	2,42

Moments Statistics

Mean	1,53
Sorting	0,58
Skewness	-0,19
Kurtosis	1,24
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)

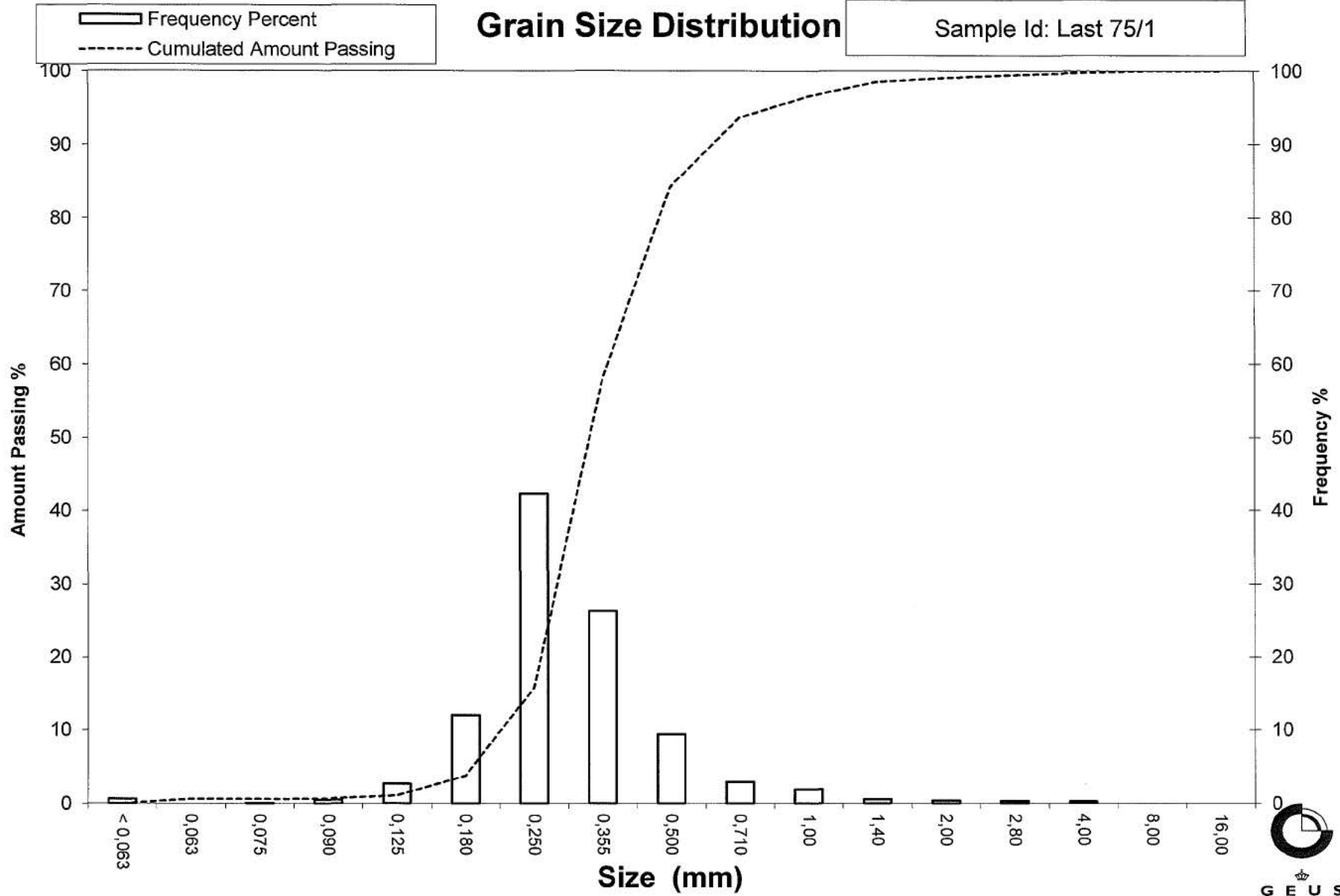
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

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

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

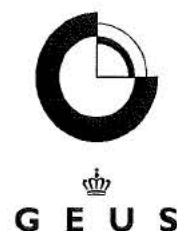
Sample Id: Last 75/1



Grain Size Distribution

Geotechnical

Sample Id: Last 75/2
Lab. Id: 170361
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 123,36 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	0,10	0,08	99,92
2,80	-1,49	0,24	0,19	99,72
2,00	-1,00	0,48	0,39	99,34
1,40	-0,49	0,65	0,53	98,81
1,00	0,00	1,30	1,05	97,75
0,710	0,49	2,99	2,42	95,33
0,500	1,00	9,98	8,09	87,24
0,355	1,49	31,38	25,44	61,80
0,250	2,00	54,16	43,90	17,90
0,180	2,47	16,18	13,12	4,78
0,125	3,00	4,12	3,34	1,44
0,090	3,47	0,66	0,54	0,91
0,075	3,74	0,07	0,06	0,85
0,063	3,99	0,01	0,01	0,84
< 0,063	> 3,99	1,04	0,84	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,84
Sand, fine (0,063 mm - 0,200 mm):	7,69
Sand, medium (0,2 mm - 0,6 mm):	82,56
Sand, coarse (0,6 mm - 2 mm):	8,24
Gravel (> 2 mm):	0,66
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	1,05
25%	75%	0,43	1,22
40%	60%	0,35	1,51
Median 50%	50%	0,33	1,61
75%	25%	0,27	1,91
84%	16%	0,24	2,06
90%	10%	0,21	2,27
95%	5%	0,18	2,46

Moments Statistics

Mean	1,58
Sorting	0,55
Skewness	-0,12
Kurtosis	1,16
Uniformity Coefficient	1,69

The analysis is executed according to DS 405.9 extended by sieves to the 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)

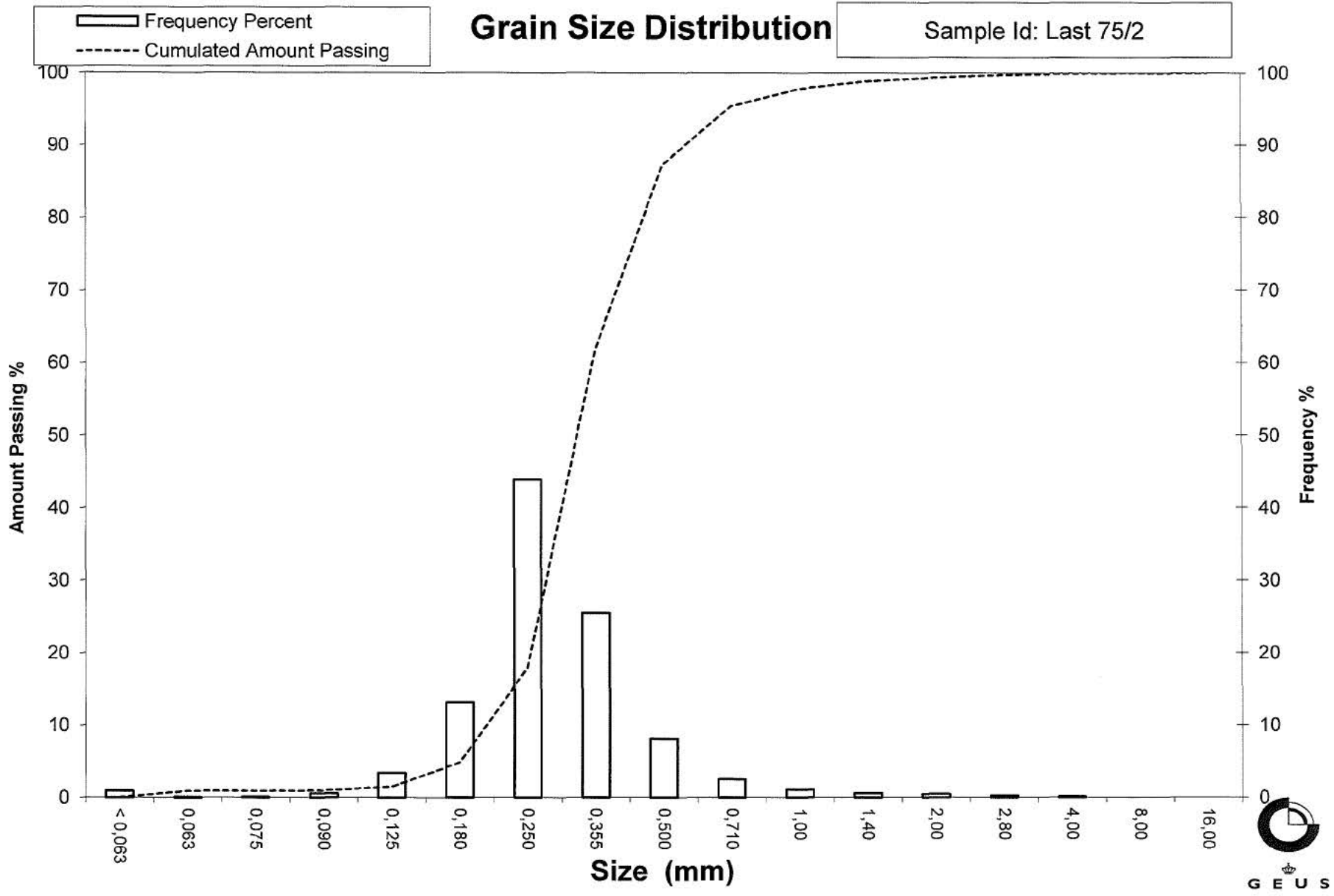
Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on

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 Email: GEUS@geus.dk

Grain Size Distribution

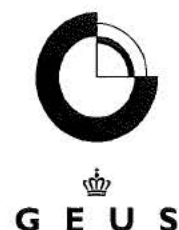
Sample Id: Last 75/2



Grain Size Distribution

Geotechnical

Sample Id: Last 75/3
Lab. Id: 170362
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 123,95 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	0,31	0,25	99,75
2,80	-1,49	0,23	0,19	99,56
2,00	-1,00	0,72	0,58	98,98
1,40	-0,49	0,72	0,58	98,40
1,00	0,00	2,20	1,77	96,63
0,710	0,49	3,51	2,83	93,80
0,500	1,00	10,97	8,85	84,95
0,355	1,49	31,97	25,79	59,15
0,250	2,00	52,96	42,73	16,43
0,180	2,47	15,31	12,35	4,07
0,125	3,00	3,43	2,77	1,31
0,090	3,47	0,58	0,47	0,84
0,075	3,74	0,05	0,04	0,80
0,063	3,99	0,00	0,00	0,80
< 0,063	> 3,99	0,99	0,80	0,00

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,80
Sand, fine (0,063 mm - 0,200 mm):	6,80
Sand, medium (0,2 mm - 0,6 mm):	81,56
Sand, coarse (0,6 mm - 2 mm):	9,82
Gravel (> 2 mm):	1,02
Sum:	100,00

Moments Measures (Folk and Wards)

Percentile	Percentile	d(mm)	Φ
Amount in sieve	Amount passing		
5%	95%	0,83	0,26
16%	84%	0,49	1,02
25%	75%	0,44	1,17
40%	60%	0,36	1,47
Median 50%	50%	0,33	1,59
75%	25%	0,27	1,88
84%	16%	0,25	2,01
90%	10%	0,21	2,23
95%	5%	0,19	2,43

Moments Statistics

Mean	1,54
Sorting	0,58
Skewness	-0,18
Kurtosis	1,25
Uniformity Coefficient	1,68

The analysis is executed according to DS 405.9 extended by sieves to the 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)

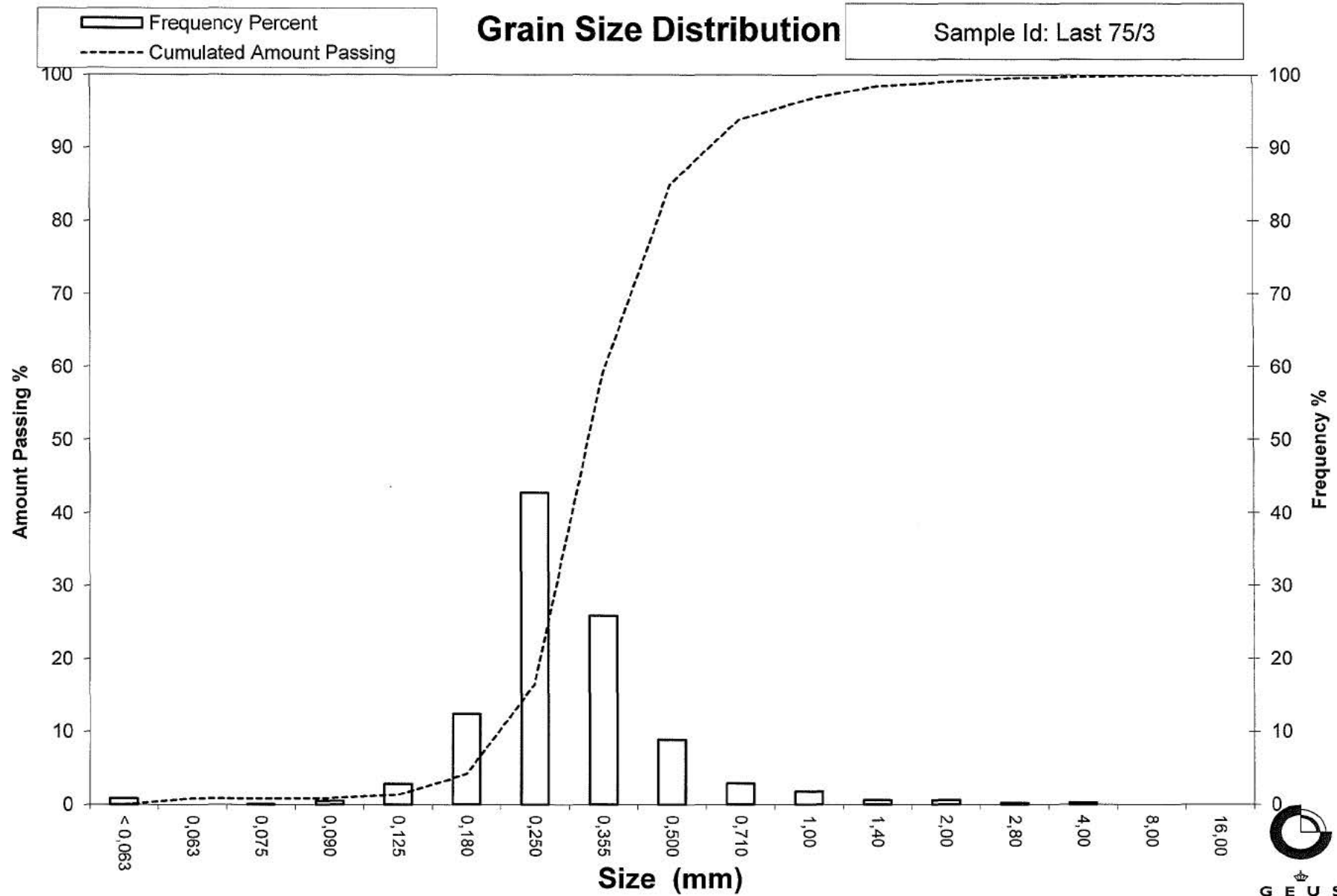
Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

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

Mean, sorting, skewness and kurtosis are based on

Grain Size Distribution

Sample Id: Last 75/3



Grain Size Distribution

Geotechnical

Sample Id: Last 75/4
Lab. Id: 170363
Submitter: Rohde Nielsen
Subject: Sand fra Læsø
Date: 15-11-2017
Executed: PS
Remarks:



Total Weight 125,49 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	0,44	0,35	99,65
2,80	-1,49	0,32	0,26	99,39
2,00	-1,00	0,62	0,49	98,90
1,40	-0,49	1,02	0,81	98,09
1,00	0,00	1,90	1,51	96,57
0,710	0,49	3,66	2,92	93,66
0,500	1,00	11,26	8,97	84,68
0,355	1,49	33,65	26,81	57,87
0,250	2,00	53,30	42,47	15,40
0,180	2,47	14,30	11,40	4,00
0,125	3,00	3,48	2,77	1,23
0,090	3,47	0,55	0,44	0,79
0,075	3,74	0,06	0,05	0,74
0,063	3,99	0,00	0,00	0,74
< 0,063	> 3,99	0,93	0,74	0,00

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

	Weight %
Silt and clay (< 0,063 mm):	0,74
Sand, fine (0,063 mm - 0,200 mm):	6,52
Sand, medium (0,2 mm - 0,6 mm):	81,70
Sand, coarse (0,6 mm - 2 mm):	9,94
Gravel (> 2 mm):	1,10
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%	0,50	1,01
25%	75%	0,45	1,16
40%	60%	0,37	1,45
Median 50%	50%	0,34	1,58
75%	25%	0,27	1,87
84%	16%	0,25	1,99
90%	10%	0,22	2,21
95%	5%	0,19	2,43

Moments Statistics

Mean	1,53
Sorting	0,58
Skewness	-0,19
Kurtosis	1,26
Uniformity Coefficient	1,69

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

Grain Size Distribution

Sample Id: Last 75/4

