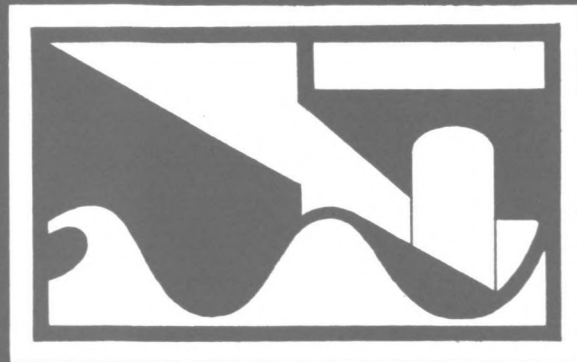


574B



Kustuitbreiding tussen Scheveningen  
en Hoek van Holland

Bijlage I (Tabellen)

J.P. Smit

Technische Hogeschool Delft  
Afdeling der Civiele Techniek  
Vakgroep Kustwaterbouwkunde

"KUSTUITBREIDING TUSSEN SCHEVENINGEN EN HOEK VAN HOLLAND"

J.P. Smit

TABELLEN

Technische Hogeschool Delft  
Hoofdontwerp aan de afdeling Kustwaterbouwkunde  
Hoogleraar: Prof.Dr.Ir. E.W. Bijker  
Begeleider: Ir. R. Reinalda

1984

H <sub>zo</sub>	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.00/0.25													4.50E-1
0.25/0.75													2.54
0.75/1.25													3.55
1.25/1.75													2.04
1.75/2.25													8.60E-1
2.25/2.75													5.08E-1
2.75/3.25													1.01E-1
3.25/3.75													3.37E-2
3.75/4.25													1.17E-2
4.25/4.75													3.56E-3
4.75/5.25													1.32E-3
5.25/5.75													4.87E-4
5.75/6.25													1.43E-4
6.25/6.75													3.56E-5
6.75/7.25													3.71E-5
7.25/7.75													5.79E-6
7.75/8.25													1.82E-6
8.25/8.75													6.95E-7
8.75/9.25													2.03E-7
9.25/9.75													8.54E-8
9.75/10.25													3.66E-8
TOTAAL													10.10

Frequenties van voorkomen in % van de tijd van golfhoogten H<sub>zo</sub> op diep water bij bepaalde waterstanden Z, afgeleid uit waarnemingen van het lichtschip Goeree voor de periode 1951 t/m 1960. Richtingssector NO II ( 15°-45° )

Golfklimaat op diep water  
 Richtingssector NO II  
 Tabel 3.3-1

Hso	Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.00/0.25		5.00E-2	5.00E-1	3.00E-1	1.70E-1	2.80E-2	2.00E-3							1.05
0.25/0.75		2.45	9.00E-1	4.00E-1	1.80E-1	1.90E-2	1.00E-3							3.95
1.75/1.25		1.90	1.05	4.00E-1	1.10E-1	3.80E-2	1.98E-3	1.90E-5	1.90E-5	1.00E-6				3.50
1.25/1.75		7.00E-1	3.50E-1	1.80E-1	1.30E-1	3.70E-2	2.98E-3	1.80E-5	1.80E-5	2.00E-6				1.40
1.75/2.25		2.70E-1	1.30E-1	1.55E-1	5.50E-2	3.70E-2	2.92E-3	7.80E-5	7.80E-5	2.00E-6				6.50E-1
2.25/2.75		1.15E-1	4.50E-2	3.50E-2	4.00E-2	3.00E-2	4.90E-3	9.96E-5	9.96E-5	3.00E-6				2.70E-1
2.75/3.25		2.00E-3	2.30E-2	2.80E-2	1.70E-2	3.10E-2	3.80E-3	1.98E-5	1.98E-5	2.00E-6				1.01E-1
3.25/3.75		1.20E-2	3.00E-3	2.00E-3	1.20E-2	1.22E-2	3.62E-3	1.76E-4	1.76E-4	4.00E-6	5.00E-8			4.50E-2
3.75/4.25		//////////	//////////	//////////	6.00E-3	8.55E-3	2.25E-3	1.92E-4	1.92E-4	8.45E-6	4.00E-8			1.70E-2
4.25/4.75				//////////	//////////	5.25E-3	1.23E-3	2.10E-4	2.10E-4	9.40E-6	1.00E-7			6.70E-3
4.75/5.25					/	1.85E-3	8.20E-4	1.24E-4	1.24E-4	5.90E-6	1.00E-7			2.80E-3
5.25/5.75					/	9.50E-4	4.50E-4	9.40E-5	9.40E-5	5.95E-6	5.00E-8			1.50E-3
5.75/6.25					/	6.70E-4	3.30E-4	4.40E-5	4.40E-5	5.55E-6	4.50E-7			1.05E-3
6.25/6.75					/	2.70E-4	1.33E-4	4.40E-5	4.40E-5	2.80E-6	2.00E-7			4.50E-4
6.75/7.25					/	1.50E-4	8.20E-5	2.20E-5	2.20E-5	4.30E-7	1.70E-7			2.55E-4
7.25/7.75					/	5.50E-5	5.50E-5	1.63E-5	1.63E-5	3.47E-6	2.30E-7			1.30E-4
7.75/8.25					/	5.75E-5	1.05E-5	9.20E-6	9.20E-6	2.60E-6	2.10E-7			8.00E-5
8.25/8.75					/	7.25E-6	7.05E-6	7.60E-6	7.60E-6	1.66E-6	1.40E-7			2.37E-5
8.75/9.25					/	//////////	2.70E-6	2.10E-6	2.10E-6	1.76E-6	1.40E-7			6.70E-6
9.25/9.75					/	//////////	//////////	//////////	//////////	6.80E-7	1.20E-7			8.00E-7
9.75/10.25					/	//////////	//////////	//////////	//////////	//////////	//////////			
TOTAAL		5.50	3.00	1.50	7.20E-1	2.50E-1	2.86E-2	1.17E-3	1.17E-3	6.27E-5	2.00E-6			11.00

Frequenties van voorkomen in % van de tijd van golfhoogten Hso op diep water bij bepaalde waterstanden Z, afgeleid uit waarnemingen van het lichtschip Goeree voor de periode 1951 t/m 1960.  
 Richtingssector N(345° - 15°)

Golfklimaat op diep water  
 Richtingssector N  
 Tabel : 3.3-2



Hso	Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.00/0.25		7.00E-1	3.00E-1	2.40E-1	2.50E-1	6.00E-2	4.00E-2							1.50
0.25/0.75		1.50	1.00	1.80E-1	2.60E-1	5.90E-2	1.00E-2							3.00
1.75/1.25		1.00	8.50E-1	4.50E-1	1.40E-1	5.90E-2	1.00E-2							2.50
1.25/1.75		9.00E-1	6.80E-1	3.00E-1	2.40E-1	7.50E-2	5.00E-2							2.20
1.75/2.25		3.20E-1	2.10E-1	1.90E-1	1.10E-1	6.70E-2	2.28E-2	2.00E-4						9.20E-1
2.25/2.75		5.00E-2	1.20E-1	1.00E-1	7.00E-2	5.80E-2	2.12E-2	7.00E-4	1.00E-4					4.20E-1
2.75/3.25		4.50E-2	2.50E-2	4.00E-2	4.00E-2	4.00E-2	1.90E-2	8.00E-3	2.00E-4					2.17E-1
3.25/3.75		1.50E-2	3.00E-3	1.30E-2	1.50E-2	2.80E-2	1.40E-2	2.70E-3	2.90E-4	1.00E-5				9.00E-2
3.75/4.25		3.00E-3	8.00E-3	5.00E-3	2.00E-3	1.90E-2	7.50E-3	3.15E-3	3.40E-4	6.00E-6	3.50E-6	5.00E-7		4.80E-2
4.25/4.75		6.00E-3	2.00E-3	2.00E-3	2.00E-3	5.00E-3	4.80E-3	2.75E-3	4.00E-4	3.70E-5	1.25E-5	5.00E-7		2.50E-2
4.75/5.25		1.00E-3	2.00E-3	1.00E-3	1.00E-3	3.00E-3	3.90E-3	1.70E-3	2.50E-4	4.00E-5	8.50E-6	5.00E-7		1.39E-2
5.25/5.75		////	////	////	////	2.90E-3	1.60E-3	9.00E-4	2.60E-4	3.00E-5	9.00E-6	9.50E-7	5.00E-8	5.70E-3
5.75/6.25						9.00E-4	9.00E-4	8.00E-4	1.60E-4	3.00E-5	8.00E-6	1.95E-6	5.00E-8	2.80E-3
6.25/6.75						5.00E-4	7.50E-4	3.50E-4	1.50E-4	3.30E-5	4.00E-6	2.80E-6	2.00E-7	1.79E-3
6.75/7.25						4.00E-4	3.50E-4	1.50E-4	1.60E-4	3.50E-5	2.50E-6	2.10E-6	4.00E-7	1.10E-3
7.25/7.75		--- Frequenties kleiner				2.00E-4	3.00E-5	3.10E-4	1.30E-4	2.50E-5	3.50E-6	1.20E-6	3.00E-7	7.00E-4
7.75/8.25		--- dan nauwkeurigheid				5.00E-5	1.10E-4	1.80E-4	8.00E-5	2.40E-5	4.50E-6	1.00E-6	5.00E-7	4.50E-4
8.25/8.75		--- van bepaling				5.00E-5	4.00E-5	8.00E-5	5.10E-5	2.50E-5	3.90E-6	7.00E-7	4.00E-7	2.51E-4
8.75/9.25						////	2.00E-5	3.00E-5	7.90E-5	2.55E-5	3.90E-6	1.15E-7	4.50E-7	1.59E-4
9.25/9.75						////	////	2.00E-5	1.15E-5	4.30E-6	1.21E-6	5.90E-7	3.76E-5	3.76E-5
9.75/10.25									8.00E-7	6.00E-6	6.40E-7	3.70E-7	7.81E-6	7.81E-6
TOTAAL		4.54	3.20	1.52	1.13	4.24E-1	1.03E-1	2.20E-2	2.67E-3	3.32E-4	7.51E-5	1.42E-5	3.31E-6	10.95

Frequenties van voorkomen in % van de tijd van zelfhoosten Hso op diep water bij bepaalde waterstanden Z, afgeleid uit waarnemingen van het lichtschip Goeree voor de periode 1951 t/m 1960. Richtingssector NW I (315° - 345°)

Golfklimaat op diep water  
 Richtingssector NW I      Tabel      3.3-3

Hso	Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.00/0.25		3.00E-1	4.00E-1	1.00E-1	2.30E-1	7.00E-2								1.10
0.25/0.75		2.00E-1	5.00E-1	5.00E-2	3.50E-1	1.00E-1								1.20
1.75/1.25		1.10	4.00E-1	2.50E-1	2.30E-1	1.15E-1								2.10
1.25/1.75		1.50E-1	4.50E-1	2.40E-1	1.30E-1	1.30E-1								1.10
1.75/2.25		2.00E-1	1.20E-1	1.40E-1	1.20E-1	9.50E-2	3.00E-2							7.00E-1
2.25/2.75		1.20E-1	5.00E-2	7.00E-2	7.00E-2	8.00E-2	2.90E-2	1.00E-3						4.20E-1
2.75/3.25		3.00E-2	4.00E-2	2.00E-2	2.00E-2	6.50E-2	3.00E-2	3.00E-3						2.10E-1
3.25/3.75	////////		2.00E-2	1.00E-2	1.00E-2	4.20E-2	3.10E-2	7.00E-3						1.20E-1
3.75/4.25	/		1.00E-2	1.00E-2	1.00E-2	1.00E-2	1.50E-2	4.20E-3	7.90E-4	1.00E-5				6.00E-2
4.25/4.75	/		3.00E-3	5.00E-3	5.00E-3	1.20E-2	9.50E-3	2.70E-3	7.50E-4	4.00E-5	1.00E-5			3.80E-2
4.75/5.25	/		3.00E-3	3.00E-3	2.00E-3	4.00E-3	6.35E-3	2.75E-3	7.50E-4	5.00E-5	7.00E-6			2.19E-2
5.25/5.75	/		3.00E-3	1.00E-3	1.00E-3	2.50E-3	2.50E-3	1.60E-3	2.00E-4	8.50E-5	1.20E-5	2.80E-6	2.00E-7	1.19E-2
5.75/6.25	////////			5.00E-4	5.00E-4	2.50E-3	2.00E-3	1.00E-3	4.00E-4	9.00E-5	7.00E-6	2.80E-6	2.00E-7	7.00E-3
6.25/6.75	/			5.00E-4	8.00E-4	1.00E-3	1.10E-3	1.00E-3	3.00E-4	8.00E-5	1.50E-5	4.20E-6	8.00E-7	4.80E-3
6.75/7.25	/			4.00E-4	5.00E-4	7.00E-4	4.00E-4	5.00E-4	2.30E-5	6.00E-5	7.50E-6	1.50E-6	1.00E-6	2.60E-3
7.25/7.75	/			4.00E-4	2.00E-4	1.00E-4	3.00E-4	4.20E-4	2.20E-4	5.10E-5	4.50E-6	3.30E-6	1.20E-6	1.70E-3
7.75/8.25	/			2.00E-4	////////	1.80E-4	2.00E-4	1.80E-4	1.60E-4	4.40E-5	1.20E-5	2.90E-6	1.10E-6	9.80E-4
8.25/8.75	////////			////////	////////	2.00E-5	////////	1.50E-4	1.80E-4	3.00E-5	1.60E-5	3.10E-6	9.00E-7	4.00E-4
8.75/9.25	Frequenties kleiner dan nauwkeurigheid van bepaling				////////	////////	////////	6.00E-5	1.02E-4	4.70E-5	7.00E-6	3.30E-6	7.00E-7	2.20E-4
9.25/9.75							////////	4.80E-5	3.30E-5	1.10E-5	2.50E-6	1.00E-6	9.55E-5	
9.75/10.25										2.00E-6	1.40E-6	1.10E-6	4.50E-6	
TOTAAL		2.10	2.00	0.90	1.18	0.73	1.57E-1	2.56E-2	3.92E-3	6.20E-4	1.11E-4	2.78E-5	8.20E-6	7.10

Frequenties van voorkomen in % van de tijd van zelfhoosten Hso op diep water bij bepaalde waterstanden Z, afgeleid uit waarnemingen van het lichtschip Goeree voor de periode 1951 t/m 1960.  
Richtingssector NW II (285°-315°)

Golfklimaat op diep water  
Richtingssector NW II  
Tabel 3.3-4



Hso	Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.00/0.25		7.00E-1	1.00E-1	2.00E-1	5.00E-2	5.00E-2								1.10
0.25/0.75		1.90	6.00E-1	1.00E-1	2.50E-1	4.50E-2	5.00E-3							2.90
1.75/1.25		7.00E-1	5.00E-1	4.00E-1	3.00E-1	9.00E-2	1.00E-2							3.00
1.25/1.75		6.00E-1	5.00E-1	4.00E-1	1.50E-1	1.35E-1	1.50E-2							1.80
1.75/2.25		3.50E-1	2.00E-1	5.00E-2	1.30E-1	1.55E-1	1.30E-2	1.90E-3	8.50E-5	1.50E-5				9.00E-1
2.25/2.75		4.00E-2	9.00E-2	4.00E-2	5.00E-2	1.45E-1	3.20E-2	2.80E-3	1.95E-4	5.00E-6				4.00E-1
2.75/3.25		1.00E-2	1.00E-2	1.00E-2	6.00E-2	8.00E-2	2.50E-2	4.80E-3	1.95E-4	5.00E-6				2.00E-1
3.25/3.75		//////////	//////////	//////////	1.00E-2	4.30E-2	2.80E-2	3.60E-3	3.95E-4	5.00E-6				8.50E-2
3.75/4.25				//////////		2.40E-2	1.80E-2	2.70E-3	2.85E-4	1.50E-5				4.50E-2
4.25/4.75					/	1.60E-2	1.00E-2	3.60E-3	3.85E-4	1.40E-5	1.00E-6			3.00E-2
4.75/5.25					/	7.00E-3	6.30E-3	2.50E-3	1.90E-4	7.00E-6	2.80E-6	2.00E-7		1.60E-2
5.25/5.75					/	4.50E-3	3.40E-3	1.85E-3	2.30E-4	1.70E-5	2.90E-6	1.00E-7		1.00E-2
5.75/6.25					/	3.70E-3	1.70E-3	1.29E-3	2.60E-4	4.70E-5	2.50E-6	4.00E-7	1.00E-7	7.00E-3
6.25/6.75					/	8.00E-4	1.35E-3	6.10E-4	2.10E-4	2.50E-5	4.30E-6	6.00E-7	1.00E-7	3.00E-3
6.75/7.25					/	7.00E-4	7.50E-4	3.20E-4	1.70E-4	2.55E-5	4.00E-6	3.00E-7	2.00E-7	1.97E-3
7.25/7.75		--- Frequenties kleiner			/	4.00E-4	1.00E-4	3.40E-4	1.33E-4	2.35E-5	2.80E-6	5.00E-7	2.00E-7	1.00E-3
7.75/8.25		--- dan nauwkeurigheid			/	1.00E-4	1.50E-4	2.35E-4	9.40E-5	1.78E-5	2.50E-6	4.00E-7	3.00E-7	6.00E-4
8.25/8.75		--- van bepaalde			/	8.00E-5	3.00E-5	1.15E-4	8.50E-5	1.72E-5	2.20E-6	4.00E-7	2.00E-7	3.30E-4
8.75/9.25					/	3.00E-5	1.00E-5	1.00E-5	6.20E-5	1.52E-5	2.20E-6	3.60E-7	2.40E-7	1.30E-4
9.25/9.75					/	//////////	//////////	//////////	2.60E-5	8.90E-6	2.00E-6	4.00E-7	1.60E-7	3.75E-5
9.75/10.25										9.00E-7	8.00E-7	6.00E-7	2.00E-7	2.50E-6
TOTAAL		4.30	2.00	1.20	1.00	8.00E-1	1.70E-1	2.67E-2	3.00E-3	2.64E-4	3.00E-5	4.30E-6	1.70E-6	9.50

Frequenties van voorkomen in % van de tijd van golfhoorden Hso op diep water bij bepaalde waterstanden Z, afgeleid uit waarnemingen van het lichtschip Goeree voor de periode 1951 t/m 1960. Richtingssector W(255°-295°)

Golfklimaat op diep water  
 Richtingssector WEST  
 Tabel 3.3-5

H <sub>50</sub>	Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.00/0.25		3.34E-1	4.64E-1	3.31E-1	2.43E-1	1.43E-1	1.17E-2	1.15E-3						1.53
0.25/0.75		8.98E-1	1.25	8.89E-1	6.54E-1	3.85E-1	3.15E-2	3.09E-3						4.10
1.75/1.25		9.92E-1	1.39	9.84E-1	7.24E-1	4.26E-1	3.48E-2	3.42E-3						4.54
1.25/1.75		5.51E-1	7.67E-1	5.47E-1	4.02E-1	2.37E-1	1.94E-2	1.90E-3						2.52
1.75/2.25		3.26E-1	4.54E-1	3.24E-1	2.38E-1	1.40E-1	1.15E-2	1.12E-3						1.49
2.25/2.75		1.85E-1	2.58E-1	1.84E-1	1.35E-1	7.96E-2	6.51E-3	6.38E-4						8.48E-1
2.75/3.25		7.97E-2	1.11E-1	7.91E-2	5.82E-2	3.43E-2	2.80E-3	2.75E-4						3.65E-1
3.25/3.75		1.90E-2	2.64E-2	1.89E-2	1.39E-2	8.16E-3	6.67E-4	6.54E-5						8.70E-2
3.75/4.25		4.15E-3	5.77E-3	4.12E-3	3.03E-3	1.78E-3	1.46E-4	1.43E-5						1.90E-2
4.25/4.75		2.40E-3	3.34E-3	2.38E-3	1.75E-3	1.03E-3	8.44E-5	8.27E-6						1.10E-2
4.75/5.25		1.20E-3	1.67E-3	1.19E-3	8.77E-4	5.16E-4	4.22E-5	4.14E-6						5.50E-3
5.25/5.75		3.28E-4	4.56E-4	3.25E-4	2.39E-4	1.41E-4	1.15E-5	1.13E-6						1.50E-3
5.75/6.25		1.53E-4	2.13E-4	1.52E-4	1.12E-4	6.57E-5	5.37E-6	5.27E-7						7.00E-4
6.25/6.75														
6.75/7.25														
7.25/7.75														
7.75/8.25														
8.25/8.75														
8.75/9.25														
9.25/9.75														
9.75/10.25														
TOTAAL		3.39	4.72	3.36	2.47	1.46	1.19E-1	1.17E-2						15.53

Frequenties van voorkomen in % van de tijd van zelfhoogste H<sub>50</sub> op diep water bij bepaalde waterstanden Z, afgeleid uit waarnemingen van het lichtschip Goeree voor de periode 1951 t/m 1960.  
Richtingssector ZW I (225°-255°)

Golfklimaat op diep water  
Richtingssector ZW I Tabel 3.3-6



Golfrichting Noord

Hso-klasse (m)	$H_i$	$f_i$	$H_i^2 * f_i$	$f_i'$	$H_i^2 * f_i'$	$f_i''$	$H_i^2 * f_i''$
		A	A	B	B	C	C
0 /0.25	0.0156	1.05	1.64E-2	1.00	1.56E-2	5.00E-1	7,80E-3
0.25/0.75	0.25	3.95	9.88E-1	1.50	3.75E-1	6.00E-1	1.50E-1
0.75/1.25	1.00	3.50	3.50	1.60	1.60	5.50E-1	5.50E-1
1.25/1.75	2.25	1.40	3.15	7.00E-1	1.57	3.50E-1	7.87E-1
1.75/2.25	4.00	6.50E-1	2.60	3.80E-1	1.52	2.50E-1	1.00
2.25/2.75	6.25	2.70E-1	1.75	1.55E-1	1.03	1.10E-1	7.49E-1
2.75/3.25	9.00	1.05E-1	9.43E-1	1.03E-1	9.25E-1	7.98E-2	7.19E-1
3.25/3.75	12.25	4.50E-2	5.51E-1	3.30E-2	4.04E-1	3.00E-2	3.68E-1
3.75/4.25	16.00	1.70E-2	2.72E-1	1.70E-2	2.72E-1	1.70E-2	2.72E-1
4.25/4.75	20.25	6.70E-3	1.36E-1	6.70E-3	1.36E-1	6.70E-3	1.36E-1
4.75/5.25	25.00	2.80E-3	7.00E-2	2.80E-3	7.00E-2	2.80E-3	7.00E-2
5.25/5.75	30.25	1.50E-3	4.54E-2	1.50E-3	4.54E-2	1.50E-3	4.53E-2
5.75/6.25	36.00	1.05E-3	3.78E-2	1.05E-3	3.78E-2	1.05E-3	3.78E-2
6.25/6.75	42.25	4.50E-4	1.90E-2	4.50E-4	1.91E-2	4.50E-4	1.90E-2
6.75/7.25	49.00	2.55E-4	1.25E-2	2.55E-4	1.25E-2	2.55E-4	1.25E-2
7.25/7.75	56.25	1.30E-4	7.31E-3	1.30E-4	7.31E-3	1.30E-4	7.31E-3
7.75/8.25	64.00	8.00E-5	5.12E-3	8.00E-5	5.12E-3	8.00E-5	5.12E-3
8.25/8.75	72.25	2.40E-5	1.71E-3	2.40E-5	1.71E-3	2.40E-5	1.71E-3
8.75/9.25	81.00	7.00E-6	5.43E-4	7.00E-6	5.43E-4	7.00E-6	5.43E-4
9.25/9.75	90.25	1.00E-6	7.20E-5	1.00E-6	7.20E-5	1.00E-6	7.20E-5
9.75/10.25	100.00						
Totaal		11.00	14.10	5.50	8.05	2.50	4.87

geval A :  $f_i$  = frequentie van voorkomen van golfhoogte Hso op diepwater  
 geval B :  $f_i'$  = frequentie van voorkomen van golfhoogte Hso op diepwater  
 zonder waterstandsklasse -1/-0.5  
 geval C :  $f_i''$  = frequentie van voorkomen van golfhoogte Hso op diepwater  
 zonder waterstandsklasse -1/-0.5 en waterstandsklasse -0,5/0.

geval A :  $H_r$  = 1.13 m       $T_m$  = 4.10 sec       $T_r$  = 4.91 sec  
 geval B :  $H_r'$  = 1.21 m       $T_m'$  = 4.20 sec       $T_r'$  = 5.04 sec  
 geval C :  $H_r''$  = 1.40 m       $T_m''$  = 4.43 sec       $T_r''$  = 5.32 sec

Golfrichting N.W.I

Hso-klasse (m)	$H^2$	$f_i$ A	$H^2 \cdot f_i$ $\bar{A}$	$f_i'$ B	$H^2 \cdot f_i'$ B	$f_i''$ C	$H^2 \cdot f_i''$ C
0/0.25	0.0156	1.50	2.34E-2	8.00E-1	1.25E-2	5.00E-1	7.80E-3
0.25/0.75	0.25	3.00	7.50E-1	1.50	3.75E-1	5.00E-1	1.25E-1
0.75/1.25	1.00	2.50	2.50	1.50	1.50	6.50E-1	6.50E-1
1.25/1.75	2.25	2.20	4.95	1.30	2.93	6.20E-1	1.40
1.75/2.25	4.00	9.20E-1	3.68	6.00E-1	2.40	3.90E-1	1.56
2.25/2.75	6.25	4.29E-1	2.63	3.70E-1	2.31	2.50E-1	1.56
2.75/3.25	9.00	2.17E-1	1.95	1.72E-1	1.55	1.47E-1	1.32
3.25/3.75	12.25	9.00E-2	1.10	7.50E-2	9.19E-1	7.20E-2	8.82E-1
3.75/4.25	16.00	4.80E-2	7.68E-1	4.50E-2	7.20E-1	3.70E-2	5.92E-1
4.25/4.75	20.25	2.50E-2	5.01E-1	1.90E-2	3.85E-1	1.70E-2	3.44E-1
4.75/5.25	25.00	1.39E-2	3.40E-1	1.29E-2	3.23E-1	1.09E-2	2.72E-1
5.25/5.75	30.25	5.00E-3	1.72E-1	5.00E-3	1.72E-1	5.00E-3	1.72E-1
5.75/6.25	36.00	2.80E-3	1.00E-1	2.80E-3	1.00E-1	2.80E-1	1.00E-1
6.25/6.75	42.25	1.79E-3	7.56E-2	1.79E-3	7.56E-2	1.79E-3	7.56E-2
6.75/7.25	49.00	1.10E-3	5.39E-2	1.10E-3	5.39E-2	1.10E-3	5.39E-2
7.25/7.75	56.25	7.00E-4	3.94E-2	7.00E-4	3.94E-2	7.00E-4	3.94E-2
7.75/8.25	64.00	4.50E-4	2.88E-2	4.50E-4	2.88E-2	4.50E-4	2.88E-2
8.25/8.75	72.25	2.51E-4	1.81E-2	2.51E-4	1.81E-2	2.51E-4	1.81E-2
8.75/9.25	81.00	1.59E-4	1.29E-2	1.59E-4	1.29E-2	1.59E-4	1.29E-2
9.25/9.75	90.25	3.80E-5	3.44E-3	3.80E-5	3.44E-3	3.80E-5	3.44E-3
9.75/10.25	100.00	8.00E-6	7.81E-4	8.00E-6	7.81E-4	8.00E-6	7.81E-4
Totaal		10.95	19.71	6.40	13.93	3.21	9.22

gevalA :  $f_i$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 gevalB :  $f_i'$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5  
 gevalC :  $f_i''$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5 en -0.5/0

gevalA :  $H_r$  = 1.34 m     $T_m$  = 4.37 sec     $T_r$  = 5.24 sec  
 gevalB :  $H_r'$  = 1.47 m     $T_m'$  = 4.52 sec     $T_r'$  = 5.42 sec  
 gevalC :  $H_r''$  = 1.70 m     $T_m''$  = 4.77 sec     $T_r''$  = 5.72 sec

Golrichting N.W.II

Hso-klasse (m)	$H^2_i$	$f_i$ A	$H^2_i * f_i$ A	$f_i^I$ B	$H^2_i * f_i^I$ B	$f_i^{II}$ C	$H^2_i * f_i^{II}$ C
0/0.25	0.0156	1.10	1.72E-2	8.00E-1	1.25E-2	4.00E-1	6.24E-3
0.25/0.75	0.25	1.20	3.00E-1	1.00	2.50E-1	5.00E-1	1.25E-1
0.75/1.25	1.00	2.10	2.10	9.95E-1	9.95E-1	5.95E-1	5.95E-1
1.25/1.75	2.25	1.10	2.48	9.50E-1	2.14	5.00E-1	1.13
1.75/2.25	4.00	7.05E-1	2.82	5.05E-1	2.02	3.85E-1	1.54
2.25/2.75	6.25	4.20E-1	2.63	3.00E-1	1.88	2.50E-1	1.56
2.75/3.25	9.00	2.08E-1	1.87	1.78E-1	1.60	1.38E-1	1.24
3.25/3.75	12.25	1.20E-1	1.47	1.20E-1	1.47	1.00E-1	1.23
3.75/4.25	16.00	6.00E-2	9.60E-1	6.00E-2	9.60E-1	5.00E-2	8.00E-1
4.25/4.75	20.25	3.80E-2	7.70E-1	3.80E-2	7.70E-1	3.50E-2	7.09E-1
4.75/5.25	25.00	2.19E-2	4.05E-1	2.19E-2	4.05E-1	1.89E-2	3.30E-1
5.25/5.75	30.25	1.19E-2	3.60E-1	1.19E-2	3.60E-1	8.90E-3	2.69E-1
5.75/6.25	36.00	7.00E-3	2.52E-1	7.00E-3	2.52E-1	7.00E-3	2.52E-1
6.25/6.75	42.25	4.80E-3	2.03E-1	4.80E-3	2.03E-1	4.80E-3	2.03E-1
6.75/7.25	49.00	2.60E-3	1.27E-1	2.60E-3	1.27E-1	2.60E-3	1.27E-1
7.25/7.75	56.25	1.70E-3	9.56E-2	1.70E-3	9.56E-3	1.70E-3	9.56E-2
7.75/8.25	64.00	9.80E-4	6.27E-2	9.80E-4	6.27E-2	9.80E-4	6.27E-2
8.25/8.75	72.25	4.00E-4	2.89E-2	4.00E-4	2.89E-2	4.00E-4	2.89E-2
8.75/9.25	81.00	2.20E-4	1.78E-2	2.20E-4	1.78E-2	2.20E-4	1.78E-2
9.25/9.75	90.25	9.60E-5	8.62E-3	9.60E-5	8.62E-3	9.60E-5	8.62E-3
9.75/10.25	100.00	5.00E-6	4.50E-4	5.00E-6	4.50E-4	5.00E-6	4.50E-4
Totaal		7.10	16.96	5.00	13.65	3.00	10.32

geval A :  $f_i$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 geval B :  $f_i^I$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5  
 geval C :  $f_i^{II}$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5 en -0.5/0

geval A :  $H_r$  = 1.55 m       $T_m$  = 4.61 sec       $T_r$  = 5.53 sec  
 geval B :  $H_r^I$  = 1.65 m       $T_m^I$  = 4.72 sec       $T_r^I$  = 5.67 sec  
 geval C :  $H_r^{II}$  = 1.80 m       $T_m^{II}$  = 4.93 sec       $T_r^{II}$  = 5.92 sec



Golfrichting West

Hso-klasse (m)	$H_z^2$	fi A	$H_z^2 * fi$ A	fi' B	$H_z^2 * fi'$ B	fi'' C	$H_z^2 * fi''$ C
0-0.25	0.0156	1.10	1.78E-2	4.00E-1	6.24E-3	3.00E-1	4.69E-3
0.25/0.75	0.25	2.90	7.25E-1	1.00	2.50E-1	4.00E-1	1.00E-1
0.75/1.25	1.00	2.00	2.00	1.30	1.30	8.00E-1	8.00E-1
1.25/1.75	2.25	1.80	4.05	1.20	2.70	7.00E-1	1.58
1.75/2.25	4.00	9.00E-1	3.60	5.50E-1	2.20	3.50E-1	1.40
2.25/2.75	6.25	4.00E-1	2.50	3.60E-1	2.25	2.70E-1	1.69
2.75/3.25	9.00	2.00E-1	1.80	1.90E-1	1.71	1.80E-1	1.62
3.25/3.75	12.25	8.50E-2	1.04	8.50E-2	1.04	8.50E-2	1.04
3.75/4.25	16.00	4.50E-2	7.20E-1	4.50E-2	7.20E-1	4.50E-2	7.20E-1
4.25/4.75	20.25	3.00E-2	5.40E-1	3.00E-2	5.40E-1	3.00E-2	5.40E-1
4.75/5.25	25.00	1.60E-2	4.00E-1	1.60E-2	4.00E-1	1.60E-2	4.00E-1
5.25/5.75	30.25	1.00E-2	3.03E-1	1.00E-2	3.03E-1	1.00E-2	3.03E-1
5.75/6.25	36.00	1.00E-3	2.52E-1	7.00E-2	2.52E-1	7.00E-2	2.52E-1
6.25/6.75	42.25	3.00E-3	1.27E-1	3.00E-3	1.27E-1	3.00E-3	1.27E-1
6.75/7.25	49.00	1.97E-3	9.67E-2	1.97E-3	9.67E-2	1.97E-3	9.67E-2
7.25/7.75	56.25	1.00E-3	5.63E-2	1.00E-3	5.63E-2	1.00E-3	5.63E-2
7.75/8.25	64.00	6.00E-4	3.84E-2	6.00E-4	3.84E-2	6.00E-4	3.84E-2
8.25/8.75	72.25	3.30E-4	2.11E-2	3.30E-4	2.11E-2	3.30E-4	2.11E-2
8.75/9.25	81.00	1.30E-4	1.05E-2	1.30E-4	1.05E-2	1.30E-4	1.05E-2
9.25/9.75	90.25	3.90E-5	3.39E-3	3.90E-5	3.39E-3	3.80E-5	3.39E-3
9.75/10.25	100.00	2.00E-6	2.50E-4	3.00E-6	2.50E-4	3.00E-6	2.50E-4
Totaal		9.50	18.30	5.20	14.02	3.20	10.80

geval A : fi = frequentie van voorkomen van golfhoogten Hso op diepwater  
 geval B : fi' = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5  
 geval C : fi'' = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5 en -0.5/0

geval A : Hr = 1.39 m    Tm = 4.42 sec    Tr = 5.31 sec  
 geval B : Hr' = 1.64 m    Tm' = 4.71 sec    Tr' = 5.65 sec  
 geval C : Hr'' = 1.84 m    Tm'' = 4.92 sec    Tr'' = 5.90 sec



Golfrichting Z.W.I

Hso-klasse (m)	$H_f^2$	$f_i$ A	$H_f^2 * f_i$ A	$f_i'$ B	$H_f^2 * f_i'$ B	$f_i''$ C	$H_f^2 * f_i''$ C
0/0.25	0.0156	1.53	2.38E-2	1.19	1.86E-2	7.30E-1	1.14E-2
0.25/0.75	0.25	4.11	1.03	3.21	8.03E-1	1.96E-1	4.91E-1
0.75/1.25	1.00	4.54	4.54	3.55	3.55	2.17	2.17
1.25/1.75	2.25	2.53	5.68	1.97	4.44	1.21	2.72
1.75/2.25	4.00	1.49	5.98	1.17	1.67	7.14E-1	2.86
2.25/2.75	6.25	8.49E-1	5.30	6.64E-1	4.15	4.06E-1	2.54
2.75/3.25	9.00	3.65E-1	3.28	2.86E-1	2.57	1.75E-1	1.57
3.25/3.75	12.25	8.17E-2	1.07	6.81E-2	8.34E-1	4.17E-2	5.11E-1
3.75/4.25	16.00	1.90E-2	3.04E-1	1.49E-2	2.38E-1	9.09E-3	1.45E-1
4.25/4.75	20.25	1.10E-2	2.23E-1	8.59E-3	1.74E-1	5.25E-3	1.06E-1
4.75/5.25	25.00	5.50E-3	1.37E-1	4.30E-3	1.07E-1	2.63E-3	6.57E-2
5.25/5.75	30.25	1.50E-3	4.54E-2	1.17E-3	3.55E-2	7.18E-4	2.17E-2
5.75/6.25	36.00	7.02E-4	2.52E-2	5.49E-4	1.97E-2	3.36E-4	1.21E-2
6.25/6.75	42.25						
6.75/7.25	49.00						
7.25/7.75	56.25						
7.75/8.25	64.00						
8.25/8.75	72.25						
8.75/9.25	81.00						
9.25/9.75	90.25						
9.75/10.25	100.00						
Totaal		15.54	27.65	12.15	21.62	7.43	13.22

geval A :  $f_i$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 geval B :  $f_i'$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5  
 geval C :  $f_i''$  = frequentie van voorkomen van golfhoogten Hso op diepwater  
 zonder waterstandsklasse -1/0.5 en -0.5/0

geval A :  $H_r = 1.33$  m     $T_m = 4.36$  sec     $T_r = 5.23$  sec  
 geval B :  $H_r' = 1.33$  m     $T_m' = 4.36$  sec     $T_r' = 5.23$  sec  
 geval C :  $H_r'' = 1.33$  m     $T_m'' = 4.36$  sec     $T_r'' = 5.23$  sec

H <sub>50</sub> <sup>2</sup> Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.0156													7.02E-3
0.2500													6.35E-1
1.0000													3.55
2.2500													4.59
4.0000													3.44
6.2500													3.18
9.0000													9.09E-1
12.2500													4.13E-1
16.0000													1.87E-1
20.2500													7.21E-2
25.0000													3.31E-2
30.2500													1.47E-2
36.0000													5.14E-3
42.2500													1.50E-3
49.0000													1.82E-3
56.2500													3.26E-4
64.0000													1.16E-4
72.2500													5.00E-5
81.0000													1.60E-5
90.2500													3.00E-6
100.0000													4.00E-6
TOTAAL													17.03

Gewogen golfenergie opgebouwd uit de frequenties van voorkomen vermenigvuldigd met het H<sub>50</sub><sup>2</sup>.  
 Richtingssector NO II (15° - 45°)

Richtingssector NO II  
 Tabel 3.5-1

Hso <sup>2</sup> : Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.0156	7.80E-4	7.80E-3	4.68E-3	2.65E-3	4.37E-4	3.10E-5							1.64. -2
0.2500	6.13E-1	2.35E-1	1.00E-1	2.15E-2	4.75E-3	2.50E-4							9.88. -1
1.0000	1.90	1.05	4.00E-1	1.10E-1	3.80E-2	1.98E-3	1.90E-5	1.00. -6					3.50
2.2500	1.53	7.88E-1	4.05E-1	2.93E-1	8.32E-2	6.71E-3	4.10E-5	5.00. -6					3.15
4.0000	1.03	5.20E-1	6.20E-1	2.20E-1	1.48E-1	1.17E-2	3.12E-4	8.00. -6					2.60
6.2500	7.19E-1	2.81E-1	2.19E-1	2.50E-1	1.87E-1	3.06E-2	6.23E-2	1.90. -5					1.75
9.0000	1.80E-2	2.07E-1	2.52E-1	1.53E-1	2.79E-1	3.42E-2	1.79E-4	1.80. -5					9.43. -1
12.2500	1.47E-1	3.68E-2	2.45E-2	1.47E-1	1.49E-1	4.43E-2	2.16E-3	4.90. -5	1.00E-6				5.51. -1
15.0000				9.60E-2	1.37E-1	3.60E-2	3.07E-3	1.35. -4	1.00. -6				2.72. -1
20.2500					1.06E-1	2.49E-2	4.25E-3	1.92. -4	2.00. -6				1.36. -1
25.0000					4.63E-2	2.05E-2	3.10E-3	1.48. -4	3.00. -6				7.00. -2
30.2500					2.87E-2	1.36E-2	2.84E-3	1.80. -4	2.00. -6				4.54. -2
35.0000					2.41E-2	1.19E-2	1.58E-3	2.00. -4	1.60. -5				3.78. -2
42.2500					1.14E-2	5.62E-3	1.36E-3	1.18. -4	8.00. -6				1.90. -2
49.0000					7.35E-3	4.02E-3	1.08E-3	2.10. -5	8.00. -6				1.25. -2
55.2500					3.09E-3	3.09E-3	9.17E-4	1.95. -4	1.30. -5				7.31. -3
64.0000					3.68E-3	6.72E-4	5.89E-4	1.66. -4	1.30. -5				5.12. -3
72.2500					5.24E-4	5.09E-4	5.49E-4	1.20. -4	1.10. -5				1.71. -3
81.0000						2.19E-4	1.70E-4	1.43. -4	1.10. -5				5.43. -4
90.2500								6.10. -5	1.10. -5				7.20. -5
100.0000													
TOTAAL	6.05	3.12	2.02	1.32	1.26	2.51E-1	8.50E-2	1.78. -3	9.90. -5				14.10
	100%	57.09%	35.01%	20.65%	11.32%	2.39%	0.61%	0.01%	0.001%				
		100%	61.31%	36.17%	19.82%	4.19%	1.03%	0.02%	0.001%				
			100%	58.99%	32.33%	6.84%	1.76%	0.04%	0.002%				

Gewogen zelfenergie opgebouwd uit de frequenties van voorkomen vermenigvuldigd met het Hso<sup>2</sup>. Richtingssector N (345°-15°)

Richtingssector N  
Tabel 3.5-2



Hso^2   Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.0156	1.09E-2	4.68E-3	3.74E-3	3.90E-3	9.40E-4	6.20E-4							2.34
0.2500	3.75E-1	2.50E-1	4.50E-2	6.50E-2	1.47E-2	2.50E-4							7.50E-1
1.0000	1.00	8.50E-1	4.50E-1	1.40E-1	5.90E-2	1.00E-3							2.50
2.2500	2.03	1.53	6.75E-1	5.40E-1	1.69E-1	1.13E-2							4.95
4.0000	1.28	8.40E-1	7.60E-1	4.40E-1	2.68E-1	9.13E-2	8.00E-4						3.68
6.2500	3.13E-1	7.50E-1	6.25E-1	4.38E-1	3.63E-1	1.33E-1	4.38E-3	6.25E-4					2.63
9.0000	4.05E-1	2.25E-1	3.60E-1	3.60E-1	3.60E-1	1.71E-1	7.20E-2	1.80E-3					1.95
12.2500	1.84E-1	3.68E-2	1.47E-1	1.84E-1	3.43E-1	1.72E-1	3.31E-2	3.55E-3	1.23E-4				1.10
16.0000	4.80E-2	1.28E-1	8.00E-2	3.20E-2	3.04E-1	1.20E-1	5.04E-2	5.44E-3	9.60E-5	5.60E-5	8.00E-6		7.68E-1
20.2500	1.22E-1	4.05E-2	4.05E-2	4.05E-2	1.01E-1	9.72E-2	5.57E-2	8.10E-3	7.49E-4	2.53E-4	1.00E-5		5.06E-1
25.0000	2.50E-2	5.00E-2	2.50E-2	2.50E-2	7.50E-2	9.75E-2	4.25E-2	6.25E-3	1.00E-3	2.38E-4	1.30E-5		3.47E-1
30.2500					8.77E-2	4.84E-2	2.73E-2	7.87E-3	9.08E-4	2.72E-4	2.90E-5	2.00E-6	1.72E-1
36.0000					3.24E-2	3.24E-2	2.80E-2	5.76E-3	1.08E-3	2.88E-4	7.00E-5	2.00E-6	1.00E-1
42.2500					2.11E-2	3.17E-2	1.48E-2	6.34E-3	1.39E-3	1.69E-4	1.18E-4	8.00E-6	7.65E-2
49.0000					1.96E-2	1.72E-2	7.35E-3	7.84E-3	1.72E-3	1.23E-4	1.03E-4	2.00E-5	5.39E-2
56.2500					1.13E-2	1.69E-3	1.74E-2	7.31E-3	1.41E-3	1.97E-4	6.80E-5	1.70E-5	3.94E-2
64.0000					3.20E-3	7.04E-3	1.15E-2	5.12E-3	1.54E-3	2.88E-4	6.40E-5	3.20E-5	2.88E-2
72.2500					3.61E-3	2.89E-3	5.78E-3	3.69E-3	1.81E-3	2.82E-4	5.10E-5	2.90E-5	1.81E-2
81.0000						1.62E-3	2.43E-3	6.40E-3	2.07E-3	3.16E-4	9.00E-6	3.60E-5	1.29E-2
90.2500								1.81E-3	1.08E-3	3.88E-4	1.09E-4	5.30E-5	3.44E-3
100.0000									8.00E-5	6.00E-4	6.40E-5	3.70E-5	7.81E-4
TOTAAL	5.79	4.70	3.21	2.27	2.24	1.04	3.73E-1	7.79E-2	1.50E-2	3.47E-3	7.16E-4	2.36E-4	19.71
	100%	70.65%	46.73%	30.49%	18.98%	7.65%	2.39%	0.49%	0.10%	0.02%	0.005%	0.001%	
		100%	66.22%	43.16%	26.87%	18.82%	2.38%	0.70%	0.14%	0.03%	0.007%	0.002%	
			100%	65.18%	40.58%	16.34%	5.11%	1.06%	0.21%	0.05%	0.01%	0.003%	

Gewogen zelffenansie opeebouwd uit de frequenties van voorkomen vermenigvuldigd met het Hso^2. Richtingssector NW I (315°-345°)

Richtingssector NW I  
Tabel 3.5-3



Hso <sup>2</sup> Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.0156	4.68E-3	6.24E-3	1.65E-3	3.59E-4	1.09E-3								1.72E-2
0.2500	5.00E-2	1.25E-1	1.25E-2	8.75E-2	2.50E-2								3.00E-1
1.0000	1.10	3.00E-1	3.50E-1	2.30E-1	1.15E-1								2.10
2.2500	3.38E-1	1.01	5.40E-1	2.93E-1	2.93E-1								2.48
4.0000	8.00E-1	4.80E-1	5.60E-1	4.80E-1	3.80E-1	1.20E-1							2.82
6.2500	7.50E-1	3.13E-1	4.38E-1	4.38E-1	5.00E-1	1.81E-1	6.25E-3						2.63
9.0000	2.70E-1	3.60E-1	1.80E-1	1.80E-1	5.85E-1	2.70E-1	2.70E-2						1.87
12.2500		2.45E-1	1.23E-1	1.23E-1	5.15E-1	3.80E-1	8.58E-2						1.47
16.0000		1.60E-1	1.60E-1	1.60E-1	1.60E-1	2.40E-1	6.72E-2	1.26E-2	1.60E-4				9.60E-1
20.2500		6.08E-2	1.01E-1	1.01E-1	2.43E-1	1.92E-1	5.47E-2	1.52E-2	8.10E-4	2.03E-4			7.70E-1
25.0000		7.50E-2	7.50E-2	5.00E-2	1.00E-1	1.59E-2	6.88E-2	1.88E-2	1.25E-3	1.75E-4			4.05E-1
30.2500		9.08E-2	3.03E-2	3.03E-2	7.56E-2	7.56E-2	4.84E-2	6.05E-3	2.57E-3	3.63E-4	8.50E-5	6.00E-6	3.60E-1
36.0000			1.80E-2	1.80E-2	9.00E-2	7.20E-2	3.60E-2	1.44E-2	3.24E-3	2.52E-4	1.01E-4	7.00E-6	2.52E-1
42.2500			2.11E-2	3.38E-2	4.23E-2	4.65E-2	4.23E-2	1.27E-2	3.38E-3	6.34E-4	1.77E-4	3.40E-5	2.03E-1
49.0000			1.96E-2	2.45E-2	3.43E-2	1.96E-2	2.45E-2	1.13E-3	2.94E-3	3.68E-4	7.40E-5	4.90E-4	1.27E-1
56.2500			2.25E-2	1.13E-2	5.63E-3	1.69E-2	2.36E-2	1.24E-2	2.87E-3	2.53E-4	1.86E-4	6.80E-5	9.56E-2
64.0000			1.28E-2		1.15E-2	1.28E-2	1.15E-2	1.02E-2	2.82E-3	7.68E-4	1.86E-4	7.00E-5	6.27E-2
72.2500					1.45E-3		1.08E-2	1.30E-2	2.17E-3	1.16E-3	2.24E-4	6.50E-5	2.89E-2
81.0000							4.33E-3	8.26E-3	3.81E-3	5.67E-4	2.67E-4	5.70E-5	1.78E-2
90.2500								4.33E-3	2.98E-3	9.93E-4	2.26E-4	9.00E-5	8.62E-3
100.0000										2.00E-4	1.40E-4	1.10E-4	4.50E-4
TOTAAL	3.31	3.323	2.56	2.26	3.18	1.64	5.12E-1	1.29E-1	2.90E-2	5.93E-3	1.67E-3	5.56E-4	16.96
	100%	80.48%	60.86%	45.47%	32.40%	13.68%	4.00%	0.98%	0.23%	0.05%	0.01%	0.003%	
		100%	75.62%	56.84%	40.27%	17.00%	4.96%	1.24%	0.27%	0.06%	0.02%	0.004%	
			100%	75.16%	53.25%	22.47%	6.57%	1.65%	0.36%	0.08%	0.02%	0.005%	

Gewonen zelfenserie opgebouwd uit de frequenties van voorkomen vermenigvuldigd met het Hso<sup>2</sup>. Richtingssector NW II (285°-315°)

Richtingssector NW II  
Tabel 3.5-4

H <sub>so</sub> <sup>2</sup> : Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.0156	1.09E-2	1.56E-3	3.12E-3	7.90E-4	7.90E-4								1.72E-2
0.2500	4.75E-1	1.50E-1	2.50E-2	6.35E-2	1.13E-2	1.25E-3							7.25E-1
1.0000	7.00E-1	5.00E-1	4.00E-1	3.00E-1	9.00E-2	1.00E-2							2.00
2.2500	1.35	1.13	9.00E-1	3.38E-1	3.04E-1	3.38E-2							4.05
4.0000	1.40	8.00E-1	2.00E-1	5.20E-1	6.20E-1	5.20E-2	7.60E-3	3.40E-4	6.00E-5				3.60
6.2500	2.50E-1	5.63E-1	2.50E-1	3.13E-1	9.06E-1	2.00E-1	1.75E-2	1.22E-3	3.10E-5				2.50
9.0000	9.00E-2	9.00E-2	9.00E-2	5.40E-1	7.20E-1	2.25E-1	4.32E-2	1.76E-3	4.50E-5				1.80
12.2500				1.23E-1	5.27E-1	3.43E-1	4.41E-2	4.84E-3	6.10E-5				1.04
15.0000					3.34E-1	2.88E-1	4.32E-2	4.56E-3	2.40E-4				7.20E-1
20.2500					2.56E-1	2.03E-1	7.29E-2	7.80E-3	2.84E-4	2.00E-5			5.40E-1
25.0000					1.75E-1	1.58E-1	6.25E-2	4.75E-3	1.75E-4	7.00E-5	5.00E-6		4.00E-1
30.2500					1.36E-1	1.03E-1	5.60E-2	6.96E-3	5.14E-4	8.80E-5	3.00E-6		3.03E-1
35.0000					1.33E-1	6.12E-2	4.64E-2	9.36E-3	1.69E-3	9.00E-5	1.40E-5	4.00E-6	2.52E-1
42.2500					3.38E-2	5.70E-2	2.58E-2	8.87E-3	1.06E-3	1.82E-4	2.50E-5	4.00E-6	1.27E-1
49.0000					3.43E-2	3.68E-2	1.57E-2	8.33E-3	1.25E-3	1.96E-4	1.50E-5	1.00E-5	9.65E-2
55.2500					2.25E-2	5.63E-3	1.91E-2	7.48E-3	1.32E-3	1.58E-4	2.80E-5	1.10E-5	5.63E-2
64.0000					6.40E-3	9.60E-3	1.50E-2	6.02E-3	1.14E-3	1.60E-4	2.60E-5	1.90E-5	3.84E-2
72.2500					5.12E-3	1.92E-3	7.36E-3	5.44E-3	1.10E-3	1.41E-4	2.60E-5	1.30E-5	2.11E-2
81.0000					2.40E-3	8.10E-4	8.10E-4	5.02E-3	1.23E-3	1.78E-4	2.90E-5	1.90E-5	1.05E-2
90.2500								2.35E-3	8.03E-4	1.81E-4	4.00E-5	1.40E-5	3.39E-3
100.0000									9.00E-5	8.00E-5	6.00E-5	2.00E-5	2.50E-4
TOTAAL	4.28	3.23	1.87	2.20	4.37	1.79	4.77E-1	8.51E-2	1.11E-2	1.54E-3	2.71E-4	1.14E-4	18.30
	100%	76.64%	58.99%	48.78%	36.78%	12.92%	3.14%	0.54%	0.07%	0.01%	0.002%	0.001%	
		100%	76.98%	63.66%	48.00%	16.86%	4.10%	0.70%	0.09%	0.01%	0.002%	0.001%	
			100%	82.70%	62.36%	21.90%	5.33%	0.91%	0.12%	0.02%	0.003%	0.001%	

Gewogen zelfenergie opgebouwd uit de frequenties van voorkomen vermenigvuldigd met het H<sub>so</sub><sup>2</sup>.  
Richtingssector W (255°-285°)

Richtingssector W  
Tabel 3.5-5



H <sub>50</sub> <sup>2</sup> : Z	-1/-0.5	-0.5/0.0	0.0/0.5	0.5/1.0	1.0/1.5	1.5/2.0	2.0/2.5	2.5/3.0	3.0/3.5	3.5/4.0	4.0/4.5	4.5/5.0	TOTAAL
0.0156	5.21E-3	7.24E-3	5.16E-3	3.79E-3	2.23E-3	1.83E-4	1.80E-5						2.38E-2
0.2500	2.24E-1	3.13E-1	2.23E-1	1.64E-1	9.63E-2	7.88E-3	7.73E-4						1.03
1.0000	9.92E-1	1.38	9.84E-1	7.24E-1	4.26E-1	3.48E-2	3.42E-3						4.54
2.2500	1.24	1.73	1.23	9.05E-1	5.33E-1	4.37E-2	4.28E-3						5.68
4.0000	1.30	1.82	1.30	9.52E-1	5.60E-1	4.60E-2	4.48E-3						5.97
6.2500	1.16	1.61	1.15	8.44E-1	4.98E-1	4.07E-2	3.99E-3						5.30
9.0000	7.17E-1	9.99E-1	7.12E-1	5.24E-1	3.09E-1	2.52E-2	2.48E-3						3.29
12.2500	2.33E-1	3.33E-1	2.32E-1	1.70E-1	1.00E-1	8.17E-3	8.01E-4						1.07
16.0000	6.64E-2	9.23E-2	6.59E-2	4.85E-2	2.85E-2	2.34E-3	2.29E-4						3.04E-1
20.2500	4.86E-2	6.76E-2	4.82E-2	3.54E-2	2.09E-2	1.71E-3	1.67E-4						2.23E-1
25.0000	3.00E-2	4.18E-2	2.98E-2	2.19E-2	1.29E-2	1.06E-3	1.04E-4						1.37E-1
30.2500	9.92E-3	1.38E-2	9.83E-3	7.23E-3	4.27E-3	3.48E-4	3.40E-5						4.54E-2
36.0000	5.51E-3	7.67E-3	5.47E-3	4.03E-3	2.37E-3	1.93E-4	1.90E-5						2.53E-2
42.2500													
49.0000													
56.2500													
64.0000													
72.2500													
81.0000													
90.2500													
100.0000													
TOTAAL	6.03	8.40	5.99	4.40	2.59	2.12E-1	2.08E-2						27.65
	100%	78.19%	47.81%	36.14%	10.22%	0.21%	0.02%						
		100%	61.15%	33.44%	13.07%	1.08%	0.10%						
			100%	54.68%	21.38%	1.76%	0.16%						

Gewogen zelfenergie opgebouwd uit de frequenties van voorkomen vermenigvuldigd met het H<sub>50</sub><sup>2</sup>. Richtingssector ZW I (225°-255°)

Richtingssector ZW I

Tab. 3.5-6

TABEL 5.1-1

STRANDPAAL AFSTAND	RAAL AFSTAND	GEMIDDELTE EROSIE/AAN- ZANDING IN M <sup>2</sup>	STANDAARDAFWIJKING
103.12	15.38	-13.7	34.2
103.91	14.59	-14.9	85.6
104.58	13.92	-6.2	51.2
104.88	13.62	-10.1	112.6
105.07	13.43	-21.6	92.8
105.47	13.03	-23.3	88.5
105.92	12.58	-47.7	16.1
106.23	12.27	-13.1	93.1
106.68	11.82	-5.0	31.3
107.13	11.37	+11.7	70.5
107.58	10.92	+1.2	73.1
108.07	10.43	+3.2	97.8
108.64	9.86	-9.4	55.5
109.20	9.30	+8.3	72.4
109.77	8.73	-9.1	35.6
110.34	8.16	-5.8	73.0
110.91	7.59	-22.4	66.9
111.47	7.03	-17.0	46.6
111.96	6.54	-16.4	31.2
112.21	6.29	-8.5	38.3
112.63	5.87	+5.9	55.4



VERVOLG TABEL 5.1-1

STRANDPAAL AFSTAND	RAAIAFSTAND	GEMIDDELDE ERODIE/AANZANDING IN M <sup>2</sup>	STANDAARDAFWUKING
112.82	5.68	-11.3	40.2
113.19	5.31	-19.1	63.3
113.38	5.12	-7.8	83.5
113.75	4.75	+10.3	80.2
113.94	4.56	-18.2	35.5
114.31	4.19	-27.7	97.8
114.50	4.0	-11.8	68.0
114.88	3.62	+9.0	58.5
115.10	3.40	+13.7	61.0
115.60	2.90	+46.3	29.5
116.11	2.39	+23.5	30.0
116.62	1.88	+8.0	20.3

LANGSTRANSPORTGRADIËNT NADIGE SITUATIE

RAAIAFSTAND	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LANGSTRANSPORT S IN 10 <sup>3</sup> M <sup>3</sup> /JAAR	-	250	240	180	140	100	20	20	20	60	80	200	280	300	240	180	-
LANGSTRANSPORT- GRADIËNT AS IN M <sup>2</sup> /JAAR	-	-10	-60	-40	-40	-80	0	0	+40	+20	+120	+80	+20	-60	-	-	-

GEMIDDELDE HELLINGEN

R.S.P. 117		R.S.P. 110		R.S.P. 93	
Diepte i.o.v. N.A.P.	Helling	Diepte t.o.v. N.A.P.	Helling	Diepte t.o.v. N.A.P.	Helling
+2 M → -1 M	1:30	+2 M → 0 M	1:25	+2 M → -1 M	1:30
-1 M → -4 M	BREKER BANKEN	0 M → -4 M	1:50	-1 M → -4 M	1:50
-4 M → -7 M	1:100	-4 M → -7 M	1:100	-4 M → -12 M	1:200
DIEPER DAN -7 M	FLAUWER DAM: 100	-7 M → -12 M	1:300	DIEPER DAN -12 M	FLAUWER DAM: 200
		DIEPER DAN -12 M	FLAUWER DAM: 300		



TABEL 6.-2

KUISTONTWIKKELING

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RAAIFSTAND																	
LANGSTRANSPORT S IN 10 <sup>3</sup> M <sup>3</sup> /JR	0	+200	+130	+60	-40	-120	-180	-220	-270	-200	-100	0	+50	+60	+50	+50	0
SITUATIE A $\frac{\Delta S}{\Delta x}$ IN M <sup>2</sup> /JR	+200	-70	-70	-100	-80	-60	-40	-20	+40	+100	+100	+100	+50	+10	-10	-20	-30
DYNA I JAAR	-12.5	+4.4	+4.4	+6.3	+5.0	+3.8	+1.5	+1.3	-2.5	-6.3	-6.3	-3.1	-0.6	+0.6	+2.2	+1.9	
SITUATIE B $\frac{\Delta S}{\Delta x}$ IN M <sup>2</sup> /JR	+200	-70	-70	-100	-80	-60	-40	-20	+40	+100	+100	0					
DYNA I JAAR	-12.5	+4.4	+4.4	+6.3	+5.0	+3.8	+2.5	+1.3	-2.5	-6.3	-6.3	0					



TABEL A.2-1

$m$	BODEMHELLING	1:50
$\gamma$	BREKINGSCOEFFICIENT	0,5
$H_0$	SIGNIFICANTE GOLFHOOGTE	2,5 M
$T$	GOLFPERIODE	7 SEC
$\phi_0$	HOEK VAN INVAL	30°
$D_{50}$	KORRELDIAMETER OVERSCHREIDEN DOOR 50% VAN MATERIAAL - 250 $\mu$ m GEWICHT	
$D_{90}$	KORRELDIAMETER OVERSCHREIDEN DOOR 90% VAN MATERIAAL - 350 $\mu$ m GEWICHT	

## BEREKENING UITERSTE GRENS BREKERZONE

NA ITEREREN VOLGT:

$$h_{br} = 4,7 \text{ M}$$

$$\frac{h_{br}}{\lambda_0} = \frac{4,7}{1,56 * (7)^2} = 0,06 \quad \text{UIT TABELLEN VOOR SINUSOIDALE ZWAARTEKRACHTS.}$$

GOLVEN VOLGT:  $K_{sh} = 0,993$ 

$$\frac{\sin \phi_0}{\sin \phi_{br}} = \frac{c_0}{c} = \frac{1}{\tanh(kh)} = \frac{1}{0,575} ; \tanh(kh) \text{ IS GETABELLEERD} ; \phi_{br} = 16,7^\circ$$

$$K_r = \sqrt{\frac{\cos \phi_0}{\cos \phi_{br}}} = \sqrt{\frac{\cos 30^\circ}{\cos 16,7^\circ}} = 0,951 ; H_{br} = H_0 * K_{sh} * K_r = 2,5 * 0,993 * 0,951 = 2,36$$

$$h_{br} = \frac{H_{br}}{\gamma} = 4,72 \text{ M}$$



TABEL A.2-2

## LANGSTRANSPOORT VOLGENS BUKER-FORMULE

1STE STAP	$H = \gamma \cdot h$
2DE STAP	$\lambda = \lambda_0 \cdot \tanh(kh)$
3DE STAP	$a_b = \frac{H}{2 \sinh(kh)}$
4DE STAP	$f_w = \exp[-5.977 + 5.213 \left(\frac{a_b}{r}\right)^{-0.194}]$ ; RIBBELHOOGTE $r = 0.06m$
5DE STAP	$C = 18 \log\left(\frac{12h}{r}\right)$
6DE STAP	$V = \frac{5 \pi \sqrt{g} \cdot \gamma \cdot \sin \phi_0 \cdot C \cdot h \cdot m}{8 \sqrt{2} \cdot c_0 \cdot \sqrt{f_w}}$
7DE STAP	$\hat{u}_b = w \cdot \hat{a}_b$
8STE STAP	$A = \frac{r}{h}$
9DE STAP	$C' = 18 \log\left(\frac{12h}{D_{90}}\right)$
10DE STAP	$\mu = \left(\frac{C}{C'}\right)^{\frac{3}{2}}$
11DE STAP	$\xi = \frac{C \sqrt{f_w}}{\sqrt{2g}}$
12DE STAP	$Z_* = \frac{w \sqrt{r}}{K \sqrt{\tau_{cw}}}$
	WAARIN: $\tau_{cw} = \tau_c \left[1 + \frac{1}{2} \left(\frac{\xi \hat{a}_b}{V}\right)^2\right]$ ; $\tau_c = \rho g \frac{V^2}{C^2}$
	VOOR $T = 10^\circ C$ : $w = 0.0306 m/s$
13DE STAP	$S_b = B \cdot D_{50} \sqrt{g} \cdot \frac{V}{C} \cdot \exp\left[\frac{-0.27 \cdot \Delta \cdot D_{50} \cdot \rho \cdot g}{\mu \cdot \tau_{cw}}\right]$
	MET $B = 5$
	EN $\Delta = \frac{2650 - 1025}{1025} = 1.59$
14DE STAP	$S = S_b (1 + 1.83Q)$ ; $Q$ IS GETABELLEERD VOOR $Z_*$ EN $A$

TABELA 2-3

$\lambda = 0.06$   
 $D = 250$   
 $0.25 \cdot 10^{-3}$   
 $2.56$

$T = 1 \text{ se. } U$

Y (M)	h (M)	H (M)	$\lambda$ (M)	$a_b$ (M)	$f_w$ (-)	C (M <sup>2</sup> /s)	V (M/S)	$Q_b$ (M <sup>3</sup> /S)	A (-)	C' (M <sup>2</sup> /s)	$\mu$ (-)	$\xi$ (-)	$Z_w$ (-)	$S_b$ (M <sup>2</sup> ) $\times 10^{-6}$	Q (-)	S (M <sup>3</sup> /s) $\times 10^{-6}$	$S_{tot}$ (M <sup>3</sup> /s) $\times 10^{-6}$
0	0	0	0	0	—	—	—	—	—	—	—	—	—	—	—	—	412.25
25	0.5	0.25	15.9	0.59	0.072	36.0	0.13	0.53	0.1200	56.8	0.505	2.18	1.063	9.453	1.36	32.98	2511.68
50	1.0	0.5	21.6	0.85	0.057	41.4	0.35	0.76	0.0600	62.2	0.543	2.23	0.810	26.632	2.90	167.97	7629.75
75	1.5	0.75	26.5	1.01	0.052	44.6	0.58	0.91	0.0400	65.4	0.563	2.27	0.693	43.666	4.99	442.41	16672.88
100	2.0	1.0	30.1	1.17	0.047	46.8	0.86	1.05	0.0300	67.6	0.576	2.29	0.633	64.203	7.03	891.42	32498.25
125	2.5	1.25	33.6	1.28	0.045	48.6	1.14	1.15	0.0240	69.4	0.586	2.33	0.537	84.057	10.56	1708.44	54540.68
150	3.0	1.5	36.3	1.39	0.043	50.0	1.44	1.25	0.0200	70.8	0.593	2.34	0.485	104.999	13.27	2654.81	86042.25
175	3.5	1.75	39.1	1.47	0.042	51.2	1.74	1.32	0.0171	72.0	0.600	2.37	0.444	125.401	17.88	4228.57	180415.23
200	4.0	2.0	41.3	1.56	0.041	52.3	2.06	1.40	0.0152	73.0	0.606	2.39	0.407	146.798	22.55	6204.64	185788.38
225	4.5	2.25	43.7	1.62	0.040	53.2	2.38	1.45	0.0133	74.0	0.610	2.40	0.380	167.859	27.51	8618.43	93542.85
250	4.7	2.35	44.0	1.65	0.039	53.5	2.54	1.48	0.0128	74.3	0.611	2.40	0.366	178.690	30.31	10090.44	

$609.553 \times 10^{-6} \text{ M}^3/\text{s}$   
 $192 \times 10^{-5} \text{ M}^3/\text{JAAR}$

$1.47 \cdot 10^{-3}$

$6.12 \cdot 10^{-3}$