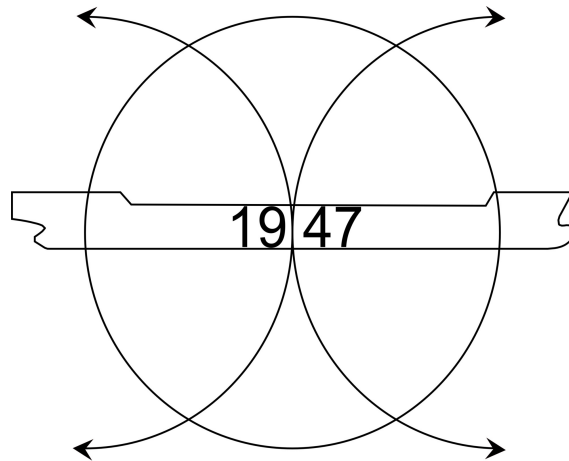


NUL-KRYDS

Annual Report 2017



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1 Words from the President

2017 has been another fine year for Nul-Kryds with a lot of activities, both academically and socially. You can read in detail about these activities on the following pages.

Amongst other things we have visited lots of equipment manufactures in northern Jutland, during the NTHS congress visited numerous interesting companies in Norway, and hosted a company evening focusing on entrepreneurship.

In general Nul-Kryds have continued to work hard to maintain and further strengthen the good social and professional relations between maritime students on different levels at DTU. Apart from studying every kind of floating structure, we consider the good social relationships as one of the finest elements of the education as a maritime engineer at DTU.

Both the academic and social content of the study path are fine elements which we both need to continue to attract maritime students. After DTU Diplom have moved to Ballerup a couple of years ago students herefrom are a lot less exposed to the maritime courses, professors and events. This lack of exposure have lead to a decrease in bachelor of engineering students selecting the maritime study path.

Therefore I will also raise the flag and inform you that we need your ideas and collaboration in order to maintain the blue Denmark as an option for bachelor of engineering students.

We look forward to collaborating with you and your company in the year 2018.

If you have any ideas for events or want to contribute with content for some of those taking place each year, do not hesitate to contact us.

Happy New Year

Philip Holt

President of Nul-Kryds and NTHS 71

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2 Resume of the general assembly

The general assembly took place at DTU at the 14th of September with approximately 30 participants broadly representing bachelor, both engineering and science, local master students as well as Nordic masters and international students. A few former students were also present at the general assembly.

The past year was evaluated with satisfaction and a plan was made for the oncoming period, especially regrading NTHS which will be hosted by Nul-Kryds in week 9 in 2018, for further information regarding this, see section 12. Additionally to the elected board members described below, an election was held for members of the NTHS planning committee.

3 Board members

A very capable board was elected by the general assembly representing a good mixture of experienced and new highly motivated board members.

- **Philip Holt, President.**

Elected as president after two years as substitute and board member. Philip is on his first semester of the master in Naval Architecture, and has previously completed the practical part of the education as marine engineer.

- **Lina Christensen, Vice President.**

Reelected as Vice President. Lina is on her third semester of the master in Naval Architecture and will contribute to Nul-Kryds in the autumn and via Skype in the spring as she will perform an exchange at University College of London.

- **Anna K. Joensen, Treasurer.**

Elected as Treasurer after one year as 2nd substitute board member. Anna is on her first semester of the master in Naval Architecture.

- **Hans Frederik Wedel Schwarz, 1st ordinary board member.**

Newly elected as board member representing the mechanical bachelor of engineering students with a maritime specialisation. He is on his third semester and has previously sailed with Georg Stage.

- **Ondine Chegaray, 2nd ordinary board member.**

Newly elected as a board member. Ondine is on her third semester of the bachelor of science in mechanical engineering with a maritime specialisation.

- **Frederik Hammer Berthelsen, 1st substitute board member.**

Newly elected as a substitute board member. Frederik is on his fifth semester of the bachelor of science in mechanical engineering with a maritime specialisation.

- **Hedin Gunnarstein Poulsen, 2nd substitute board member.**

Newly elected as a substitute board member. Hedin is on his fifth semester of the bachelor of science in mechanical engineering with a maritime specialisation.



Figure 1: The board from left to right: Hans, Lina, Philip, Anna, Frederik, Ondine and Hedin.

4 Sauna evening

Inspired by our Finnish friends up north - thing got hot when Nul-Kryds invited all members for the new yearly tradition: Sauna evening.

The evening started out with everyone meeting up in the Nul-Kryds room with De Glade Sømænd. When the room got too crowded we moved to Diamanten to enjoy pizzas, beers, sodas and Minttu.

When everyone had eaten and the saunas were ready, we moved to the DTU gym to shower and get ready. We stayed in the sauna for a few hours, where Minttu and Snaps were provided. The party was made possible with a portable stereo which played a lot of De Glade Sømænd.

After the sauna, the party continued well into the night in S-Huset.

Nul-Kryds is very much looking forward to continuing this new tradition in the coming years, and plan to have a as successful evening again next time.

5 Jutland trip

At the end of February Nul-Kryds rented two mini-busses and a scout hut and went on a two day studytrip to Frederikshavn and Aalborg - with the hidden agenda of scouting for locations for NTHS 71 in 2018.

Naturally the crossing to Jutland was performed with Mols-Linjen and included a tour in the engine room as well as on the bridge. Inspecting the lightweight high speed catamaran in closer detail than as a regular passenger was interesting, as well as talking to the crew revealed interesting details about the operation of high speed not taught at DTU.

In Frederikshavn we visited MAN Diesel & Turbo and their 4-stroke testcenter, having a look at the 175D which were just about to go to the market at the time. On the quay-site we visited PrimeServ Academy with the full range of propulsion components on display offering nice access and good possibilities for discussion.

Furthermore we visited Ørskov Yard and had a magnificent and inspiring tour around the yard by the director herself. The story of Ørskov Yard greatly represents the story of many of the danish shipyards and getting a sense of the drive and spirit that is behind Ørskov was inspiring for every one of us.

In the evening the participants shared a nice spaghetti bolognese at the scout hut and gathered around the fireplace for some social games.

On the second day we visited the Naval Base in Frederikshavn, going onboard Esbern Snare where we had a great view into the world of gray ships and the possibilities for bachelors within the danish navy.

Lastly, on our way back the Århus and Mols-Linjen we visited the testcenter of Alfa Laval in Aalborg. This was a magnificent experience as the testcenter offers unique possibilities for access to engine room components that are otherwise so closely packed that giving a presentation around them can be challenging.



Figure 2: The scout hut - the only place where pictures were allowed.

6 NTHS 70

The 70th anniversary of the Nordens Tekniska Högskolors Skeppsbyggare Congress (NTHS) was held in Norway in March 2017. The well planned congress was hosted by 10 maritime engineering students from the Norwegian University of Science and Technology (NTNU). As always, the congress saw participation from five technical universities from the Nordic countries, apart from NTNU, students from the Technical University of Denmark (DTU), Aalto University in Finland, Chalmers and the Royal Institute of Technology (KTH) in Sweden participated bringing the total number of participants to 50.

From DTU, 10 students took part, both bachelor and master of science students (da: civilingeniørstuderende) and bachelor of engineering students (da: diplomingeniørstuderende) were part of the Danish delegation. The mixture of study tracks and wide variety in year of study is unique to the Danish delegation and the friendship between different lines of study are something that Nul-Kryds is very happy to support as it gives room to a lot of fruitful discussions, when multiple views and experiences come into play.

Being part of NTHS is always a great pleasure and is a guarantee of an interesting and challenging week with loads of company visits. Although we knew that the Norwegian delegation had been on top of the planning process of the congress through the entire year, we were still excited to see the Norwegian industry, which was strongly affected by the reduced oil-prices and had, as a consequence, downsized considerably. Throughout the five days and more than 15 company visits and presentations we were consistently surprised and intrigued by the companies ability to reinvent themselves, innovate and adapt to a rapidly changing market.



Figure 3: A brief introduction to fish farming before a tour to see the nets being repaired and produced.

Company presentations and visits included the production of coolers and compressors to the oil and now the fish-farming industry to thrusters, state-of the art diving vessels, a live demonstration of ship simulators using the newest technology available, and a full workshop hosted by the main sponsor, DNV-GL, about the visions for and role of the shipping industry in the coming years - and pretty much anything in between. As can be seen the congress was very diverse and was even more interesting because the company present covered the full range from small family-driven businesses to global giants, thus giving a very good idea about the diversity of the Norwegian maritime industry.



Figure 4: Some of the participants testing the simulator.

A full account of the five days is too comprehensive to be included here, but can be found in the NTHS2016 report available at Nul-Kryds website (www.nul-kryds.dk) or upon request (please send an email to nul-kryds@dtu.mek.dk).

Most lunches were kindly sponsored by participating companies and discussion about recent presentations, thoughts of whether that particular company could be a place to work in the future and expectations for the following visit was the most frequent topics of discussions. The evenings and dinners was thus reserved for social activities with a chance for the participants to get to know each other as friends and build on friendships from previous years, which is also a very important part of NTHS. The week was concluded with a banquet where this years participants met with previous years participants - the so-called oldtimers, for a night filled with fun and traditions.

This balance between social and academic activities worked very well and will definitely be copied by Nul-Kryds when we host NTHS in early spring 2018.

Lastly, a huge thank you to our sponsors who made it possible for us to go to NTHS on a student friendly budget. It is important to Nul-Kryds, that all students who see the value in taking out a week of the semester to visit the industry in the neighbouring countries apply to partake, without having to consider if they can afford the trip. This is only possible because of the support we receive from the Danish industry and we are very grateful for this!



Figure 5: All participants of NTHS70, the red flag of Nul-Kryds can be seen in the background.

7 70th Anniversary

At May 5th Nul-Kryds celebrated the 70th anniversary for the union. Everyone was therefore invited to a piece of cake and some cold drinks. The event was held as a reception starting at 1:00PM where people could just drop by and have a chat.

All the boxes with old pictures were dusted off and were shown on a projector to show the union through the ages. This was a a great way to put into perspective how old Nul-Kryds is and how many different members that have been in the union throughout the years. These pictures will definitely be shown again.

We can only say that we hope that Nul-Kryds will take another 70 years!



Figure 6: The cake for the 70th anniversary.

8 Martha evening

The much loved annual event at Nul-Kryds, Martha evening, was hosted again this year early in June. The board met early that day to prepare for the festivities. Martha evening was held in the garden between building 404 and 414, which was decorated with maritime flags hanging in the trees and from the roof. The tables were decorated with a general arrangement of S/S Martha as tablecloths. There was also a liferaft which was used as cooler for the drinks. The room chosen for showing the movie was also properly decorated.

When everyone had arrived, which was an impressive number of about 30 participants at the beginning of the evening, later 50, the movie S/S Martha was shown which involved plenty of singing and fun. According to the tradition O. P. Anderson snaps was available, as well as soda and beers. When the movie had come to an end, the festivities moved back to the garden, where the food was ready. The board had prepared pulled pork, coleslaw and buns which the participants could put together into a nice burger.

The festivities went on into the night, leaving people with opportunities to catch up with old friends and colleges and meet new friends. Other activities like anchor throwing were also practised through out the evening.

We look very much forward to hosting the next Martha evening and hope to repeat this years success. We have no doubts that it will provide an equally good atmosphere and hopefully help to strengthen the social environment on our line of education.



Figure 7: The participants watching S/S Martha.

9 Company evening

This year the company evening had the theme "Maritime start-ups". It was held by Nul-Kryds on October 4th 2017 in Building 402 at DTU from 5:30PM to 8:00PM. The company evening is an annual opportunity to meet the industry and hear about the latest news and technologies within the field. The companies attending the evening were:

- Harnvig Arctic and Marine
- Vessel Performance Solutions
- Cool4Sea

The first presentation was given by Klaus A. Harnvig Krone from Harnvig Arctic and Marine. They provide knowledge about the arctic to many different projects and companies and advise about arctic voyages and safety. He pointed out the importance of having a common thread and adhering to it.

The second presentation was given by Jakob Buus Petersen from Vessel Performance Solutions. They deliver vessel performance management to many different shipping companies. He talked about how they advise big companies and why they started the company.

After the first two presentations it was time for a break where sandwiches and refreshments were served. The break was of course used for some networking with the attending companies and between students, as the evening is also a good occasion to meet other maritime interested students.

The last presentation was given by Daniel Buhl Hansen from Cool4Sea. They provide cooling technology for all kinds of ships. He talked about the problems of a start-up when everything is completely new and how to overcome them.

The presentations invited to a range of questions from the students and gave them good first hand information about danish start-ups in the maritime industry. There was a keen interest in start-ups as it provides an opportunity to work more independently with own ideas and projects. The evening ended with networking where the students could get more detailed answers to their questions and have a little chat with the speakers.



Figure 8: The participants listening closely while enjoying cold drinks.

10 Christmas Lunch

On the 4th of November, Nul-Kryds had the annual Christmas lunch. The greatest party of the year and a good chance for new members and old members to get to know each other and have a great time together. The party started at 4:00PM and 41 Nul-Kryds members attended. Almost half of the participants were old timers and they could tell many anecdotes which is always fun.

The party started as always with a warm welcome with the members eating "æbleskiver", drinking gløgg, beer and having a good talk. The event took place at "Saxen" which is the bar for the dorm called Kampsax at DTU.

After eating "æbleskiver" it was then time for some great food. At 7:00PM there was served the great danish Christmas lunch, including roast pork with potatoes and sauce, hot "leverpostej", herring, meatballs, eggs and salmon. Meanwhile eating the great food there were many great snaps taken and the atmosphere was great.

When the belly was full of food, it was time for "Risalamande". Normally the whole almond would be found by a lucky one, but this time we did not find it. But later on that night, one famous Indian guy had hidden it, because he did not want the almond prize. The gift was as always an O.P Anderson snaps bottle.

The party carried out until the morning. The last people left at approximately 4:00AM. Everyone had fun at the party and everyone got enough food and drinks. There was even food for the cleaning team the following day.

The great thing about the Christmas party is the atmosphere. This is the party which everyone is looking forward to. We therefore look forward to the Christmas lunch next year where we hope to see as many old-timers and newcomers.



Figure 9: The participants having a good time in Saxen.

11 Work at DTU during 2017

Throughout the year the Nul-Kryds board meets two-three times a month. It is during these meetings that we plan who is responsible for what when we organise events, but a lot of the time is also spend talking about what it is like to be a maritime student at DTU, discuss if any new suggestions has come in and brainstorm on events we would like to host in the future.

In 2017 Nul-Kryds has hosted a number of events, most of those are described in this annual report. Apart from these bigger events Nul-Kryds are present at DTU through-out the year and continues to visit lectures to talk about the maritime courses at DTU and type of jobs an engineer with a specialisation in maritime industry could have in Denmark. Through conversations with students and the lecturers at maritime DTU we have started visiting lectures for mechanical engineering students already at their first semester. This was done to increase awareness of the maritime courses that has seen a drop in students over the last couple of years. We were happy to meet the new engineering students and answer their questions, and especially happy that some of them were already interested in the maritime study track and more of them asked where they could get more information to stay up-to-date.

We continue to work closely with both the lecturers at the section for Fluid Mechanics, Coastal and Maritime Engineering (da: FVM) as well as the center for maritime engineering at DTU. In Nul-Kryds, we are very happy for this collaboration and for a chance to present students view on the available courses and academic activities for maritime students at DTU.

Nul-Kryds has had increased focus on the IDA Maritime events that has taken place about every third week, and we are working on bringing them to attention of more students, this has been done by creating our own events and thereby implementing it as a thing Nul-Kryds members can do together. Students who participate express their excitement about the talks and it leads to good discussions about how a theoretical concept can be used in practice. The main issue in bringing more students to the events, is the location and timing of the events that means that students will have to leave class very early, something that most DTU students are reluctant to do. This is an issue we cannot resolve, but we are working on bringing the events to the attention of students who do not have class at that time.

The building 402, where Nul-Kryds has its office has been under renovation for the first part of 2017 and Nul-Kryds had its office in a small storage room which, to be honest, did have its charm. However we are very happy to have moved back into our newly renovated office, where there is room for the entire board when we have meetings. Moving back also means that we are again visible to the students - ours is the only door covered in naval charts.

12 Plans for 2018

In 2018 Nul-Kryds are hosting the 71th NTHS congress for Nordic naval architecture students in week 9. This of course takes up quite a lot of resources as the planning is running in top gear, but have paid of as a very nice program, presenting every element of the danish maritime industry, have taken shape:

We will start in Northern Jutland visiting equipment manufactures and yards. Hereafter the congress continues to Esbjerg where we will visit a wind turbine installation vessel and life saving equipment manufacturers. The last two days will be spent visiting shipowners and vessels in Copenhagen, having presentations from design offices and many more.

Having completed the congress with success, hopefully, we are planning to do a study trip to northern Germany to include the members of Nul-Kryds not participating in NTHS and visit Scandlines hybrid ferries and the restructured yards.

Naturally the yearly events such as the sauna and Martha evening as well as the Christmas lunch will take place as well.

Towards the end of 2018 Nul-Kryds is planning an international study trip to Shanghai in cooperation with DTU-MEK, hopefully with 25 participating students, during the autumn break. Something that we look very much forward to, as it really contributes to the good social relationship in the union.

Finally, we will do our best to increase the knowledge about the blue Denmark amongst bachelor of engineering students.

13 Sponsors

