

# **Communications on Hydraulic and Geotechnical Engineering 2014-03**

ISSN 0169-6548

# Reflection and transmission through a vertical, permeable breakwater

for the purpose of validating mathematical models

- Report of measurements and observations -

Jeroen van den Bos\*

August 15, 2014



\* Section Coastal Engineering, Department of Hydraulic Engineering Delft University of Technology, P.O. Box 5048, 2600 GA Delft, The Netherlands. Tel. + 31 15 27 83592; Fax: +31 15 27 85124

e-mail: J.P.vandenBos@tudelft.nl



# Communications on Hydraulic and Geotechnical Engineering 2014-03

#### ISSN 0169-6548

The communications on Hydraulic an Geotechnical Engineering are published by the Department of Hydraulic Engineering at the Faculty of Civil Engineering of Delft University of Technology. In the first years mainly research reports were published, in the later years the main focus was republishing Ph.D.-theses from this Department. The function of the paper version of the Communications was to disseminate information mainly to other libraries and research institutes. (Note that not all Ph.D.-theses of the department were published in this series. For a full overview is referred to <a href="https://www.hydraulicengineering.tudelft.nl">www.hydraulicengineering.tudelft.nl</a> ==> research ==> dissertations).

At this moment this series is mainly used to disseminate background information related to other publications (e.g. data reports with data underlying journal papers and Ph.D. theses). Recent issues of the Communications are only available in digital format. A notification will be sent to interested readers when new issues are released. For placement on the notification list, please send an e-mail to <a href="https://hip.rerhagen@tudelft.nl">h.j.verhagen@tudelft.nl</a>.

Older versions (before 1986) were published as <u>Communications on Hydraulic Engineering</u>. A number of internal reports were not published in this series, but are also available via this website.

Postal address for the Communications is: TU Delft, Faculty of Civil Engineering and Geosciences, department of Hydraulic Engineering, Stevinweg 1, 2628CN Delft, Netherlands. Permissions for republishing parts (figures, data), can be obtained from the responsible publisher, <u>ir. H.J. Verhagen</u>

This report is produced in the framework of the general research programme of the Department of Hydraulic Engineering. Tests were performed by Gerben Jan Vos, Henk Jan Verhagen, Coen Kuiper and Jeroen van den Bos. The report has been compiled by Jeroen van den Bos. Data, pictures and videos are publicly available via the 3TU datacenter (<a href="http://data.3tu.nl/repository/">http://data.3tu.nl/repository/</a>)

© 2014 TU Delft, Department Hydraulic Engineering



#### 1. Introduction

From 18.07.2014 to 07.08.2014, physical model tests were carried out in the Environmental Fluid Mechanics Laboratory at TU Delft. The purpose of the tests was to measure wave reflection and transmission on/through porous structures representing strongly simplified rubble-mound breakwater configurations. These tests were carried out against the background of a more general research programme into wave-structure interaction. The main goal of these tests was to create a dataset that can be used for validation of numerical prediction methods.

The tests are a continuation of work done by Bart Mellink in the context of his MSc thesis (Mellink 2012). Mellink tested four different simple, single porous vertical blocks (see below for details) using regular waves. These additional tests represent slightly more complex configurations including double blocks, reflective boundaries, irregular waves and sloping structures.

This present document is a factual test report covering the details of the test setup, observations, data management and results.

## 2. Test setup

#### Elastocoast<sup>TM</sup> blocks

The structures used in these tests consisted of rectangular porous blocks made of Elastocoast<sup>™</sup>. Six of these blocks were previously made by BSc students (Zeelenberg and Koote 2012). The porous flow parameters of these blocks have been measured and are constant throughout the tests because the stones are glued together. This makes the test setup very suitable for validation purposes of numerical models. The parameters of the six blocks are given below.

	Material	Thickness	$d_{n50}$	n	k	$\alpha$	β	$Re_d$
		(mm)	(m)	(-)	(m/s)	(-)	(-)	(-)
1	Yellow sun lime-	39	0.007	0.386	0.065	700	1.1	220
	stone $8\text{-}11~\mathrm{mm}$							
2	Yellow sun lime-	88	0.020	0.405	0.136	1200	1.25	2100
	stone $20\text{-}40~\mathrm{mm}$					(est.)	(est.)	
3	Yellow sun lime-	132	0.020	0.423	0.131	1200	1.25	2700
	stone 20-40 mm							
4	Norwergian >40	80	0.039	0.41	0.154	1900	1.7	6000
	mm							
5	Norwergian >40	160	0.039	0.466	0.214	1150	1.6	7850
	mm							
6	Norwergian >40	240	0.039	0.46	0.213	1020	1.45	8300
	mm							

Figure 1: Block parameters (Zeelenberg and Koote 2012)



#### **Original tests**

The original tests (Mellink 2012) consisted of four different configurations consisting of a single block, placed vertically in the wave flume (see Figure 2 for an illustration).

Series M1¹: Block 2
Series M2: Block 3
Series M3: Block 5
Series M4: Block 6

Each series was loaded by sixteen different wave conditions (using regular waves), consisting of all possible combinations of four different wave heights (H = 0.075 m, H = 0.10 m, H = 0.125 m and H = 0.15 m) and four different wave periods (T = 1.0 s, T = 1.5 s, T = 2.0 s and T = 3.0 s).

The instrumentation consisted of six wave gauges, setup in two three-probe arrays, one before the structure and one behind the structure. The array before the structure allows for the decomposition of the wave signal into incoming and reflected components and direct calculation of the reflection coefficient  $R = H_{ref}/H_{in}$ . The array behind the structure allows for the separation of the transmitted wave and the wave that is (re-)reflected off the far end of the wave flume. The transmission coefficient can then be calculated as  $T = H_{trans}/H_{in}$ . Details of the probe setup and spacing are given in Figure 3.

The water depth was h = 0.65 m for all tests. The full test matrix and other relevant details can be found in Mellink (2012).



Figure 2: Illustration of original tests with single blocks (Mellink 2012)

#### **Additional tests**

In these present tests, 8 different additional configurations were tested. Details of the configurations are provided in Figure 4.

- **Configuration A:** Block 5 combined with block 3, representing a two-layer breakwater (armour and filter layer). Block 5 is the 'armour' layer placed on the wave maker side. Between the blocks an 18 mm gap is left which allows the measurement of the water table between the blocks. The wave probe setup is exactly the same as in the Mellink tests, with the exception of the addition of a 7<sup>th</sup> probe in between the two blocks. The structure is loaded by the same 16 regular wave conditions as used by Mellink.
- **Configuration B:** The two blocks are placed next to each other, without gap. The central wave probe is no longer used. The same 16 wave conditions are used.
- **Configuration C:** An impermeable wooden plate is constructed on the far side of Block 3, representing a breakwater structure with an impermeable (reflective) core. Subsequently no transmission is measured any more. The same 16 wave conditions are used.

-

<sup>&</sup>lt;sup>1</sup> The numbering 'M1, M2 etc' was not used in Mellink 2012 but is introduced in this present report in order to distinguish the original test series from the additional test series.



- **Configuration D:** The plate is removed again and configuration B is repeated, but this time with irregular waves (both JONSWAP spectra with  $\gamma$  =3.3). Two conditions are defined:  $H_{m0}$  = 0.10 m /  $T_p$  = 1.5 s and  $H_{m0}$  = 0.10 m /  $T_p$  = 3.0 s. The wave probe spacing is adapted, using in-house TU Delft recommendations, to  $x_{12}$  = 0.30 m and  $x_{23}$  = 0.40 m.
- **Configuration E:** Block 3 is removed and only block 5 remains<sup>2</sup>. The same two irregular wave conditions are applied.
- **Configuration F:** As E, but the probe spacing is adjusted to  $x_{12} = 0.70$  m and  $x_{23} = 1.10$  m. This is done in order to verify the in-house recommendations and check the sensitivity of the results. Only a single wave condition ( $H_{m0} = 0.10$  m /  $T_p = 3.0$  s) was used.
- **Configuration G:** The wooden plate was placed back behind block 5, representing a single-layer breakwater with an impermeable core. The original probe spacing was restored, and the 16 regular wave conditions were used.
- **Configuration H:** The structure, including wooden plate, was tilted 45 degrees representing a sloped structure and loaded by the 16 regular wave conditions. Loose rocks were added in the toe of the slope to fill the gap between the tilted support frame and the flume bottom.

The target water depth for all these tests was h = 0.65 m. The actual value deviates slightly between tests because the flume was drained and re-filled occasionally. The actual values were recorded and are logged in the test matrix. The water level was measured by means of a tape rule.

The overall test matrix, for a total of 85 tests, is given in appendix A.

#### **Test duration**

The test duration was approximately 300 seconds for each test, with the exception of:

- Most of the tests with T = 1.0 s, which were aborted earlier when a lateral standing wave pattern evolved
- The tests with irregular waves, which were run for approximately 1000 waves which results in a duration in the range 1400 s 2800 s depending on the wave period.

The exact test duration (measured by the duration of the recorded signal) is included in the test matrix.

#### 3. Instrument calibration

The tests were carried out over the course of 8 different sessions. The wave probes were calibrated at the start of each session. The obtained conversion factors (Volts to meters) are given in the table below. The probe numbers in this table correspond to the setup illustrated in Figure 4.

Table 1: Wave gauge calibration

Ses-	Date	Configu-			Calibratio	n coeffic	ient (m/V	)	
sion		ration	0	1	2	3	4	5	6
1	18-Jul-14	Α	0.0240	0.0218	0.0265	0.0271	0.0231	0.0251	0.0242
2	23-Jul-14	Α	0.0239	0.0216	0.0265	0.0266	0.0229	0.0251	0.0250
3	24-Jul-14	В	0.0238	0.0215	0.0264	-	0.0229	0.0251	0.0251
4	25-Jul-14	С	0.0240	0.0217	0.0265	-	-	-	-
5	26-Jul-14	D	0.0240	0.0217	0.0266	-	0.0233	0.0251	0.0249
6	30-Jul-14	E, F	0.0241	0.0215	0.0266	-	0.0231	0.0249	0.0249
7	31-Jul-14	G	0.0242	0.0216	0.0266	-	-	-	-
8	07-Aug-14	Н	0.0240	0.0215	0.0264	-	-	-	-

<sup>&</sup>lt;sup>2</sup> During the execution of the tests it was erroneously believed that the number of the remaining block was #3. Consequently all entries in the logbook, file names etc. have used number 3. During the writing of this present measurement report all references and file names were corrected to number 5 in order to avoid confusion for future use.

Jeroen van den Bos 3 revision 2 - 24-10-2014



#### 4. Observations

Detailed observations during each test have been recorded in the test logbook, see appendix B. Some observations might be relevant in the interpretation of these tests and the use of the acquired data for validation of numerical models:

- During all tests with the shortest wave period T = 1.0 s (regular waves) a lateral standing wave pattern (i.e sideways across the flume, from glass wall to the other) formed after some time. This happened typically after some 30-60 s into the tests. When this happened, the test was aborted and only the first part of the test, before the formation of the lateral standing wave pattern, was recorded.
- During the tests with the impermeable wooden plate, leakage was observed between the plate and the flume walls.
- During some tests with the impermeable wooden plate, the frame in which the blocks are placed and/or the plate became undone and the blocks moved out of position during the tests. The results from these tests are therefore less reliable. These tests are marked with an asterisk (\*) in the test matrix.

### 5. Data management

All tests have been given a unique file name, as recorded in the test matrix. The raw data, i.e. the direct output of the seven wave probes (in Volts) as recorded by the lab computer, was written to a ".asc" file.

The processing of this data into wave records (in meters) was performed by a purpose-written matlab script. (The standard scripts available in the lab work with a graphical user interface that allows only one analysis at a time, and values need to be input by hand. This would be rather time-consuming for a total of 85 tests. The purpose-written scripts allow for bulk processing). The translation from volts to metres was made using the calibration coefficients for the appropriate test session. The results were written into a '.wave' file with the same filename. For convenience of future analysis, the processed wave signals are split in 3 separate files:

- One file containing the 3 gauges before the structure, denoted "\_wave\_heights\_123.wave".
- One file containing the gauge in between the two plates, denoted "\_wave\_heights\_4.wave".
- One file containing the 3 gauges behind the structure, denoted "\_wave\_heights\_567.wave".

The files are stored together in a subdirectory labeled with the test name.

The '.wave' file does not use header lines, which allows for easier processing. The first column of the '.wave' files is the time, the next columns are the measured water levels for the relevant gauges. Note that a "\_4.wave" and "\_567.wave" file are always created even for the tests in which these gauges were not used. In that case the signal column simply contains zeros.

The raw data ('.asc'), the calibrated wave data ('.wave') and the applied matlab script are uploaded onto the 3TU datacentre (http://data.3tu.nl/repository) for further use.

#### References

Mellink, B (2012) *Numerical and experimental research of wave interaction with a porous breakwater*, MSc thesis Delft University of Technology, Delft, The Netherlands

Zeelenberg W, and Koote M (2012) *The use of Elastocoast in breakwater research*, Technical report, Delft University of Technology, Delft, The Netherlands



# **Appendices**

- A. Test matrix
- B. Logbook

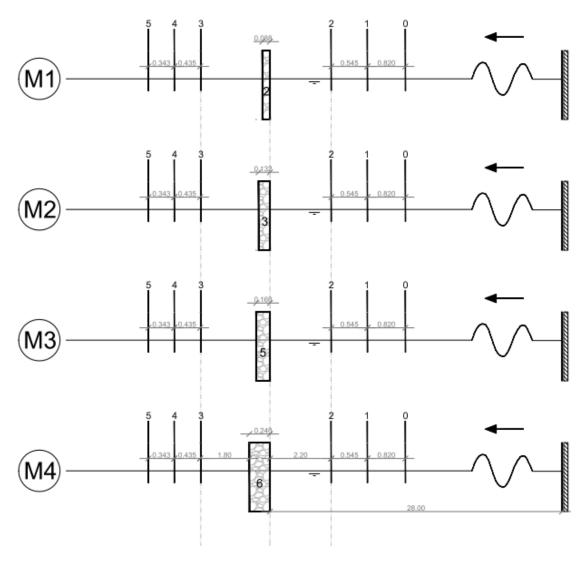


Figure 3: Test setup original tests Mellink



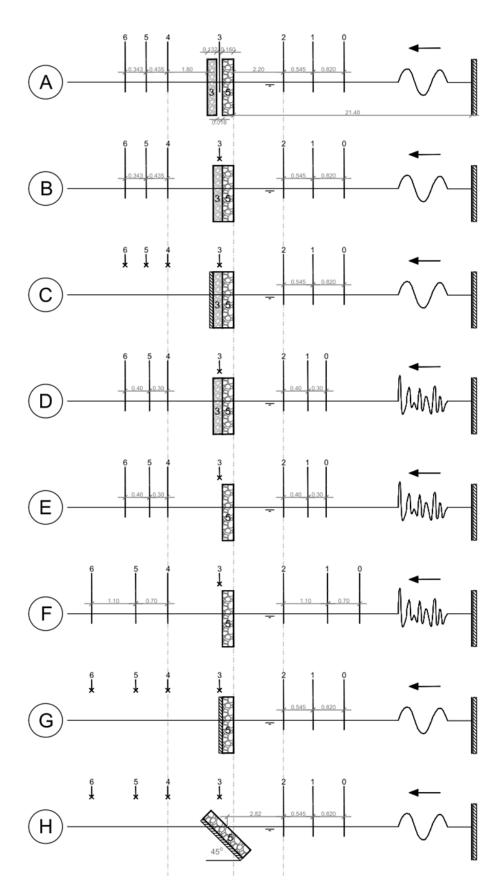


Figure 4: Test setup details additional tests



## **APPENDIX A**

**Test matrix** 

	2719 4							0.023	0.000	0.02/	0.022	0.024	0.650	5.0	U.LOU			Е	30-Jul-14	S10TP30_Block5	
	2729.0	0.40	0.30	0.40	0.30	0.025	0.025	2000	2000	2007	2	,	0	2	0 1 0			1			
	1461.1	0.40	0.30	0.40	0.30	0.025	0.025	0.023	0.000	0.027	0.022	0.024	0.650	1.5	0.150			Е	30-Jul-14		
	2649.6	0.40	0.30	0.40	0.30	0.025	0.025	0.023	0.000	0.027	0.022	0.024	0.648	3.0	0.100			00	26-Jul-14 26-Jul-14	S10TP30_Block3_Block5_Vert_Gap0	
	303.4	3	3	0.545	0.82	0.000	0.000	0.000	0.000	0.02/	0.022	0.024	0.650	1		3.0	0.150	, (,	25-Jul-14	15030_Block3_Block5_Vert_Plate	
	302.1			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			2.0	0.150	· · *	25-Jul-14	15020_Block3_Block5_Vert_Plate	
	340.5			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.5	0.150	C *	25-Jul-14	15015_Block3_Block5_Vert_Plate	
	29.4			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.0	0.150	C *	25-Jul-14	15010_Block3_Block5_Vert_Plate	
	303.4			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			3.0	0.125	C *	25-Jul-14	12530_Block3_Block5_Vert_Plate	
	387.2			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			2.0	0.125	C *	25-Jul-14	12520_Block3_Block5_Vert_Plate	
	302.1			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.5	0.125	C *	25-Jul-14	12515_Block3_Block5_Vert_Plate	_
	28.2			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.0	0.125	C *	25-Jul-14	12510_Block3_Block5_Vert_Plate	
	342.4			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			3.0	0.100	С	25-Jul-14	10030_Block3_Block5_Vert_Plate	
	310.4			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			2.0	0.100	С	25-Jul-14	10020_Block3_Block5_Vert_Plate	
	302.1			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.5	0.100	C	25-Jul-14	10015_Block3_Block5_Vert_Plate	
	40.3			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.0	0.100	С	25-Jul-14	10010_Block3_Block5_Vert_Plate	_
	307.8			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			3.0	0.075	С	25-Jul-14	07530_Block3_Block5_Vert_Plate	
	329.0			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			2.0	0.075	С	25-Jul-14	07520_Block3_Block5_Vert_Plate	
	302.7			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.5	0.075	С	25-Jul-14	07515_Block3_Block5_Vert_Plate	_
	58.2			0.545	0.82	0.000	0.000	0.000	0.000	0.027	0.022	0.024	0.650			1.0	0.075	С	25-Jul-14	07510_Block3_Block5_Vert_Plate	
	309.8	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			3.0	0.150	В	24-Jul-14	15030_Block3_Block5_Vert_Gap0	1
	305.9	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			2.0	0.150	В	24-Jul-14	15020_Block3_Block5_Vert_Gap0	_
	309.1	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.5	0.150	В	24-Jul-14	15015_Block3_Block5_Vert_Gap0	
	32.6	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.0	0.150	В	24-Jul-14	15010_Block3_Block5_Vert_Gap0	
	302.7	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			3.0	0.125	В	24-Jul-14	12530_Block3_Block5_Vert_Gap0	
	302.7	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			2.0	0.125	В	24-Jul-14	12520_Block3_Block5_Vert_Gap0	
	303.4	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.5	0.125	В	24-Jul-14	12515_Block3_Block5_Vert_Gap0	
Hithoname   Hithoname   Hithon   Hith   Hi	23.7	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.0	0.125	В	24-Jul-14	12510_Block3_Block5_Vert_Gap0	
Hitheanmene	318.7	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			3.0	0.100	В	24-Jul-14	10030_Block3_Block5_Vert_Gap0	
Hilmanme   Hilmanme	303.4	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			2.0	0.100	В	24-Jul-14	10020_Block3_Block5_Vert_Gap0	
	306.6	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.5	0.100	В	24-Jul-14	10015_Block3_Block5_Vert_Gap0	
Filtename	51.8	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.0	0.100	В	24-Jul-14	10010_Block3_Block5_Vert_Gap0	_
Filename	325.8	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			3.0	0.075	В	24-Jul-14	07530_Block3_Block5_Vert_Gap0	
Filename	306.6	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			2.0	0.075	В	24-Jul-14	07520_Block3_Block5_Vert_Gap0	
Filename   Session   Configuration   H(m)   T(s)   Hmol (m)   T(s)   depth (m)   0   1   2   3   4   5   6   0-1   1.2   4.5   5.6   0.45	302.7	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.5	0.075	В	24-Jul-14	07515_Block3_Block5_Vert_Gap0	
Filename   Session   Configuration   H(m)   T(s)   Hmo (m)   Tp (s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   3.4   1.2   3.4   1.2   3.4   1.2   3.4   1.2   3.4   1.2   3.4   3.	130.6	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.000	0.026	0.022	0.024	0.624			1.0	0.075	в (	24-Jul-14	07510 Block3 Block5 Vert Gap0	
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   Tp (s)   depth (m)   0   1   2   3   4   5   6   0-1   1-2   3   4   5   6   0-1   1-2   3   1   1   1   1   1   1   1   1   1	300 4	0.243	0.435	0.545	0.87	0.025	0.025	0.023	0.027	0.026	0.022	0.024	0.645			٠ ١	0.150	<b>&gt;</b> )	23-Jul-14	15030 Block3 Block5 Vert Gap18	
Filename   Session   Configuration   H(m)   T(s)   Hm0(m)   T(s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   3.4   5   6   0.1   1.2   3.4   5   6   0.1   1.2   0.34   1.3	3110	0.27.2	0.125	0 5 7 5	0 0 0	0.025	0.025	0.023	0.027	0.026	0.023	0.024	0.645			) i	0.150	> ;	23-Jul-14	15020 Block3 Block5 Vert Gap19	
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   Tp (s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   3.4   5   6   0.1   1.2   3.4   5   6   0.1   1.2   0.34   1.3   0.025   0.024   0.022   0.027   0.023   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.025   0.024   0.025   0.025   0.024   0.025   0.025   0.025   0.024   0.025   0	302.7	0.343	0.435	0.545	0.87	0.025	0.025	0.023	0.027	0.026	0.022	0.024	0.645			1.5	0.150	<b>&gt;</b> )	23-Jul-14	15015 Block3 Block5 Vert Gap18	
Filename   Session   Configuration   H(m)   T(s)   Hm0(m)   Tp (s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   4.5   6   0.1   1.2   3   1.2   1	20.1	0 0	0 400	0 0 0	9 9	0.025	0.025	0.000	0.027	0.026	0.00	0.02	0.645			2 (	0.150	> 1	22 111 14	15010 Block3 Block5 Vort Gap10	_
Filename   Session   Configuration   H(m)   T(s)   Hm0(m)   T(s)   depth (m)   0   1   2   3   4   5   6   0-1   1-2   3   4   5   6   0-1   1-2   3   4   5   6   0-1   1-2   3   4   5   6   0-1   1-2   3   1   1   1   1   1   1   1   1   1	205.7	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.027	0.026	0.022	0.024	0.645			۵ .c	0.125	> 1	23-Jul-14	12530 Block3 Block5 Vert Gan18	
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   T(s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   4.5   6.4   0.12   0.34   0	432.0	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.027	0.026	0.022	0.024	0.645			3.5	0.125	> ⊅	23-Jul-14	12515_Block3_Block5_Vert_Gap18	
Flename   Session   Configuration   H(m)   T(s)   Hm0 (m)   T(s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   3   4   5   6   0.1   1.2   3   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.024   0.025   0.025   0.024   0.025   0.024   0.025   0.025   0.024   0.025   0.025   0.024   0.025   0.025   0.025   0.024   0.025   0.025   0.025   0.024   0.025	304.6	0.343	0.435	0.545	0.82	0.025	0.025	0.023	0.027	0.026	0.022	0.024	0.645			1.0	0.125	> >	23-Jul-14	12510_Block3_Block5_Vert_Gap18	
Filename   Session   Configuration   H(m)   T(s)   Hm0(m)   T(s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   4.5   5.6   0.1   1.2   4.5   5.6   0.1   1.2   0.35   0.34   0	332.8	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			3.0	0.100	Þ	18-Jul-14	10030_Block3_Block5_Vert_Gap18	
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   T(s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   4.5   5.6   0.1   1.2   4.5   5.6   0.1   1.2   0.35   0.025	227.8	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			2.0	0.100	Þ	18-Jul-14	10020_Block3_Block5_Vert_Gap18	7 Т
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   T(s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   4.5   6   0.1   1.2   3   4   5   6   0.1   1.2   3   0.025   0.024   0.025   0.025   0.024   0.025   0.025   0.025   0.024   0.025	201.0	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			1.5	0.100	Þ	18-Jul-14	10015_Block3_Block5_Vert_Gap18	
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   Tp (s)   depth (m)   0   1   2   3   4   5   6   0.1   1.2   4.5   5.6   0.1   1.2   4.5   5.6   0.1   1.2   4.5   5.6   0.1   1.2   0.025   0.	83.2	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			1.0	0.100	Þ	18-Jul-14	10010_Block3_Block5_Vert_Gap18	5
Filename   Session   Configuration   H(m)   T(s)   Hm0 (m)   Tp (s)   depth (m)   0   1   2   3   4   5   6   0-1   1-2   4-5   5-6   1-2   4-5   5-6   1-2   4-5   5-6   1-2   1-	309.8	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			3.0	0.075	Þ	18-Jul-14	07530_Block3_Block5_Vert_Gap18	4 T
Filename Session Configuration H (m) T(s) Hm0 (m) Tp(s) depth (m) 0 1 2 3 4 5 6 0.1 1.2 4.5 5.6 107510_BlockS_Vert_Gap18 18-Jul-14 A 0.075 1.0 0.655 0.024 0.025 0.024 0.027 0.027 0.023 0.025 0.024 0.82 0.545 0.435 0.343 1707515_BlockS_Vert_Gap18 18-Jul-14 A 0.075 1.5 0.655 0.024 0.025 0.024 0.027 0.027 0.027 0.023 0.025 0.024 0.82 0.545 0.435 0.343	214.4	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			2.0	0.075	Þ	18-Jul-14	07520_Block3_Block5_Vert_Gap18	3
Filename Session Configuration H (m) T (s) Hm0 (m) T (s) depth (m) 0 1 2 3 4 5 6 0.1 1.2 4.5 5.6 Filename T07510 Block3 Block5 Vert Gap18 18-Jul-14 A 0.075 1.0 0.075 0.055 0.024 0.025 0.024 0.027 0.027 0.023 0.025 0.024 0.82 0.545 0.435 0.343	206.7	0.343	0.435	0.545	0.82	0.024	0.025	0.023	0.027	0.027	0.022	0.024	0.655			1.5	0.075	A	18-Jul-14	07515 Block3 Block5 Vert Gap18	2 T
Filename Session Configuration H (m) T (s) Hm0 (m) T p (s) depth (m) 0 1 2 3 4 5 6 0.1 1.2 4.5 5.6	64.0	0.343	0.435	0.545	0.82	0.024		0.023	1	0.027	0.022	0.024	0.655			1.0	7	A		07510 Block3 Block5 Vert Gap18	
	duration (s)	5-6	4-5	1-2	0-1	6		4		•	,										

70 71 73 73 74 75 76 77 77 77 78 78 78 80 81 81 82 83 83 84 ₽ T07530\_Block5\_Plate\_slope
T10010\_Block5\_Plate\_slope
T10015\_Block5\_Plate\_slope
T10020\_Block5\_Plate\_slope
T10250\_Block5\_Plate\_slope
T12510\_Block5\_Plate\_slope
T12520\_Block5\_Plate\_slope
T12520\_Block5\_Plate\_slope
T12530\_Block5\_Plate\_slope
T15010\_Block5\_Plate\_slope
T15010\_Block5\_Plate\_slope
T15010\_Block5\_Plate\_slope
T15020\_Block5\_Plate\_slope 112515\_Block5\_Plate 112520\_Block5\_Plate 112530\_Block5\_Plate 115010\_Block5\_Plate 115015\_Block5\_Plate 115020\_Block5\_Plate T10015\_Block5\_Plate T10020\_Block5\_Plate T10030\_Block5\_Plate T12510\_Block5\_Plate T07515\_Block5\_Plate\_slope T07520\_Block5\_Plate\_slope T07515\_ T07510\_Block5\_Plate\_slope T10010\_Block5\_Plate T07530\_Block5\_Plate T07520\_Block5\_Plate \_Block5\_ Block5\_Plate Test 07-Aug-14
07-Aug-14 31-Jul-14 0.075
0.075
0.075
0.075
0.075
0.100
0.100
0.100
0.100
0.125
0.125
0.125
0.125
0.125 0.075
0.075
0.075
0.075
0.100
0.100
0.100
0.100
0.100
0.125
0.125
0.125
0.125 1.5 2.0 3.0 1.0 1.5 2.0 3.0 1.5 2.0 1.5 2.0 3.0 1.5 2.0 3.0 (s) T Input Hm0 (m) Tp (s) 0.650 0.650 0.650 0.650 0.650 0.655 0.655 0.655 0.655 0.655
0.655
0.655
0.655
0.655
0.655
0.655
0.655 0.024 0.021 0.021 0.021 0.021 0.022 0.021 0.021 0.021 0.021 0.021 0.021 0.021 0.021 0.021 0.022 0.022 0.022 0.022 0.022 0.022 0.022 0.022 0.022 0.022 0.022 0.022 0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026
0.026 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.000 ave gauges 0.000 0.000 0.000 0.000 0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000 0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000
0.000 0-1 ng between gauges (m)
1-2 4-5 5-6 0.548 Recorded duration (s) 

Note: tests marked (\*) may be less reliable because the support frame and/or the blocks were not properly fixed during the tests - see logbook



# **APPENDIX B**

Logbook

Mary   1		Kuiper, Jeroen van d	en Bos, Henk Jan	Verhagen, Gerben-Jan Vos	
Total	Time :	approx h0 (m)	Input file	Output file	Remarks
1	18-Jul				
					First test (#1) turned out to be too short, test repeated and output file overwritten
Company					
1	6 15h55	0.655	R10020	T10020_Block3_Block5_Vert_Gap18	
1					tests terminated after 85s because of of lateral standing wave, pattern was visible after 20-30 s.
1					
Mary 100	23-Jul				
1	10 11h33				some lateral standing waves
Page 12	13 12h21	0.645	R12510	T12510_Block3_Block5_Vert_Gap18	test immediately terminated because of lateral standing wave.
Part					
Mary	16 12h47	0.645	R15015	T15015_Block3_Block5_Vert_Gap18	
Part	17 12h54	0.645	R15010	T15010_Block3_Block5_Vert_Gap18	test immediately terminated because of lateral standing wave.
Part					
Part					
1	10h42	0.642	R07515	T07515_Block3_Block5_Vert_Gap0	
Part					tests terminated after 180s because of of lateral standing wave.
Part	11h03	0.642	R10020	T10020_Block3_Block5_Vert_Gap0	
Part					
Total					test immediately terminated decause or lateral standing wave.
1	11h34	0.642	R12520	T12520_Block3_Block5_Vert_Gap0	
1					test immediately terminated because of lateral standing wave.
1985	11h52	0.642	R15030	T15030_Block3_Block5_Vert_Gap0	•
1					
1					test terminated after 30s because of lateral standing wave.
1	25-Jul				
1	09h57				
1903   1905					
1913    6.5   18200   1920    1920	10h20	0.65	R07510	T07510_Block3_Block5_Vert_Plate	test terminated after 50s because of lateral standing wave.
1972   1975					
1,100   0.55   0.253   12.353   12.353   0.503   0.503   12.513   0.503   0.					
1956   1956   1957   1952					
1,000					
1944   0.55   1950	12h06	0.65	R12515	T12515_Block3_Block5_Vert_Plate	frames were with unwanted gap of 50mm vertical, 0.04 m/m horizontal, exact time unknown
1958   1968   1968   18128   1969   18128   1969					
1938   1939	12h36	0.65	R15020	T15020_Block3_Block5_Vert_Plate	frames were with unwanted gap of 50mm vertical, 0.04 m/m horizontal, exact time unknown
The properties of the control of t					
Decomposition was wasted. Marked with distillability and interest to all processing and an interest to all					
2007/2018  23. Severaginal, Mode 20, 10, 10, 10, 10, 10, 10, 10, 10, 10, 1					
1 51-51   1.51-51   0.64   1.51-517   0.51-51   1.51-51	and tussen golfhoogter	neters is 30 cm en 40	cm (30 cm is he	t dichtst bij het golfshot)	
Signified   March   Sign	26/07/2014				
1					
The control of Explose is not bestudy to the control of Explose in the treating product of the Control of Explose in the treating product of the Control of Explose in Exp			113101730	113101F30_BIOCK3_BIOCK3_VEIT_GBP0	test duration of 45 min.
			abuis vermeld da	t dit andersom was. nl block 3 is bliiven staar	n. Alle filenamen etc ware ook consequent verkeerd gelabeld.
15012	eze huidige versie van o	dit logboek is dit her	steld).		
11001   10.5   15.0	30/07/2014				
10. golffloogtemeters verset. Marker het dichts bij het model is blijven staan and bassen gelfloogtemeters in 27 cm on 1100 cm (100 cm) for the dichts bij het golfshot)  12/21 0. 66 HS07979 MS0679 M					
12b1 0.65 HS10730 HS107530_BlockS_7001100 test duration of 45 mins, senter distance 700mm and 1100mm  3.107/2014 30 locks 3 with plate and taxen golfmogetmenter tenggebrisch naar compronkelijke opset (average beginning of 1500 b	11108	0.65	H2101F30	HS101P30_BIOCKS	test duration of 45 min.
12h21 0.65 HS10TP30 HS10TP30 Block5_7001100 test duration of 45 min., sersor distance 700mm and 1100mm 3.007014 3.007014 3.006x63 avim plate and tusine applicagementers terruggebrucht have rounders in the area or conditions and the standard of the standa			to hii hat madal :		
3 (NOT/2014   20 (NOT 2 very plate   20 (NOT	and tussen gonnoogter				
30 block 3 with plate and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet fact water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke opzet fact water fact and trusten golfbrodgementers teruggebracht naar oorspronkelijke golfbrodgementers t					
and tusens gallhoogeneries tengebruicht nair oorspronkelijke opzet y wave height meters on wave-maker side are used    1003	12h21		100 cm (70 cm is	het dichtst bij het golfshot)	test duration of 45 min., sensor distance 700mm and 1100mm
9 9h35			100 cm (70 cm is	het dichtst bij het golfshot)	test duration of 45 min., sensor distance 700mm and 1100mm
9h:35	31/07/2014 30 block 3 with plate	L (	1.00 cm (70 cm is	het dichtst bij het golfshot)  HS10TP30_Block5_7001100	test duration of 45 min., sensor distance 700mm and 1100mm
9h3	31/07/2014 30 block 3 with plate and tussen golfhoogten	l (	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk	het dichtst bij het golfshot)  HS10TP30_Block5_7001100	test duration of 45 min., sensor distance 700mm and 1100mm
9h3	31/07/2014 30 block 3 with plate and tussen golfhoogten	l (	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk	het dichtst bij het golfshot)  HS10TP30_Block5_7001100	test duration of 45 min., sensor distance 700mm and 1100mm
96.99	31/07/2014 30 block 3 with plate and tussen golfhoogten y wave height meters o	l neters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk re used	het dichtst bij het golfshot)  HS10TP30_Block5_7001100  elijke opzet	test duration of 45 min., sensor distance 700mm and 1100mm
1010/3	31/07/2014 30 block 3 with plate and tussen golfhoogter y wave height meters o 9h35 9h43	neters teruggebrach n wave-maker side a 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk re used 655 R07530 655 R07520	het dichtst bij het golfshot)  HS10TP30_Block5_7001100  elijke opzet  T07530_Block5_Plate T07520_Block5_Plate	test duration of 45 min., sensor distance 700mm and 1100mm
10135 0.655 R10015 100105, Block5, Plate test terminated after 20-30s because of lateral standing wave.  10145 0.655 R12530 125230, Block5, Plate test terminated after 20-30s because of lateral standing wave.  11140 0.655 R12515 12551, Block5, Plate test terminated after 20-30s because of lateral standing wave.  11141 0.655 R151303 115030, Block5, Plate frame started moving into -1.5 degree vertical angle 111430 0.655 R15015 115002, Block5, Plate frame started moving into -1.5 degree vertical angle 111430 0.655 R15010 115002, Block5, Plate frame started moving into -1.5 degree vertical angle 11144 0.655 R15010 115002, Block5, Plate frame started moving into -1.5 degree vertical angle 11144 0.655 R15015 115012, Block5, Plate frame started moving into -1.5 degree vertical angle 11144 0.655 R15010 115002, Block5, Plate frame started moving into -1.5 degree vertical angle 11144 0.655 R15010 115002, Block5, Plate frame started moving into -1.5 degree vertical angle 11145 0.655 R15010 115002, Block5, Plate frame started moving into -1.5 degree vertical angle 11146 0.655 R15010 115002, Block5, Plate shope 11146 0.656 R15010 117503, Block5, Plate shope 11146 0.656 R15010 117503, Block5, Plate shope 11146 0.656 R10030 117503, Block5, Plate shope 11148 0.656 R10030 112503, Block5, Plate shope 11149 0.656 R10030 112503, Block5, Plate shope 11140 0.656 R10030 115003, Block5, Plate shope 1140 0.656 R10030 115003, Block5, Plate shope 1140 0.656 R10030 115003, Block5, Plat	31/07/2014 30 block 3 with plate and tussen golfhoogten y wave height meters o 9h35 9h43 9h52	neters teruggebrach n wave-maker side a 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk re used 655 R07530 655 R07515	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate	
10h28 0.655 R1250 17250, Block5, Plate 10h165 0.655 R1250 17250, Block5, Plate 10h167 0.655 R1250 17250, Block5, Plate 11h08 0.655 R1250 17250, Block5, Plate 11h08 0.655 R1250 17250, Block5, Plate 11h168 0.655 R1250 17250, Block5, Plate 11h168 0.655 R1250 17250, Block5, Plate 11h168 0.655 R1250 17250, Block5, Plate 11h26 0.655 R1250 17250, Block5, Plate 10h26 0.656 R1250 0.656 R1250 0.656, Plate 10h26 0.656 R1250 0	31/07/2014 30 block 3 with plate and tussen golfhoogter (wave height meters of 9h35 9h43 9h52 9h59 10h03	neters teruggebrach n wave-maker side a 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk re used 655 R07530 655 R07510 655 R07515 655 R07510	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T07510_BlockS_Plate	
10hd5	31/07/2014 30 block 3 with plate and tussen golfhoogten; wave height meters o 9h35 9h43 9h52 9h59 10h03	meters teruggebrach n wave-maker side a 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 H510TP30 1. naar oorspronk re used 655 R07530 655 R07510 655 R07515 655 R07510 655 R10030 655 R10030	het dichtst bij het golfshot)  HS10TP30_Block5_7001100  elijke opzet  T07530_Block5_Plate T07520_Block5_Plate T07515_Block5_Plate T07510_Block5_Plate T10030_Block5_Plate T10030_Block5_Plate	
11h00	31/07/2014 30 block 3 with plate and tussen golfhoogter y wave height meters o 9h35 9h43 9h52 9h59 10h03 10h13 10h33	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 H510TP30 1.65 H510TP30 1.65 H510TP30 1.655 R07530 1.655 R07530 1.655 R07510 1.655 R07510 1.655 R10030 1.655 R10020 1.655 R10015 1.655 R10015	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07510_BlockS_Plate T07510_BlockS_Plate T10030_BlockS_Plate T10020_BlockS_Plate T10020_BlockS_Plate T10010_BlockS_Plate T10010_BlockS_Plate	test terminated after 50s because of lateral standing wave.
11h08 0.55 R12510 T12510, Blocks Plate test terminated after 20-30s because of lateral standing wave.  11h11 0.55 R12500 T15002, Blocks Plate frame started moving into -1.5 degree vertical angle 11h36 0.655 R15010 T15010, Blocks Plate frame started moving into -1.5 degree vertical angle 11h36 0.655 R15010 T15010, Blocks Plate frame started moving into -1.5 degree vertical angle 11h36 0.655 R15010 T15010, Blocks Plate frame started moving into -1.5 degree vertical angle 11h36 0.655 R15010 T15010, Blocks Plate frame started moving into -1.5 degree vertical angle 11h36 0.655 R15010 T15010, Blocks Plate started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  07/08/2014  e constructed 45 degreed, with plate ance or waterline from slope to first waveheight gauge (G20) is 282 cm ances inbetween are 545 and 820 mm  9h40 0.65 R07530 T07530, Blocks Plate slope 9h50 0.65 R07510 T07510, Blocks Plate slope 9h51 0.65 R07510 T07510, Blocks Plate slope 10h05 0.65 R07510 T07510, Blocks Plate slope 10h05 0.65 R07510 T10001, Blocks Plate slope 10h05 0.65 R00010 T10001, Blocks Plate slope 10h05 0.65 R10010 T10001, Blocks Plate slope 10h05 0.65 R10010 T10001, Blocks Plate slope 10h06 0.65 R10010 T10001, Blocks Plate slope 10h07 0.65 R10010 T10001, Blocks Plate slope 10h08 0.65 R10010 T10001, Blocks Plate slope 10h09 0.65 R10010 T10001, Blocks Plate slope 10h0	31/07/2014 30 block 3 with plate and tussen golfhoogter (wave height meters o 9h35 9h43 9h52 9h59 10h03 10h13 10h26	meters teruggebrach n wave-maker side a 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 1. naar oorspronk re used 655 R07530 655 R07520 655 R07515 655 R07510 655 R10030 655 R10010 655 R10010 655 R10010	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07530_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10030_BlockS_Plate T10002_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate	test terminated after 50s because of lateral standing wave.
11h30 0.555 R15020 T1500_ Block5_Plate frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  07/08/2014  ### constructed 45 degreed, with plate ance on waterline from slope to first waveheight gauge (G20) is 282 cm ances inbetween are 545 and 820 mm  #### 9h40 0.65 R07530 T07530_ Block5_Plate_slope 9h50 0.56 R07520 T07530_ Block5_Plate_slope 9h50 0.56 R07520 T07530_ Block5_Plate_slope 10h05 0.56 R07530 T10000_ Block5_Plate_slope 10h05 0.56 R07530 T1250_ Block5_Plate_slope 10h05 0.56 R07530 T	31/07/2014 30 block 3 with plate and tussen golfhoogter wave height metrs o 9h35 9h43 9h52 9h59 10h03 10h13 10h34 10h64	meters teruggebrach n wave-maker side a 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 1.65 HS10TP30 1.65 HS10TP30 1.65 R07530 1.65 R07530 1.65 R07510 1.65 R07510 1.65 R07510 1.65 R10020 1.65 R10020 1.65 R10010 1.65 R10010 1.65 R10010 1.65 R12530 1.65 R12530	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07510_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10010_BlockS_Plate T10010_BlockS_Plate T10010_BlockS_Plate T1250_BlockS_Plate T1250_BlockS_Plate T1250_BlockS_Plate T1250_BlockS_Plate	test terminated after 50s because of lateral standing wave.
11h36 0.55 R15015 T15015_Block5_Plate frame started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  7/7/8/2014  9 Ph40 0.55 R15010 T05730_Block5_Plate slope 9 Ph50 0.55 R07520 T07520_Block5_Plate_slope 9 Ph50 0.55 R07520 T07520_Block5_Plate_slope 9 Ph50 0.55 R07520 T07520_Block5_Plate_slope 1 Ph50 0.55 R07510 T0751_Block5_Plate_slope 1 Ph50 0.55 R07510 T0751_Block5_Plate_slope 1 Ph50 0.55 R07510 T0751_Block5_Plate_slope 1 Ph50 0.55 R07520 T07520_Block5_Plate_slope 1 Ph50 0.55 R07520 T07520_Block5_Plate_slope 1 Ph50 0.55 R07520 T0751_Block5_Plate_slope 1 Ph50 0.55 R07520 T0751	31/07/2014 30 block 3 with plate 30 block 3 with plate y wave height meters o 9h35 9h43 9h52 9h59 10n62 10h15 10h84 10h55 11h06	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 1.65 HS10TP30 1.65 R07530 655 R07520 655 R07520 655 R07515 655 R07515 655 R05005 655 R10030 655 R10030 655 R10030 655 R12520 655 R12520 655 R12520	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07510_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10010_BlockS_Plate T12010_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12550_BlockS_Plate T12550_BlockS_Plate T12550_BlockS_Plate T12550_BlockS_Plate T12550_BlockS_Plate T12550_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.
07/08/2014 e constructed 45 degreed, with plate ance on waterline from slope to first waveheight gauge (G20) is 282 cm ances inbetween are 454 and 820 mm  9840	31/07/2014 30 block 3 with plate and tussen golfhoogten wave height meters o 9h35 9h35 9h39 10h00 10h11 10h33 10h22 10h45 10h50 11h161 11h11	meters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.65 HS10TP30 1.10 mar oorspronk re used 655 R07530 655 R07515 655 R07515 655 R07510 655 R10030 655 R10030 655 R10030 655 R10530 655 R12530 655 R12530 655 R12530 655 R12530 655 R12510 655 R12515	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07530_Block\$_Plate T07520_Block\$_Plate T07515_Block\$_Plate T07515_Block\$_Plate T07510_Block\$_Plate T10503_Block\$_Plate T10003_Block\$_Plate T10001_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12530_Block\$_Plate T12530_Block\$_Plate T12515_Block\$_Plate T12515_Block\$_Plate T12515_Block\$_Plate T1550_Block\$_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave. frame started moving into -1.5 degree vertical angle
re constructed 45 degreed, with plate ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waterline from slope to first waveheight gauge (GZD) is 282 cm ance on waterline from slope to first waterline from slope from	31/07/2014 30 block 3 with plate and tussen golfhoogter y wave height meters o 9h35 9h43 9h52 9h59 10h00 10h11 10h33 10h52 11h06 11h16 11h66 11h16 11h66 11h16	meters teruggebrach n wave-maker side e	1.00 cm (70 cm is 1.06 HS10TP30 1.16 HS10TP30 1.1	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07\$30_Block\$_Plate T07\$20_Block\$_Plate T07\$15_Block\$_Plate T07\$15_Block\$_Plate T07\$10_Block\$_Plate T10030_Block\$_Plate T10030_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12\$30_Block\$_Plate T12\$30_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle
se constructed 35 degreed, with plate ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waterline from slope to first waveheight gauge (G20) is 282 cm ance on waterline from slope to first waveheight gauge (G20) is 282 cm ance on the right edge of the plate on the right edge on the right edge of the plate on the right edge on the right edge of the plate on the r	31/07/2014 30 block 3 with plate and tussen golfhoogter y wave height meters o 9h35 9h43 9h52 9h59 10h00 10h11 10h33 10h52 11h06 11h16 11h66 11h16 11h66 11h16	meters teruggebrach n wave-maker side e	1.00 cm (70 cm is 1.06 HS10TP30 1.16 HS10TP30 1.1	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07\$30_Block\$_Plate T07\$20_Block\$_Plate T07\$15_Block\$_Plate T07\$15_Block\$_Plate T07\$10_Block\$_Plate T10030_Block\$_Plate T10030_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12\$30_Block\$_Plate T12\$30_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle
ance or waterline from slope to first waveheight gauge (G2D) is 282 cm ances inhetween are 454 and 820 mm  9h40	31/07/2014 30 block 3 with plate 30 block 3 with plate y wave height meters o 9h35 9h43 9h52 9h39 10n03 10n11 10n33 10n42 11n60 11h10 11h10 11h11 11h36 11h44	meters teruggebrach n wave-maker side e	1.00 cm (70 cm is 1.06 HS10TP30 1.16 HS10TP30 1.1	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07\$30_Block\$_Plate T07\$20_Block\$_Plate T07\$21_Block\$_Plate T07\$15_Block\$_Plate T07\$10_Block\$_Plate T10030_Block\$_Plate T10030_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12\$30_Block\$_Plate T12\$30_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle
9840 0.55 807530 T07530_Block5_Plate_slope 9850 0.55 807530 T07520_Block5_Plate_slope 9855 0.55 807515 T07515_Block5_Plate_slope 10965 0.55 807510 T07510_Block5_Plate_slope 10967 0.55 807510 T07510_Block5_Plate_slope 10967 0.55 807510 T07510_Block5_Plate_slope 10967 0.55 807510 T07510_Block5_Plate_slope 10967 0.55 807510 T10030_Block5_Plate_slope 10968 0.55 807510 T10030_Block5_Plate_slope 10968 0.55 807510 T10030_Block5_Plate_slope 10968 0.55 807510 T10035_Block5_Plate_slope 10968 0.55 807510 T12570_Block5_Plate_slope 10968 0.55 807510 T12570_Block5_Plate_slope 11968 0.55 807510 T12570_	31/07/2014 30 block 3 with plate 30 block 3 with plate 4 wave height meters o 9h35 9h43 9h52 9h59 10h03 10h13 10h35 11h06 11h10 11h36 11h14 07/08/2014	meters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.06 HS10TP30 1.16 HS10TP30 1.1	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07\$30_Block\$_Plate T07\$20_Block\$_Plate T07\$21_Block\$_Plate T07\$15_Block\$_Plate T07\$10_Block\$_Plate T10030_Block\$_Plate T10030_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12\$30_Block\$_Plate T12\$30_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T12\$51_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate T1503_Block\$_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle
98:50 0.65 807520 T07520_BlockS_Plate_slope 98:55 0.65 807515 T07515_BlockS_Plate_slope 10045 0.65 807510 T07510_BlockS_Plate_slope 10047 0.65 810300 T110030_BlockS_Plate_slope 10047 0.65 810030 T110030_BlockS_Plate_slope 10048 0.65 810010 T10015_BlockS_Plate_slope 10040 0.65 810010 T10015_BlockS_Plate_slope 10041 0.65 810010 T10015_BlockS_Plate_slope 10044 0.65 812530 T12520_BlockS_Plate_slope 10045 0.65 812530 T12520_BlockS_Plate_slope 10046 0.65 812515 T12525_BlockS_Plate_slope 10047 0.65 812515 T12525_BlockS_Plate_slope 11048 0.65 812510 T12503_BlockS_Plate_slope	31/07/2014 30 block 3 with plate 30 block 3 with plate 9 h35 9 h35 9 h33 9 h52 9 h59 10 h05 10 h15 10 h35 11 h06 11 h06 11 h16 1	meters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.05 k1.05 k	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10001_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15015_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle frame started moving into - 1.5 degree vertical angle
96.5	31/07/2014 30 block 3 with plate 30 block 3 with plate 9 wave height meters o 9 h35 9 h33 9 h32 9 h39 10 n03 10 n13 10 n33 11 n06 11 n0	meters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.05 k1.05 k	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10001_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15015_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle
10h05	31/07/2014 30 block 3 with plate 30 block 3 with plate y wave height meters o 9h35 9h33 9h32 10h00 10h11 10h33 10h22 10h65 11h10 11h	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	100 cm (70 cm is 1.65 HS10TP30 t naar oorspronk re used 655 R07530 655 R07510 655 R07510 655 R07510 655 R1030 655 R1030 655 R1030 655 R1030 655 R1030 655 R15010 655	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T07510_BlockS_Plate T10030_BlockS_Plate T10003_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T101015_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle
10h17 0.55 R10030 T10002 Block5 Plate slope 10h25 0.55 R10020 T10002 Block5 Plate slope 10h30 0.65 R10015 T10015 Block5 Plate slope 10h31 0.65 R10015 T10015 Block5 Plate slope 10h41 0.65 R12530 T12530 Block5 Plate slope leakage on the right edge of the plate 10h55 0.65 R12520 T12520 Block5 Plate slope 11h66 0.55 R12515 T12515 Block5 Plate slope 11h13 0.65 R12510 T12510 Block5 Plate slope 11h18 0.65 R12510 T1500 Block5 Plate slope 11h29 0.65 R12500 T15000 Block5 Plate slope 12h240 Block5 Plate slope 12h250	31/07/2014 30 block 3 with plate 30 block 3 with plate 9 h35 9h33 9h32 9h39 10h02 10h13 10h83 10h85 11h00 11h10 11h13 11h34 07/08/2014 e constructed 45 degree ance on waterline from ances inbetween are 54 9h40 9h40	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30 t naar oorspronk re used   555 807530 655 807530 655 807530 655 807515 655 807515 655 810030 6555 810000 6555 810000 6555 8100000 6555 810000000000000000000000000000000000	het dichtst bij het golfshot)  HS10TP30_BlockS_Plate 107530_BlockS_Plate 107520_BlockS_Plate 107520_BlockS_Plate 107510_BlockS_Plate 107510_BlockS_Plate 110030_BlockS_Plate 110030_BlockS_Plate 11001S_BlockS_Plate 11001S_BlockS_Plate 11001S_BlockS_Plate 11001S_BlockS_Plate 11001S_BlockS_Plate 112530_BlockS_Plate 112530_BlockS_Plate 112530_BlockS_Plate 112530_BlockS_Plate 115500_BlockS_Plate 115500_BlockS_Plate 11501S_BlockS_Plate 11501S_BlockS_Plate 11501S_BlockS_Plate 11501S_BlockS_Plate 11501S_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle
10h30         0.65 R10015         T10015_BlockS_Plate_slope         test terminated after 50s because of lateral standing wave.           10h41         0.65 R12530         T12530_BlockS_Plate_slope         leakage on the right edge of the plate           10h55         0.65 R12520         T12520_BlockS_Plate_slope         leakage on the right edge of the plate           11h06         0.65 R12515         T12515_BlockS_Plate_slope         leakage on the right edge of the plate           11h13         0.65 R12510         T12510_BlockS_Plate_slope         test terminated after 20-30s because of lateral standing wave.           11h18         0.65 R12510         T12510_BlockS_Plate_slope         test terminated after 20-30s because of lateral standing wave.           11h18         0.65 R12510         T1500_BlockS_Plate_slope         test terminated after 20-30s because of lateral standing wave.           11h29         0.65 R12500         T1500_BlockS_Plate_slope         test terminated after 20-30s because of the plate	31/07/2014 30 block 3 with plate 30 block 3 with plate y wave height meters 0 9h35 9h33 9h42 9h59 10h00 10h11 10h31 10h32 11h00 11h10 11h1	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.00 cm (70 cm is 1.05 HS10TP30 cm is 1.05 HS10T	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T101015_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle  frame started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.
10h41         0.55 R12501         T10010_BlockS_plate_slope         test terminated after 50s because of lateral standing wave.           10h44         0.65 R1250         T1253_BlockS_plate_slope         leakage on the right edge of the plate           10h55         0.65 R1250         T1251_BlockS_plate_slope         leakage on the right edge of the plate           11h16         0.65 R12510         T1251_BlockS_plate_slope         test terminated after 20-30s because of lateral standing wave.           11h18         0.65 R15030         T1509_BlockS_plate_slope         leakage on the right edge of the plate           11h29         0.65 R15030         T1500_BlockS_plate_slope         leakage on the right edge of the plate	31/07/2014 30 block 3 with plate 30 block 3 with plate 40 block 3 with plate 50 block 3 with plate 61 block 3 with plate 61 block 3 bl	meters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.00 cm (70 cm is 1.05 HS10TP30 cm is 1.05 HS10T	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07510_BlockS_Plate T10030_BlockS_Plate T10003_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate_slope T07515_BlockS_Plate_slope T07515_BlockS_Plate_slope T07510_BlockS_Plate_slope T07510_BlockS_Plate_slope	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave. frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.
10h44         0.55 R12530         T12530_Blocks_Plate_slope         leakage on the right edge of the plate           10h55         0.65 R1250         T12515_Blocks_Plate_slope         leakage on the right edge of the plate           11h06         0.65 R12515         T12515_Blocks_Plate_slope         test terminated after 20-30s because of lateral standing wave.           11h18         0.65 R12510         T12510_Blocks_Plate_slope         test terminated after 20-30s because of lateral standing wave.           11h19         0.65 R15030         T15030_Blocks_Plate_slope         leakage on the right edge of the plate           11h29         0.65 R1500         T15002_Blocks_Plate_slope         leakage on the right edge of the plate	31/07/2014 30 block 3 with plate 30 block 3 with plate 9 has and tussen golfhoogter 9 wave height meters o 9h35 9h43 9h52 10h06 10h11 10h38 11h60 11h11 11h36 11h44 07/08/2014 e constructed 45 degree ance on waterline from ances inbetween are 54 9h40 9h50 9h55 10h060 10h17	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30  t naar oorspronk re used  555 R07530 655 R10030 655 R07530	het dichtst bij het golfshot)  HS10TP30_BlockS_Plate  T07530_BlockS_Plate  T07530_BlockS_Plate  T07530_BlockS_Plate  T07510_BlockS_Plate  T07510_BlockS_Plate  T10030_BlockS_Plate  T10030_BlockS_Plate  T10030_BlockS_Plate  T10010_BlockS_Plate  T10010_BlockS_Plate  T10010_BlockS_Plate  T12530_BlockS_Plate  T12530_BlockS_Plate  T12530_BlockS_Plate  T12530_BlockS_Plate  T15010_BlockS_Plate  T15010_BlockS_Plate  T15010_BlockS_Plate  T15010_BlockS_Plate  T15015_BlockS_Plate  T15015_BlockS_Plate  T07530_BlockS_Plate  T07530_BlockS_Plate_slope  T07510_BlockS_Plate_slope  T07510_BlockS_Plate_slope  T07510_BlockS_Plate_slope  T07510_BlockS_Plate_slope  T07510_BlockS_Plate_slope  T07510_BlockS_Plate_slope  T00510_BlockS_Plate_slope  T10020_BlockS_Plate_slope	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave. frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.
11h06     0.65 R12515     T12515_Blocks_Plate_slope     test terminated after 20-30s because of lateral standing wave.       11h18     0.65 R15030     T15030_Blocks_Plate_slope     test terminated after 20-30s because of lateral standing wave.       11h29     0.65 R15020     T15020_Blocks_Plate_slope     leakage on the right edge of the plate       11h29     0.65 R15020     T15020_Blocks_Plate_slope     leakage on the right edge of the plate	31/07/2014 30 block 3 with plate 30 block 3 with plate y wave height meters o 9h35 9h43 9h52 9h59 10h62 10h11 10h33 10h22 10h44 10h53 11h60 11h11 11h30 11h44 07/08/2014 0 or onstructed 45 degree ance on waterline from success in between are 54 9h40 9h50 9h55 10h06 10h17 10h25 10h31	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30  t naar oorspronk re used  555 R07530 655 R10030 655 R10030 655 R10030 655 R10030 655 R10030 655 R10030 655 R07530 655 R15010	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07510_BlockS_Plate T07515_BlockS_Plate T107510_BlockS_Plate T10003_BlockS_Plate T10003_BlockS_Plate T10001_BlockS_Plate T10001_BlockS_Plate T10010_BlockS_Plate T10010_BlockS_Plate T12550_BlockS_Plate T12550_BlockS_Plate T12551_BlockS_Plate T12551_BlockS_Plate T15001_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate T15015_BlockS_Plate_slope T07510_BlockS_Plate_slope T07510_BlockS_Plate_slope T07510_BlockS_Plate_slope T10015_BlockS_Plate_slope T10003_BlockS_Plate_slope T10003_BlockS_Plate_slope T10005_BlockS_Plate_slope T100105_BlockS_Plate_slope	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle frame started moving into -0.15 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  test terminated after 50s because of lateral standing wave.  test terminated after 50s because of lateral standing wave.
11h13 0.55 R12510 T12510_Blocks_Plate_slope test terminated after 20-30s because of lateral standing wave. 11h18 0.65 R15030 T15030_Blocks_Plate_slope leakage on the right edge of the plate 11h29 0.65 R15020 T15002_Blocks_Plate_slope leakage on the right edge of the plate	31/07/2014 30 block 3 with plate 30 block 3 with plate 30 block 3 with plate 31 block 3 with plate 31 block 3	meters teruggebrach n wave-maker side a	1.00 cm (70 cm is 1.65 HS10TP30 cm is 1.65 HS1	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07530_BlockS_Plate T07530_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T10015_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12515_BlockS_Plate T12510_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15015_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate T15010_BlockS_Plate_slope T10015_BlockS_Plate_slope T10015_BlockS_Plate_slope T10015_BlockS_Plate_slope T10015_BlockS_Plate_slope T10015_BlockS_Plate_slope T10015_BlockS_Plate_slope T10015_BlockS_Plate_slope T10153_BlockS_Plate_slope T10153_BlockS_Plate_slope	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -15 degree vertical angle  frame started moving into -15 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  test terminated after 50s because of lateral standing wave.  test terminated after 50s because of lateral standing wave.  leakage on the right edge of the plate
11h29 0.65 R15020 T15020_Block5_Plate_slope leakage on the right edge of the plate	31/07/2014 30 block 3 with plate 30 block 3 with plate 40 block 3 with plate 50 block 3 bloc	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30  t naar oorspronk re used  555 R07530 655 R10030 655 R12530 655 R12530 655 R15010  2.05 R07530	het dichtst bij het golfshot)  HS10TP30_BlockS_7001100  elijke opzet  T07530_BlockS_Plate T07520_BlockS_Plate T07520_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10030_BlockS_Plate T10010_BlockS_Plate T10010_BlockS_Plate T10010_BlockS_Plate T12530_BlockS_Plate T12530_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T15010_BlockS_Plate T15015_BlockS_Plate_slope T07510_BlockS_Plate_slope T07510_BlockS_Plate_slope T10510_BlockS_Plate_slope T10010_BlockS_Plate_slope T10010_BlockS_Plate_slope T10010_BlockS_Plate_slope T10010_BlockS_Plate_slope T10010_BlockS_Plate_slope T10010_BlockS_Plate_slope T10010_BlockS_Plate_slope T1250_BlockS_Plate_slope T1250_BlockS_Plate_slope	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave. frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  test terminated after 50s because of lateral standing wave.  test terminated after 50s because of lateral standing wave. leakage on the right edge of the plate
	31/07/2014 30 block 3 with plate 30 block 3 with plate 4 wave height meters o 9h35 9h43 9h52 9h59 10n63 10h11 10h33 10h24 10h51 11h00 11h10 11h10 11h30 11h40 07/08/2014 0e constructed 45 degree ance on waterline from ances inbetween are 56 9h40 9h50 9h55 10h01 10h11 10h21 10h31 10h41 10h41 10h41 10h41 10h41 10h41 10h41 10h55 11h00 11h100 11h100 11h100 11h100	meters teruggebrach n wave-maker side a  0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1.00 cm (70 cm is 1.65 HS10TP30  It maar corspronk re used  It maar corspronk re used  555 R07530  655 R12515  655 R12530  655 R12530  655 R12530  655 R12530  655 R15010  656 R07530	het dichtst bij het golfshot)  HS10TP30_BlockS_Plate T07530_BlockS_Plate T07530_BlockS_Plate T07520_BlockS_Plate T07510_BlockS_Plate T07515_BlockS_Plate T07515_BlockS_Plate T10003_BlockS_Plate T10003_BlockS_Plate T10003_BlockS_Plate T10003_BlockS_Plate T10003_BlockS_Plate T10010_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T12510_BlockS_Plate T15003_BlockS_Plate T15003_BlockS_Plate T15010_BlockS_Plate	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  frame started moving into -1.5 degree vertical angle frame started moving into -1.5 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. leakage on the right edge of the plate
0.00 haboar race_more conge contine tight edge of the place	31/07/2014 30 block 3 with plate 31 wave height meters 0 31 shops 31 sho	meters teruggebrach n wave-maker side a  0  0  0  0  0  0  0  0  0  0  0  0  0	100 cm (70 cm is 1.65 HS101790 cm is 1.65 HS1017910	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07530_Block\$_Plate T07520_Block\$_Plate T07520_Block\$_Plate T07515_Block\$_Plate T07515_Block\$_Plate T07515_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12530_Block\$_Plate T12530_Block\$_Plate T12550_Block\$_Plate T12550_Block\$_Plate T15500_Block\$_Plate T15500_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15010_Block\$_Plate T15015_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15016_Block\$_Plate T15016_Block\$_Pl	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave. frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 20-30s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 20-30s because of lateral standing wave. test terminated after 20-30s because of lateral standing wave.
	31/07/2014 30 block 3 with plate 31 wave height meters 0 31 shops 31 sho	meters teruggebrach n wave-maker side a  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	100 cm (70 cm is 1.65 HS101790 cm is 1.65 HS1017910	het dichtst bij het golfshot)  H\$10TP30_Block\$_7001100  elijke opzet  T07530_Block\$_Plate T07520_Block\$_Plate T07520_Block\$_Plate T07515_Block\$_Plate T07515_Block\$_Plate T07515_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T10015_Block\$_Plate T12530_Block\$_Plate T12530_Block\$_Plate T12550_Block\$_Plate T12550_Block\$_Plate T15500_Block\$_Plate T15500_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15010_Block\$_Plate T15015_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15010_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15015_Block\$_Plate T15016_Block\$_Plate T15016_Block\$_Pl	test terminated after 50s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave.  test terminated after 20-30s because of lateral standing wave. frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle frame started moving into -15 degree vertical angle, test terminated after 20-30s because of lateral standing wave.  test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 20-30s because of lateral standing wave. test terminated after 50s because of lateral standing wave. test terminated after 20-30s because of lateral standing wave. test terminated after 20-30s because of lateral standing wave.