Swell!

November 2017 Volume 39 Number 1

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From the editors

Dear members,

Autumn: our favourite time of the year! Of course, nothing is more beautiful to a Hydraulic Engineering student than lots of water pouring from the air. These small things inspired us to make a magazine about water for you all.

This edition of the Swell contains a number of reports and updates of our various activities in the last months as well as some hydraulic adventures from all around the world. Amongst these is a report of our study tour to India and Sri Lanka last summer and of course a Swell wouldn’t be complete without a column from Tjerk Zitman.

Finally, we want to thank everyone who contributed to the content of this Swell, we couldn’t have done it without you!

Enjoy!

Editors of the Swell,
Iris Heemskerk and Marlein Geraeds

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**Title**

**From the president | Focco Vons**

Dear members of ‘het Waterbouwdispuut’,

After a beautiful summer, where a lot of Hydraulic masterpieces were visited in India and Sri Lanka at the international study trip, the new academic year 2017/2018 has started. A new year means also a new board for the Hydraulic Engineering student association. Therefore, we have to say goodbye and thanks towards the board of 2016/2017. Piebe, Jenkse, Onne, Steph, Vibeke, Wijnand and Floorjte, we want to thank you guys a lot for what you have accomplished!

You left the association in perfect condition. Last year was the first time that the board didn’t change halfway through the year and in my opinion is was a great success! However, the hard work must continue and therefore, seven new enthusiastic students are chosen to fulfill these exciting and appreciated tasks. As the new president of the Hydraulic Student association, I’m very proud to announce the board of 2017/2018!

**President – Focco Vons**

Hello everyone! My name is Focco Vons and I am the new president of the association. I’m really proud and thankful for having this wonderful possibility to be the chairman of this group with seven outstanding people. Everybody is full of energy and wants to add a lot to the association. Great brainstorm sessions were the start of miraculous ideas for the coming year. One of the additions so far is the variable day to drink the best coffee of the week, the hydraulic coffee! In our office on the third floor we work hard to accomplish all our desires, but there is always room for fun. “Play on words” is always something that can bring the extreme good vibe that’s already in the office to an extreme level. Our mission this year will be to maintain and expand the strong and magnificent bridge, that already has been built by the previous boards, to conquer the challenges for students with the start over their hydraulic career. If you want to share Hydraulic thoughts in the coming year, come over to room 3.72 and hang out with us!

For now, I want to end with my favorite hydraulic quote and hopefully we will stay in touch through the year!

“I want to be wild, beautiful, and free just like sea!”
Partners

From the president | Focco Vons

Vice President/External Affairs - Servaas Kievits
As this year’s vice president, my main tasks this year consist of maintaining and improving the strong relations the Hydraulic Engineering Student Association has created over the years with our partners. These relations help us in organising activities for our members, such as for example the finger licking good Hydraulic Dinner(s), challenging company cases and interesting guest lectures! By participating in these events, I am convinced that each of our members will develop their toolbox of skills and find out in which direction they will propagate after graduation. For this reason, I see personal enrichment of our members, together with having the most awesome hydraulic year in room 3.72, as my main goal this year!

I hope to see you all on one (or more) of our many activities and in case you have any questions or complaints, Focco is always happy to help!

“You can never cross the ocean unless you have the courage to lose sight of the shore”

Secretary - Marlein Geraeds
My name is Marlein Geraeds, I’m 22 years young and started my Civil Engineering bachelor’s back in 2012. Finishing my bachelor’s in 2015, I took a little detour to my Hydraulic Engineering master’s by doing a year of Applied Mathematics. However I could feel through my water that this wasn’t the place where I could fully feel like a fish in water, so I decided to come back to the TU Delft’s greatest master programme, which brings us to now! You might have seen my name in a few of the e-mails that you’ve received already, since I’m this year’s secretary of ‘Het Waterbouwdispuut’. I’ll e-mail you with all our exciting activities and I’m your contact when you need to change anything in your contact information. Furthermore I like my coffee Hydraulic, so you can find me in front of room 3.72 during Hydraulic Coffees!

“The mind is like water. When it’s turbulent, it’s difficult to see. When it’s calm, everything becomes clear.”

Treasurer - Florian Laurens
When I was still a little baby floating around in water inside my mothers belly I decided that there was a lack of concrete and that I wanted to do something about that. Now, 22 years later I am given the opportunity to make the world more grey and blue. As the treasurer of the hydraulic engineering student association, I am in charge of making sure that we can do as much as possible with as little as possible. Looking forward to help making hydraulic engineering as fun and interesting as possible!

“I don’t drink water. Fish fuck in it.”

Educational affairs – Iris Heemskerk
My name is Iris Heemskerk and next year I am the person you need to talk to when it comes to educational affairs. I am 23 years old and started my bachelor Civil Engineering in 2013. When I was asked for ‘Het Waterbouwdispuut’ and especially with the rest of the group I did not hesitate for a moment. Studying Hydraulic Engineering and being in such good contact with as well the professors as all the students really is a pleasure. If you have any complaints, compliments or issues with a course, do not hesitate to come to me! Everyone has the same goal in mind, at that is to maintain the status of the Hydraulic Engineering master: namely the best one in the world.

“I am like a drop of water on a rock. After drip, drip, dripping in the same place, I begin to leave a mark, and I leave my mark in many people’s hearts.”

Internal Affairs - Inelotte Krijnen
When I was observing swells in Indonesia, someone called me and asked if I wanted to join the board of “Het Waterbouwdispuut” and I immediately said that it would be an honour. I am responsible for the MEX and the Symposium, which is something I’m really glad to be. In a few weeks, we will go to Lisbon and after that I will start focussing on the Symposium to make it our greatest event of the year. By organizing these events, “Het
From the president | Focco Vons

Waterbouwdispuit* shows the hydraulic engineering students the many faces of our potential future and the fun part of doing your Master’s together! I hope to see many of you at the events throughout the year, if you got any questions please feel free to contact Focco.

*“Water is the driving force of all nature - Leonardo da Vonsi”

Foreign Affairs - Sebastiaan Woerlee

Hi! During this year I will be in charge of the foreign affairs within our association. I will make sure there is going to be a lot of travelling involved this year, to compensate for all the hard work in Delft. That's why we start our journey all the way up north in Amsterdam, for the first activity which I will organize, the Hydraulic Dinner! This will be the perfect opportunity to meet with five of the largest Dutch companies in the hydraulic sector and takes places on December 14th. Besides, we will really go abroad during the intercontinental study trip next summer (last two weeks of August), in which we will visit some of the most exciting projects within the hydraulic world. Keep track of both events on our Facebook page or ask Focco for more information. I am excited to get started and make the upcoming year one you guys will never forget!

*“Life is like a river, sometimes it sweeps you gently along and sometimes the rapids come out of nowhere.”

See you water!
By Iris Heemskerk and Florian Laurens

On the 4th of September the Academic year 2017/2018 officially kicked off. We, ‘Het Waterbouwdispuut’, organized an introduction program for all the new master students of Hydraulic Engineering. This day was not only organized for Dutch students, but for international students as well and there was a great outcome! The day started with an introductive speech from Bas Jonkman followed by a presentation about educational affairs by Henk Jan Verhagen. After this, the first hydraulic coffee of the year was a fact! While the first socializing between students took place we waited for lunch and then took off for the buses. There were four excursions scheduled for the afternoon: Rijkswaterstaat, BAM, Flood Proof Holland and Port of Rotterdam. We’ll shortly elaborate on two of these: BAM and Rijkswaterstaat.

BAM

After half an hour of driving, we arrived at the construction site of the biggest sea lock in the world which is a part of the port of Amsterdam. Since a big part of the locks is constructed under water and cannot be visited, there is an information centre, known as SHIP. We were welcomed by Matthias from BAM. BAM Infra is partly responsible for all the construction works of the sealocks. Matthias gave the students an interesting presentation of the work that BAM does in general and is planning to do in the future. He also provided the students with information and opportunities such as internships, graduation projects and multidisciplinary projects with BAM. After his presentation we got a tour in SHIP and got an insight on how you manage a project as big as this one.

The existing sealock with dimensions of 400x50x13m is going to be replaced by a sealock with dimensions of at least 500x65x18m! The construction of the locks is a multidisciplinary project, and therefore involves a lot of management.

We want to thank Matthias and the team of SHIP for their participation and interesting story!

Rijkswaterstaat

At the first day of the new semester 40 students had the opportunity to visit Rijkswaterstaat at the ‘Ruimte voor de Rivier’ project near Kampen (2.5 hours away from Delft). In Kampen we had the opportunity to stretch our legs for a little bit and drink some coffee before the program of the day started. The program then started with a presentation about the ‘Ruimte voor de Rivier IJsseldelta’ project. The ‘space for the river’ plan is aimed to basically keep our feet dry for the next century and consists of well over 30 projects. The one that we were visiting was one of the last ones to be finished.

What the students and I really liked about the project was the fact that it included so many different aspects besides just the engineering part. For us, coming from a theoretical, engineering environment, it was really interesting to see the interactions between all the stakeholders and how this influenced the choices that were made.

After the presentation we took the bus to see in reality what was discussed earlier in the presentation. Seeing all the constructions, combined with the previously gained knowledge made this very interesting.

After the excursions we arrived back in Delft around 17:00 and Focco and Inelotte had prepared a delicious barbecue for everyone. The barbecue was a big success, we were almost out of beers and at 21:00 we actually had to ask people whether they could continue the party somewhere else outside of the TU Delft.

All in all we can conclude that the master kick-off day was a big success!
By Floortje Roelvink

After months of hard work, a lot of coffee from Niek, some beers, moments of panic about credit cards and visas, asking professors to accompany us, beautiful selfies and a fantastic hydraulic drinks the time was finally there: The big study tour of Hydraulic Engineering 2018! The choice for the location was easily made. The name India is derived from the word ‘drop’, and Sri Lanka hangs down as a drop beneath India, it cannot be any better than that was our opinion.

We started our travels in India. Late in the evening we arrived in Mumbai, where we were immersed in the Indian night life. Booties were shaken at us, hands were thrown up in the air, this was a good start of a week full of trips to companies, days full of culture and long walks through the wilderness of India.

The first company visit was Van Oord India. After a couple of interesting presentations about their pursuits, their corporate social responsibility and a delicious lunch we went to the harbour of Mumbai. A ship was waiting for us to give us a tour through the harbour past all the Van Oord vessels. At five o’clock, the time was there to have a beer at the stock exchange and soon after that a wonderful dinner accompanied by Indian dancers was served. What an interesting day, where we learned a lot about the Van Oord projects in India and their vision as a company.

To stay in the flow, the next day was all about visiting companies, namely Fugro India. A series of presentations gave us a detailed image about the activities of Fugro, which was reinforced with a tour of all the different departments. The closing lunch gave us the opportunity to ask our questions and ask for more information. After this we went back on the bus to explore the city centre some more.

After three days of Mumbai, it was time for a change of scenery; we went on the road to Pune, a nice city with a lot of green and a nice hostel. We played loads of board games and drank beers because this was our free time! A walk to a fortress was on the schedule. The view of the Ragjag fort should have been breathtaking, but unfortunately the dense mist made it impossible to even see your own hands. This didn’t spoil the fun though, through the rain and mud we climbed up the mountain and almost as cheerful we made our way down. The next day did not go without a hitch either. The bus was a small five hours late, with as a result that we could not visit the dam. On the bright side we made it all the way to Mumbai at the end of the day. We had another two days to explore the beauties of this city before we flew to Sri Lanka.

When we arrived in Sri Lanka we suddenly realised how extremely crowded it was in Mumbai. Sri Lanka was so peaceful and quiet in comparison. We strutted along the boulevard, visited the very polluted Laguna of Colombo and some temples and again enjoyed the various foods Sri Lanka had to offer. After a couple of days the day had finally come, the dream for every hydraulic engineer, thé big land reclamation project of Colombo: Port City Colombo. Eelco Bijl of CDR led us past gigantic tetrapods, an active dredger, the Chinese offices and employees
and the enormous breakwater the harbour assets. With a lot of anecdotes and an interesting presentation the story of Port City became clear to us. It was pointed out to us that there are a lot of political, economical and social aspects important for the project and for Sri Lanka in general. After the serious part of the day we went to one of the most fancy hotels of Colombo and while enjoying a nice cold beer, followed by a dinner, we reflected on the fun day.

The rest of the week we had a lot of free time and spent this almost entirely on the beach. We saw the erosion processes from up close and the strong impact of waves on the beach. We tried surfing, relaxed in the hot sand and took long walks down the beach of Tangalle en Hikaduwa. Our last company visit was to the Chinese company CHEC together with CDR. We visited the port of Hambantota, a huge port where no ship ever moored. Again the combination of politics and hydraulic engineering became very clear. Nevertheless it was again an interesting visit, which ended with a nice lunch.

These two weeks were absolutely fantastic. We had a lot of interesting company visits, boardgames, culture, nature and of course the most important thing of all; a lot of hydraulic engineering. We want to thank all the companies, participants and mentors for these amazing two weeks!
Dear all,

In the first quarter of this college year we went with our multi-disciplinary group to Chile to work on the Valdivia Estuary project. Our group consists of the following members (from left to the right in the picture): Charlotte, Tim, Jeffrey, Ellis, Rutger and Umbriël. The project started in Valdivia where we visited the Valdivia river and the Ministry of Public Works which was our client during this project. The ministry of public works of Valdivia wanted to increase the transport over the Valdivia river which was hindered by sedimentation problems. Our question to this was: is it really beneficial to expand the transport over the Valdivia river?

At the Universidad Católica la Santísima de Concepción we made a Delft3D model to do research on the sedimentation in the river and a social cost benefit analysis. The social costs and benefits analysis was about the balance between the costs for a potential solution and social and economic benefits for the city of Valdivia.

But that is enough about the study part, let’s talk about our journey in Chile because exploring the world is the most exciting part of doing a project abroad.

Before the project started a part of the group went to the north of Chile were the temperature is way higher than in Concepcion. The north of Chile is practically a large desert whereas the south is home to penguins. Crazy!

After the second week of the project we went on a four day trip to Pucón, 600 km south of Concepcion. Pucón is a must for every traveler that goes to Chile. In Pucón you find the most beautiful mountains of the Andes, huge lakes and the most exciting: volcanos. On our second day in Pucón, Ellis, Charlotte, Tim and Rutger climbed the Villarica Volcano which is one of the few volcanoes in the world that is active. It was a really tough climb from 1000 to 2800 meter in six hours, but it was definitely worth it. On top of the volcano there was an extraordinary view over the Andes and to see the lava bubbling inside the volcano was awesome. The most funny part of the day was to slide down all the way from the top back to the basecamp. The next day we went to a national park which looked like winter-wonderland with beautiful frozen lakes. The day after we went to the Termas Geométricas: 20 hot baths, heated by the warmth of the volcano. Termas was located in a canyon and due to the trees it was like you were taking a bath in the jungle.

So, Chile is famous for its beautiful nature but another thing that we loved very much is the wine.

One Saturday we were invited by one of our supervisors for a lunch. We went out on Friday, so we were not particularly looking forward to an early lunch. However, this became the best lunch ever. Lots of red wine, beers and delicious BBQ beef! The hangover was gone within a second.

Of course, an interesting content of your project is nice. However, the experience of working within another culture, exploring the country, learning the language and enjoying life is even more valuable.
Across
1. Hydraulic Engineering study association
2. Country of the Valdivia Estuary project
3. Hydraulic coffee day in November
4. Location of the MEX this year
5. Hot drink that’s better when it’s Hydraulic

Down
1. A series of mechanical waves that propagate along the interface between water and air generated by a distant weather storm
2. The essential ingredient of life
3. Place where the magic happens
4. Vast amounts of water on Earth are contained in...
5. The phenomenon by which energy is transmitted laterally along a wave crest
6. Product of mass and velocity
7. The area between the outermost breaker and the limit of wave uprush
8. The periodic rising and falling of the water that results from gravitational attraction of the Moon and Sun
9. bottom of the sea
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“Four?” she wondered when I put four glasses of beer next to her in the grass opposite the terrace of the cosy tail of the faculty building. I had never thought of it as a tail, actually, as the building is so indecisive that without huge, multi-colour lettering no one would ever suspect it to have an entrance, let alone a head or a tail. But since everybody seems to agree that the northern tip is the head of the building, I suppose the other end is automatically designated as its tail. And that is where the beer is. Well, once a week, usually.

“It halves my trips back and forth to the bar” I reasoned. It was a sultry late afternoon, a summery twitch of early autumn. As the sun had just gone behind the red and blue pinnacle of the campus, sunbathing was not an option anymore so nothing kept us from sitting in the campus park with our backs towards the still cordless tram track. “Cheers” she said and scooped quite a bit of white foam with her upper lip from her beer. “But four beers at a time is ridiculous.”

I watched her put down her glass, carefully checking its stability in the grass before letting it go. Then she pulled her bag towards her and took out her laptop, placed it on her upper legs and unfolded it. “What are you up to?” I asked. “What you observe” she replied wittily, “is that I’m just as pro active as you are with your four beers.”

Entanglement must have been written all over my face as she volunteered some clarification. “I expect the two additional beers to become an introduction to one of your vague hypotheses for which you want me to find substantiation on the Internet. That is what usually happens and why you always buy me beer, isn’t it?”

It crossed my mind to argue that she pays about as often for our beers as I do, but I restrained myself. She did have a point. I really love the challenging discussions we have over a beer or two, but she is always the one feeding them with essential criticism and information while I just bleat away. Apparently she had enough of that and clearly it was up to me to introduce a change.

“Please, can’t we just cuddle, I mean, without the hardware” I suggested, meanwhile moving a bit closer to her and gently closing her laptop. She answered this gesture by leaning over to me. “Are you proposing we kiss?” she whispered with a smile. “No” I replied instinctively, although it didn’t feel like such a bad idea, be it apart from the tuft of foam not far from her nose that apparently took its time to vaporise.

“Are you sure? No kiss?” “Actually, yes, I mean, I’m not sure, but not in public and most certainly not on campus.” The thought that a laptop and a kiss are interchangeable confused me. “Loser” she said. Then she straightened her back, put her laptop back into her bag and took another zip of beer. “Speaking of losers” she continued, “did you happen to hear that guy on the radio yesterday?” “Not sure what you mean; have I missed anything?” “Definitely, and not just a radio item.” She looked at me, undoubtedly to read my face, but all I offered was a bland smile.

“This guy” she continued after a silent second, “talked about Harvey or, more in particular, the devastation it caused.” “Topical, I would say” I reacted. “Sure, prig. Are you at all interested or what?” It sounded rather agitated. “You’re right. I’m sorry. Please go on.” “The guy I’m talking about was introduced as a consultant, an expert in the field of flood protection. Unfortunately I didn’t catch his name. Anyway, he was asked whether disasters like this one in Houston could happen to our country as well.” “But the north of Europe isn’t hurricane-prone” I interrupted her. “Precisely. Everybody knows that, but that was about the only thing this consultant failed to mention. What he implicitly conveyed was that the type of disaster that struck Houston is what we are bound to encounter in the near future as a result of climate change.” “Did he suggest that climate change will bring hurricanes to our part of the globe?” I wondered. For a moment she fell silent, as though she was hit by lightning. “That is so typical a reaction of a boffin” she regained her ability to speak. “Precisely. Everybody knows that, but that was about the only thing this consultant failed to mention. What he implicitly conveyed was that the type of disaster that struck Houston is what we are bound to encounter in the near future as a result of climate change.” “Please, hold on for a second” I tried slowing her down a little, “it’s almost evening and I’m not thinking so fast anymore. Are you saying that we are responsible for the actions of our ancestors?” “No, not responsible but liable” she explained. “The difference may seem
subtle, but it isn’t. It means that it is your moral obligation to compensate all wrongdoings committed in the past, no matter whether you had part in them or not.”

“And you seriously believe this?” I wanted to know.

“No, of course not. It’s complete bullshit. I’m just summarising the consultants view.”

“Nevertheless, politicians will love this profitable bullshit” I argued.

“Profitable?”

“Yes! If this moral obligation is indeed a general perception, taxes can be raised at will as every present inconvenience can be explained as an adverse effect of historical actions.” And I smiled again, genuine this time.

“And what if we were talking about recent history and an action taken by yourself?” she thought aloud, “would you feel liable for that?”

Her question seemed of track and I wondered what she meant.

“You know what?” she interrupted my confusion.

“What?”

“I think you owe me another two beers.”

“Why, and why two?” I wanted to know.

“Simple: it saves you a trip to the bar.”

“Makes sense” I said, “but why do I owe you beer in the first place?”

“For starters, to make up for closing my laptop. Out here I need that thing to help your chaotic brain produce something sensible. You know that perfectly well. And then, right after I had accepted it, you reconsidered your intimate suggestion, remember? Two rejections in a row; your rejections to be precise, so you need to pay.”

I didn’t hesitate for a second and rushed to the bar. I was already half way there when I realised my stupidity. This was not at all about compensating yellow bubbles. I turned around and looked at our spot in the park, but all I saw was grass.

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