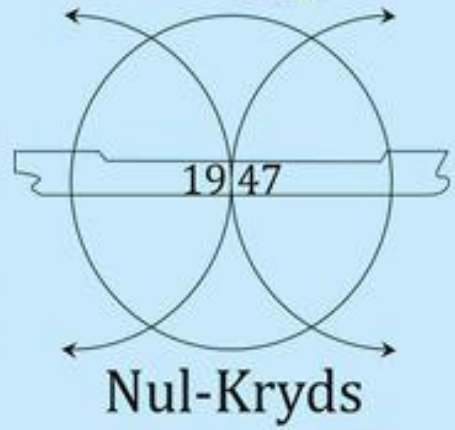
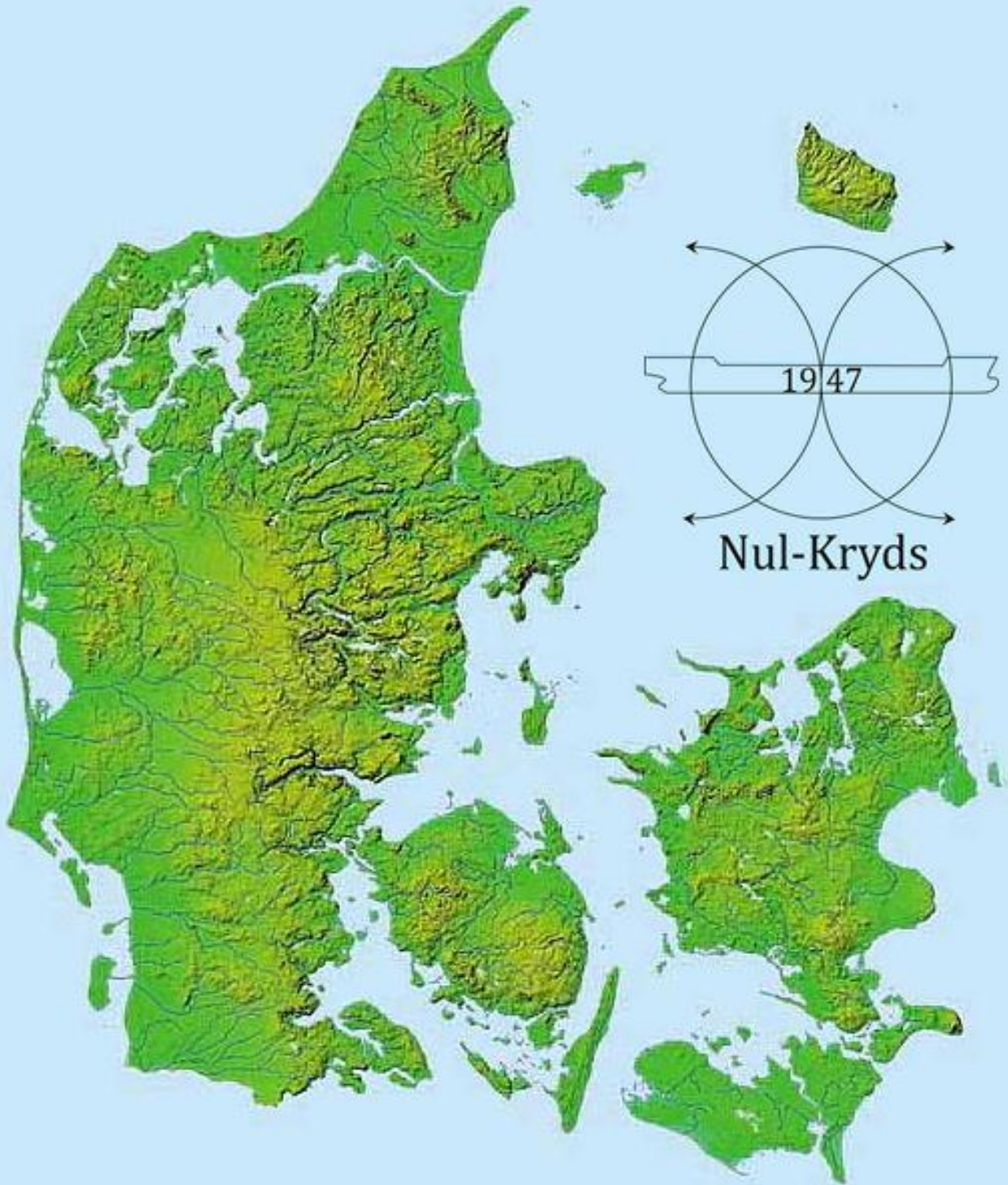


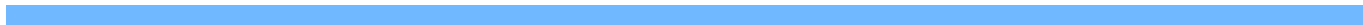
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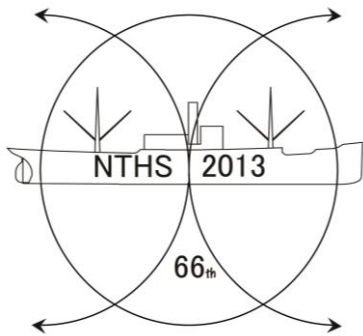
66th NTHS

2013 Denmark



Nul-Kryds





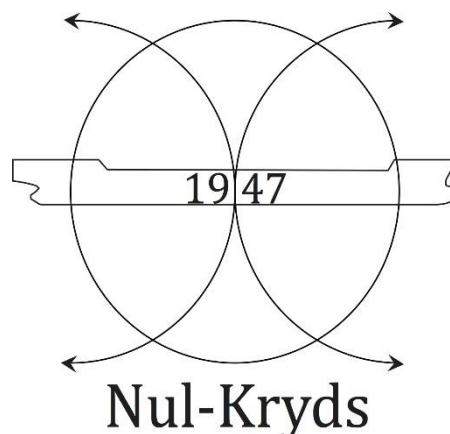
## >>> Word from President

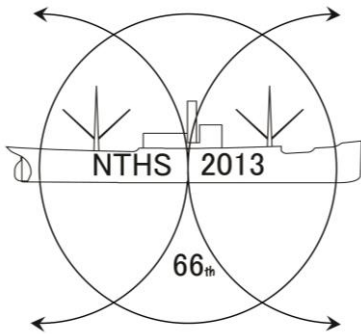
I was so lucky to become the president of this year's NTHS congress. It has been a privilege to continue this great Nordic shipbuilder tradition. This was my fourth NTHS congress and it was of course very different compared to the other congresses I have been on were all I had to do was to follow the guidance of the hosting delegation and enjoy a number of great company presentations and social events.

This year Nul-Kryds was hosting the congress here in Denmark and we had the responsibility to make a great congress in cooperation with the Danish maritime industry. It took some time but we ended up with a great congress and I would like to thanks all of the participating companies but also all of our silent sponsors and the foundations supporting this Nordic tradition.

Based on the feedback from the other delegations I am sure that Denmark made a strong impression and made them aware of the possibilities there are for maritime engineers here in Denmark. For that I would like, once again, to thank the Danish maritime industry for their support and I hope we will be able to make just as successful congress in five years' time when the congress returns to Denmark.

Yours truly,  
**Thor Andersen**  
NTHS & Nul-Kryds President



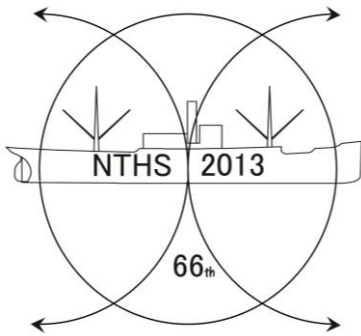


## Content

- Word from President ..... 2
- Content ..... 3
- Regulations ..... 5
- Schedule of the week ..... 6
- Participants ..... 7
  - Nul-Kryds (Copenhagen) ..... 7
  - Laivanrakentajain Kerho (Helsinki) ..... 7
  - Mannhullet (Trondheim) ..... 7
  - Kungliga Skeppsällskapet (Stockholm) ..... 7
  - Chalmers Skeppsbyggare (Gothenburg) ..... 7
- Sunday 14<sup>th</sup> April 2013 ..... 8
- Monday 15<sup>th</sup> April 2013 ..... 9
  - Karstensens Skibsværft ..... 9
  - MAN Diesel SE & Turbo in Frederikshavn ..... 10
- Tuesday 16<sup>th</sup> April 2013 ..... 13
  - Viking life-saving equipment ..... 13
  - OMT (Odense Maritime Technology) ..... 14
- Wednesday 17<sup>th</sup> April 2013 ..... 16
  - OSK-ShipTech ..... 17
- Thursday 18<sup>th</sup> April 2013 ..... 18
  - MAN Diesel SE & Turbo in Copenhagen ..... 18
  - DFDS Seaways ..... 19
- Friday 19<sup>th</sup> April 2013 ..... 21
  - Force Technology ..... 21

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- DTU and Maersk Maritime Technology ..... 23
- The banquet ..... 23
- Nul-Kryds ..... 24
- Concluding remarks ..... 25
- Other sponsors ..... 26



## Regulations

§1 The name of the association is "NORDENS TEKNISKA HÖGSKOLORS SKEPPSBYGGARE".

§2 The members of the association are composed of students from the following universities:

- Danmarks Tekniske Universitet (DTU), Copenhagen
- Chalmers Tekniska Högskola (CTH), Gothenburg
- Kungliga Tekniska Högskolan (KTH), Stockholm
- Norges Teknisk-Naturvitenskapelige Universitet (NTNU), Trondheim
- Aalto University, The School of Engineering (Alto), Helsinki

§3 The purpose of the association is to improve the contacts between the members and to act as a provider of knowledge in ship building in the Nordic countries.

§4 The board of the association consists of 10 members. Two from each delegation, chosen by student unions.

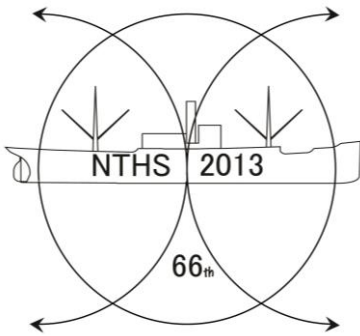
§5 The congress

- I Every year a congress is to be arranged in one of the four Nordic countries. Each university hosts the congress every fifth year.
- II Each university is allowed a delegation of ten participants. The host university may allow more participants if desired.
- III The congress must comprise of:
  - Presentations followed by discussion and excursions to laboratories, shipyards and other industrial enterprises.
  - A board meeting with the board and the next chairmen from each university.  
The following issues will be on the agenda:
    - \* Determination of time and place for the next congress.
    - \* Probable changes in the rules.
- IV Invitations must be sent no later than two months prior to the congress. A preliminary schedule should be attached.

§6 The official language of the congress is English.

§7 A member fee cannot be demanded. To cover costs for the congress it is however possible to collect a participant fee. The association may not take on economic responsibility.

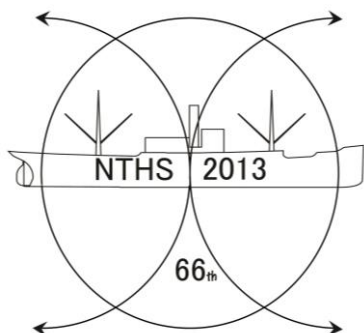
§8 When electing a new chairman at one of the universities the other universities should be informed as soon as possible. The latter also applies for changes in names, addresses and/or telephone numbers.



## ➤➤➤ Schedule of the week

The companies visited during the week is listed below, along with the corresponding evening activity

Date	Before Noon	Afternoon	Evening
April 14, Sunday	—	—	Information & Dinner in Aalborg
April 15, Monday	<b>Karstensens Skibsværft</b> in Skagen	<b>MAN Diesel &amp; Turbo</b> in Frederikshavn	Transit to Esbjerg (visit Himmelbjerget)
April 16, Tuesday	<b>Viking Life-Saving Equipment</b> in Esbjerg	<b>Odense Maritime Technology</b> in Odense	Anecdote Evening in Odense
April 17, Wednesday	<b>Carlsberg</b> in Copenhagen	<b>DSK-ShipTech</b> in Copenhagen	Social gathering in Copenhagen
April 18, Thursday	<b>MAN Diesel &amp; Turbo</b> in Copenhagen	<b>DFDS</b> in Nordhavn, Copenhagen	Dinner at the Danish Ship Owners Association
April 19, Friday	<b>Force Technology</b> in Kgs. Lyngby	<b>Technical University of Denmark (DTU)</b> Company Presentations	<b>Banquet</b> at Copenhagen Admiral Hotel
April 20, Saturday	End of Congress!		



## >> Participants

### >> Nul-Kryds (Copenhagen)

Thor Peter Andersen
Lasse Normann de Boer
Sune Thonesen
Christian Simon Nielsen
Thit Brask Sonne
Niclas Niclasen
Drude Hundevadt
Aleksander Hamdan
Hongran Li
Martin Sommer
Pablo E. de Pablo
Jonas Ertmann Hansen

### >> Mannhullet (Trondheim)

Karoline Jespersen
Nikolas Svoren
Heine Grøtting
Tarjei Jordal Hanto
Elizabeth Sævik
Anders Salberg Strand
Jørgen Rønholt
Daniel Frøland Svoren
Jostein Opsahl
André Roaldsen Skadberg
Risholm

### >> Laivanrakentajain Kerho (Helsinki)

Miia Puranen
Markus Tompuri
Visa Kauntola
Jyry Henry Albin Saario
Sami Nyysönen
Jani Henry Viljami Kuniala
Mira Katariina Honkanen
Victor Grönroos
Markus Lauri Mäkinen
Martin Jögeva

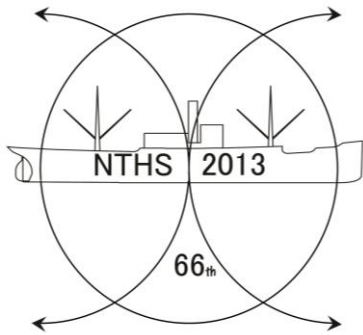
### >> Chalmers Skeppsbyggare (Gothenburg)

Steffen Hormel
Erik Larsson
Fredrik Olsson
Ulrikke Brandt
Hale Saglam
Viktor
Dominik Büchel
Gustav Moe
Johan Andersen
Axel Gühren

### >> Kungliga Skeppsällskapet (Stockholm)

Patrick Ringman
Axel Berggren
Marcus Eriksson
Jonas Johansson
Ebba Lindh
Hampus Lake
Nathaniel Holmgren Frithiof
Karin Sundberg
Molly Ericson
Naem Ibne Rahman





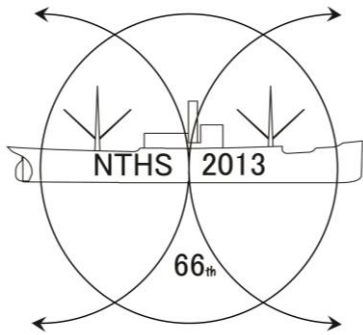
➤➤ Sunday 14<sup>th</sup> April 2013

The conference did not start until Monday, but all delegations met in Aalborg already on Sunday. The Nul-Kryds delegation started the week-long bus trip from DTU, arriving in Aalborg Sunday afternoon.

Upon arrival in Aalborg, Nul-Kryds was greeted by the Finnish members of LRK. The first evening was spent at a café, the meeting point with all the other delegations and a first welcome with a simple dinner and a beer. The delegations came one after each other and this made it easier to meet the new people and salute the old friends. There was lots of new names to remember, and in order to make it easier, the first dinner was held sitting in small groups. The first jokes and laughs come before the introducing presentation was started.



The president of NTHS and Nul-Kryds handed out the conference life saver and gave some other information, as well as the official T-shirts. Then all the delegations was presented, while finishing the dinner. Later on, the bus headed out for Skagen, where the first night was spend. With fifty-two participants assembled, the conference was really starting.



Monday 15<sup>th</sup> April 2013

### Karstensens Skibsværft

The delegation woke up early, to enjoy a solid breakfast and a short walk in the cozy surroundings in Skagen. The walk took us to Karstensens Skibsværft, and upon arrival Tage Riishøj, Director of Karstensens, gave a presentation on the history of the shipyard and on the design of state of the art fishing vessels.

After the presentation we were on a tour of the shipyard and were able to see ships in different stages of construction, and had an extensive tour of a vessel only weeks from delivery. All in all an interesting visit to the largest new-building shipyard in Denmark. The visit at Karstensens Skibsværft left us with the impression that there is hope for the shipbuilding industry in Denmark.

The delegation left Karstensens and continued to Grenen where we went for a drive with Sandormen, a local attraction, while eating sandwiches for lunch, sponsored by Karstensens. Sandormen is a tractor with a trailer that transports passengers out to Grenen, the northern tip of Denmark. The short sight-seeing stop at Grenen was a great stop in beautiful surroundings and an opportunity to take a group photo with an impressive background.

KARSTENSENS SKIBSVÆRFT A/S





### ➤➤ MAN Diesel SE & Turbo in Frederikshavn

Next stop was MAN Diesel & Turbo, Frederikshavn, where we were welcomed with refreshments by Senior Manager Torben Johansen. MAN Frederikshavn had a couple of interesting presentations in store for us. The presentations shortly outlined the work of the different departments in Frederikshavn, describing the Kappel propellers used in MAN's propeller blade design, and the strength and fatigue analysis done for propellers. Just as the second presentation finished we were interrupted by the launching of a fishing boat, just outside the window. This was decided to be a perfect time for a short break, and the participants watched the launching while enjoying a cup of coffee. After the break we proceeded with the third presentation concerning the design of complete propulsion systems, as opposed to only looking at the propellers.

When all of the presentations were finished we had a tour of the facilities and got an opportunity to see where the production of propellers and other large engine parts were manufactured until a few years ago. We also got to see the storage grounds and many of us were very keen and interested in seeing the large propeller blades.

During the visit, MAN Frederikshavn was able to demonstrate interesting job opportunities for us and overall we had a technically interesting and educational visit.

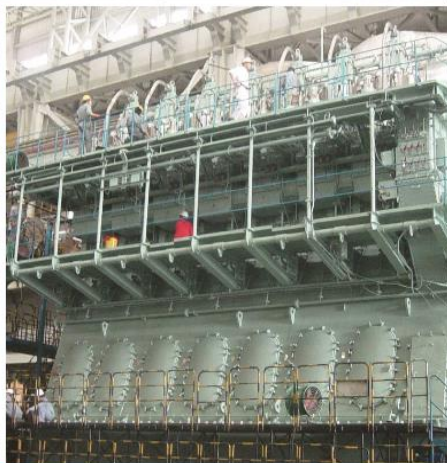


We left MAN Frederikshavn in high spirits and started our trip to Esbjerg, where we had a company visit the following morning. As the drive was a bit long and we would arrive in Esbjerg late in the evening, the Danish delegation had arranged for a dinner at Hotel Himmelbjerget. Unfortunately it was already getting dark and we therefore did not have the opportunity to fully enjoy the view, but the dinner was very good, and greatly appreciated. After the delicious dinner we continued to our destination in Esbjerg .

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**VIKING LIFE-SAVING EQUIPMENT**  
*- Protecting people and business*



## MAN Diesel & Turbo søger specialister på et højt fagligt niveau

Kan du se din fremtid i en global virksomhed med et fagligt niveau i verdensklasse?

Vil du være med til at udvikle den nyeste teknologi til totakt dieselmotorer?

Så er det nu du skal gå ombord hos MAN Diesel & Turbo.

Vi går forrest med miljøvenlige teknologier og er førende på markedet inden for totakt dieselmotorer, og vi har de mest avancerede arbejdsværktøjer til at understøtte udviklingen.

Hos os er der højt til loftet og masser af højt fagligt kvalificerede kollegaer, som vidensdeler og arbejder på tværs af afdelingerne for at løse vores projekter.

Lige nu søger vi både nyuddannede og erfarne ingeniører fra forskellige faglige retninger.

Se vores ledige stillinger i København, Holeby og Frederikshavn på [www.mandieselturbo.com/career](http://www.mandieselturbo.com/career)

Vi har et hav af dygtige kollegaer, som ser frem til at arbejde sammen med dig.

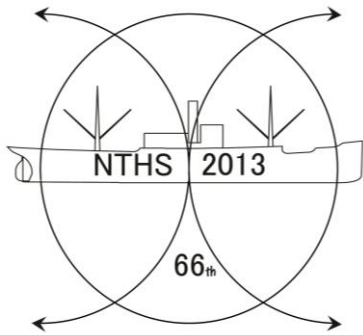


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Engineering the Future – since 1758.

**MAN Diesel & Turbo**





➤➤ Tuesday 16<sup>th</sup> April 2013

### ➤➤ Viking life-saving equipment

The first visit Tuesday is Viking Life-saving Equipment. We started by visiting their test/development center, located on the harbor in Esbjerg. Here, we got an informative lecture on the types of rescue equipment they have helped to create and how it all started. They really got into business after the Estonia accident, and now they have developed a life raft that can get people off the ship and down to the life raft without people having to use ladders, you can just slide down in a tube.

A short walk down to the harbor, allowed us to see a demonstration of a life raft thrown into the water from 10m height. It went straight in to the water, and started inflating as soon as the trigger rope was pulled. It was impressive how fast a large life raft could be blown up to full size. We were allowed to come into the life raft and you got the feeling that 101 persons, which this life raft was made for, do not have that much space. With about 40 down there at the same time, it did not seem like there could be twice as many inside it.



Afterwards, we went to their factory where they build and make all their special type life rafts. We got a quick lecture on how many people were employed and what else they made in the factory. Then we got a tour of the factory where we got a glimpse of how they are doing everything from life jackets to life rafts. It was impressive to see how much of the assembly of the life rafts were made by hand, right here in Denmark.

## ➤➤ OMT (Odense Maritime Technology)

After the thrilling experience of boarding a safety raft, we had a quiet and pleasant bus ride to Odense where we were greeted by Odense Maritime Technology in their beautiful new head office by the Odense docks. After a short introduction, we were encouraged to walk around and meet the employees of the company and ask them about their work. This was a very interesting way to learn about OMT and their current projects, but also the general work of a naval architect.

We were then given two presentations. The first described their in-house developed software package Smart3D, which acts both as a sort of design manager which ensures better communication between different design departments, updates SAP and so on, but also as a CAD/CAM tool. It is the vision of OMT that 2D drawings will be outpaced and virtual 3D models will take over instead.

The last presentation was a cost benefit analysis on whether to use one or two propellers on large container vessels. OMT has designed an 18.000 TEU container vessel and compared it to the Maersk Triple-E class. Through a very thorough investigation, the conclusion was that the payback time for installing the more fuel efficient two-propeller solution was 6.5 years which was considered too long for the present charter market. The OMT solution therefore only has one propeller. Maersk Line is on the other hand more willing to invest since they will most likely keep the vessels for a very long time. Therefore the Triple-E class has two propellers.

After the company visit, we went to Café Kræz in the Odense city center, where the annual NTHS anecdote evening was held. Each delegation had prepared a small story or event based on a theme given out by the hosts. The anecdotes were then presented in more or less impressive and professional manners. It was truly a pleasure to socialize with such a large amount of Scandinavian students with the same interest and career choice as ours.



**Odense Maritime Technology**  
Innovation. Expertise. Experience

## Odense Maritime Technology – global marine solutions

OMT's services provide global, cost-effective and environmentally friendly, state-of-the-art technologies, know-how and products for the maritime industry.

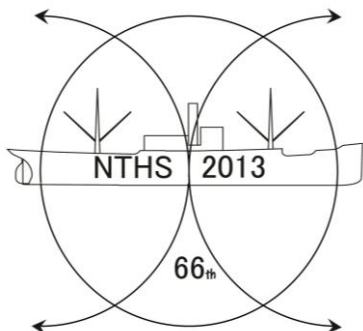
Our solutions are based on new technology, innovation, energy efficiency and improved environmental performance. The result is proven quality, reliability and operational performance.

OMT's cutting edge ship design and products traces its heritage back to 1917, when Odense Steel Shipyard was founded by A.P. Møller in Odense, Denmark.

OMT approaches each project with unique end-to-end value chain capabilities and disciplines working together with clients to achieve their specific needs and desired results.







Wednesday 17<sup>th</sup> April 2013

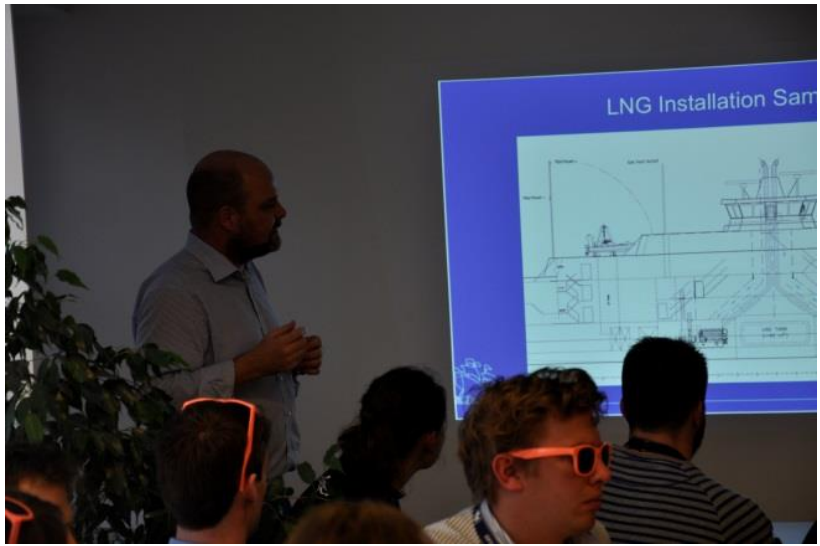
We started out with a bus ride from Odense to Copenhagen. During this trip we of course crossed the great belt bridge; luckily the weather was clear and sunny, unlike when we crossed it Sunday morning. Most of the participants were quite impressed by the tallest construction in Denmark, even though the Finnish delegation would have liked it to be even higher above the water for their cruise liners to cross beneath it.

Unfortunately a late cancellation in the program, we had some free time to kill before visiting OSK-ShipTech in Østerbro. We had decided, earlier on, to visit another great Danish company known worldwide, and in particular to students throughout Scandinavia; Carlsberg. So we had a sunny guided tour of the old production facilities and a small taste session afterwards, before heading for OSK-ShipTech.

		<p>OSK-ShipTech A/S provides all-round consultancy assistance to the maritime sector including design development, preparation of specifications and building supervision of ships and crafts of all types.</p> <p>In addition, OSK-ShipTech A/S carries out maritime development and transport studies for international agencies and national governments.</p> <p>OSK-ShipTech A/S and OSK-Offshore A/S are important contributors to the offshore industry, focussing primarily on design and modification of heavy-lift/jack-up vessels for the transport of wind turbines to their sites at sea as well as site assessment.</p> <p>An important aspect of OSK-ShipTech A/S tasks is assistance to ship-owners, who wish to optimize their vessels with regard to hull form, sailing profile and engine constellation in order to achieve fuel savings and reduce NOx, SOx, and CO<sub>2</sub> emissions.</p> <p>OSK-ShipTech A/S works to reduce the detrimental effects on the environment caused by ships and to improve safety and health for crews on board by keeping up to date on current and coming regulations and environmental requirements.</p>
		
<b>AARHUS</b>		<b>COPENHAGEN</b>
Balticagade 15 - 2 DK - 8000 Aarhus C	<a href="mailto:mail@osk-shiptech.com">mail@osk-shiptech.com</a>  <a href="http://www.osk-shiptech.com">www.osk-shiptech.com</a>	Bryggevangen 55, 1. tv DK - 2100 Copenhagen OE

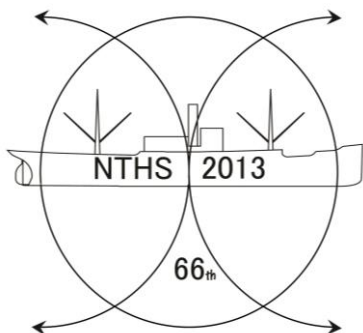
## ➤➤ DSK-ShipTech

At DSK-ShipTech's office the managing director, Anders Ørgård Hansen, was ready to meet us with sandwiches for lunch and a great presentation of the company and the type of challenges a maritime engineer would be facing working there. He explained a little about their main areas of expertise, design development of ferries, offshore support and installation vessels for the offshore wind industry. He also briefly described their role as project managers on some projects such as retrofitting and repair work.



The presentation was, however, only a small part of our visit at DSK-ShipTech. Anders had prepared a design challenge! We were challenged to design a vessel out of maximum one piece of A4 paper, a box of matches and a roll of tape. It was not about building the largest vessel with the largest cargo capacity, it was about being spot on with the calculations. We had to predict the cargo capacity of the vessel based on some bolts for cargo. The team with the most accurate guess was the winner. The vessels were tested in a small water basin one by one, as seen on the picture. The winner had designed a small craft with a calculated capacity of 50g and with a test capacity of 51g, which was perfect. Unfortunately the winning vessel was not caught on film as our photographer was way too engulfed in the competition at that point.

We end our Wednesday by eating a true Danish dish for dinner, "Smørstegt rødspætte med hvide kartofler, smørsauce og remoulade", at Café Peterborg where Anders Ørgård joined us. The dinner was followed by a walk at the Copenhagen harbor front with a view of the opera before splitting up for the night.



Thursday 18<sup>th</sup> April 2013

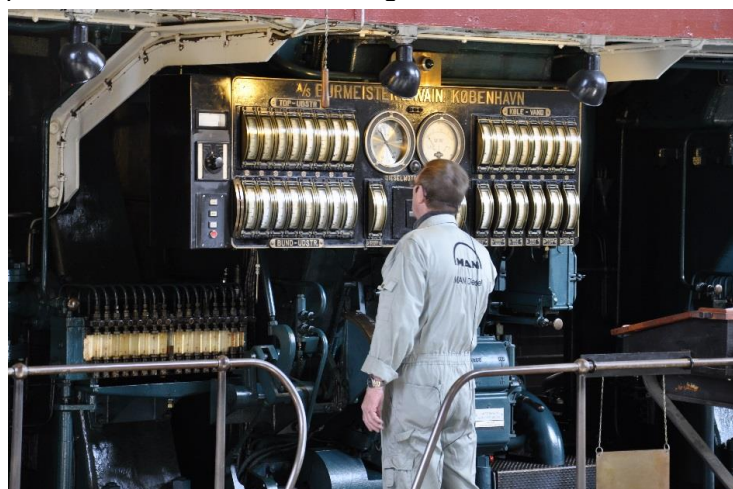
## MAN Diesel SE & Turbo in Copenhagen

Thursday morning we went to visit MAN Diesel in Copenhagen. The visit started at Diesel House in Sydhavnen. We enjoyed a bit of Danish and coffee as we were split up into two groups. One group stayed at Diesel House, while the other was transported to the production facilities of MAN Diesel. Afterwards the two groups swapped in order to do both tours.

Before 2005 Diesel House was an official part of H.C. Ørsted power plant as it holds a diesel engine made in 1932. This engine proceeded to be the largest diesel engine for the next 30 years. It is now a museum facility, exhibiting the history and development of the diesel engine. We had a guided tour around the museum, during which we started out by seeing the first diesel engine sold by B&W (MAN Diesel) and ended up at the design of modern engines, which now have a simple design, not unlike that of the very first engines. As computer modelling has become more and more efficient, the most efficient designs have proven to be the simpler ones. During the tour we saw models of more complicated engines, such as an engine with two pistons in one cylinder, acting on both sides.

When arriving at the production facilities we got a small presentation of the newly built training facilities, PrimeServ Academy. It is intended for the education of MAN employees as well as costumers, and is used mostly by marine engineers. This was followed by a walk through the production halls, where we could e.g. follow how a valve is strengthened so it does not break down when used in the big two stroke diesel engine designed by MAN Diesel.

During the lunch, the crew of Diesel House were so kind as to initiate the large double acting diesel engine in Diesel House, letting all attendees observe the power of a 32000 BHP diesel engine.



## ➤➤ DFDS Seaways

After a short bus trip, we stopped at the DFDS terminal to go on board the ferry Crown Seaways, where the representative from DFDS gave a presentation of DFDS and then divided us into groups. The participants were divided into groups, so we could be in the different rooms of the ship, when we had the tour of the ship. The tour went past the three main areas when on a ferry; the engine room, the galley and the bridge. In all places the crew was patiently answering all the weird questions from us inquisitive engineering students.



After the tour around the ship a further presentation of DFDS and the project they are doing and have done recently were presented. One of the projects was about adding a scrubber on a ship currently in use, and difficulties there can be, retrofitting a scrubber. Many ships will soon undergo a retrofitting due to the new IMO criteria about emissions from 2015 (Tier III), and DFDS has now gained experience with retrofitting a scrubber.

After the visit at DFDS we went to our new hostel to change clothes as the Danish Shipowners' Association had invited us for a nice dinner. The Senior Consultant in Danish Shipowners' Association, Hans Otto Kristensen, welcomed us all and gave a short presentation about the Danish Ship owners association and EEDI. During and after the dinner there were a lot of discussions about the future for ships owners and the EEDI criteria, especially for RO-RO ships.



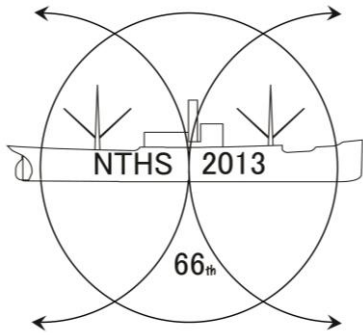
**DFDS IS NORTHERN EUROPE'S LARGEST INTEGRATED  
SHIPPING AND LOGISTICS COMPANY**

**DFDS SEAWAYS' NETWORK OF 30 ROUTES IS OPERATED  
BY 50 FREIGHT AND PASSENGER SHIPS**

**DFDS HAS 5,900 EMPLOYEES IN 20 COUNTRIES WITH  
REVENUES OF DKK 12BN. THE COMPANY WAS  
FOUNDED IN 1866, IS HEADQUARTERED  
IN COPENHAGEN**

**DFDS IS PROUD TO BE A SPONSOR OF NTHS 2013**





➤➤ Friday 19<sup>th</sup> April 2013

## ➤➤ Force Technology

The day started with a short bus ride from the hostel in the center of Copenhagen to Force Technology in Kgs. Lyngby. Upon arrival all the participants were seated in the canteen and a delicious brunch buffet was served.

During the brunch session Christian Klimt-Møllenbach, Project Manager, gave an interesting presentation about some of the recent projects at the Division for Maritime Industry. Among the topics touched upon, were a bulb retro-fitting project carried out for the Danish ship-owner Clipper. A new bulbous bow design for the G-Class vessels showed a potential for a substantial fuel saving, when the vessel is operated at lower speeds. Christian pointed out that the 'old' bulb design is not bad, but it is optimized perfectly for a single speed and draught. As vessels in general are operated at lower speeds due to the high fuel costs, it becomes economically viable to change the bulb design to be more optimal for the new operating conditions.

# Ship Performance



FORCE Technology provides a full range of design services and onboard tools for optimizing ship performance in a seaway.

The design services and the onboard tools can be used for both existing vessel evaluation and newbuilding evaluation.

### Ship design

Utilizing our advanced ship design tools, we assist the owner in minimizing fuel consumption of newbuildings or conversions. Our approach includes realistic variation in loading conditions and speeds analyzed through extensive route simulations in real-life wave and wind environments.

### Onboard tools

For the ship in operation, a full range of decision-support tools is available, including our hull performance monitoring tool **SeaTrend**, our weather routing tool **SeaPlanner** and our optimum trim tool **SeaTrim**.



In connection with the retrofit project Christian Klimt-Møllenbach also talked about a novel hull optimization procedure. Using a software package called FriendShip Framework – so-called *parametric hull design* can be carried out. The process involves defining a certain allowable range for a number of parameters defining the hull shape. The software then generates a large number of different hull-shapes within these limits. Then CFD calculations are carried out to determine the resistance of each hull design. The results provide an indication of the influence of the various parameters and finally an optimal design for the given conditions.

After the presentation the delegation members were divided into three groups for a tour around the facilities, which comprised:

- ⊗ A 250 m long towing tank for carrying out model tests of ships and off-shore structures
- ⊗ Work-shop where the wooden ship models are produced. The models are made by gluing layers of plywood together to form the rough outer shell of the ship. The draft model is then precision-milled according to a 3D hull model to produce an exact scale copy of the vessel to be tested.
- ⊗ 5 wind tunnels of various dimensions well-suited for experimental investigations of buildings, bridges and of course ships and off-shore structures. One wind tunnel can even simulate rain and over-icing.
- ⊗ Several full-mission ship simulators having a 360 degree projection. The simulators are used for training purposes and many engineers are employed to develop the underlying mathematical models.

After the tour the delegation members were invited out in the fresh air for a classic beer relay-race, which rounded off a very interesting visit at Force Technology.



# MAERSK

## >> DTU and Maersk Maritime Technology

Lunch was provided by the Technical University of Denmark (DTU) in the main campus canteen. After lunch a short walk took all delegation members to an auditorium, where Associate Professor Poul Andersen gave a presentation about DTU in general and the maritime education in particular. He also presented the Nordic Master in Maritime Engineering – a joint master program offered in cooperation between the same universities represented by the participants; Aalto, Chalmers, NTNU, KTH and DTU.

After a short break it was time for the last, but not least, of a lot of interesting presentations during the week. The presenter was Lead Naval Architect Kim Henriksen from Maersk Maritime Technology. Among the topics were the recent 'nose-job', which has received a lot of attention in the media. The comical nick name refers to the change of the entire bulbous bow on the Boston class of container vessels owned and operated by Maersk Line. As it was presented earlier at Force Technology it was found that a substantial fuel saving could be realized with the lower resistance resulting from the updated design. The return of investment of the project is thus apparently very low – in the order of a few months.

Kim Henriksen also explained in general about the vessel performance monitoring system applied by Maersk Maritime Technology in order to keep a keen eye on the performance of the fleet at all times. In the system a range of parameters describing the current state of each vessel are reported on a daily basis. The information can be used for a great number of applications; for instance to identify the optimal point to perform hull and propeller cleaning.

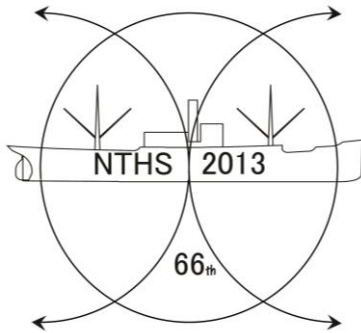
After the last presentation the bus took everybody back to the hostel in order to get a short rest and prepare for the evenings banquet.



## >> The banquet

This year's banquet was held at Copenhagen Admiral Hotel, located with the facade right out towards Admiral Kaj. Around 19.00 everybody met in the foyer for a welcome drink and a chat with the invited female guests and "old-timers" from earlier NTHS congresses. When everybody had arrived, people found their seats and a nice evening with delicate food and wine and all the traditional festive touches took place in good order. After the dinner all guests were asked to relocate to the pier outside the hotel, from where a canal tours boat took everyone across the harbor. On the other side the old great belt ferry M/F William Jørgensen waited with a fantastic live band to entertain the company for the remainder of the night.





>>> Nul-Kryds

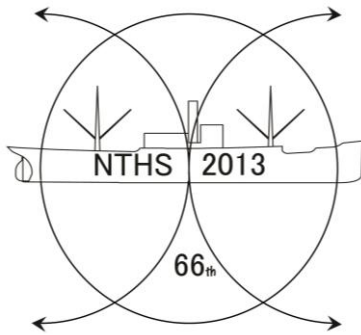
Nul-Kryds is a student union for students of maritime engineering located at DTU. Our main goals are to establish a social and professional environment between the maritime engineering students at DTU, the rest of our Nordic colleagues and the Danish maritime industry. We do so by hosting a variety of different events, such as company presentations at DTU, company visits, social events and parties and of course participate in the yearly NTHS congress. Nul-Kryds is a relatively small student union, but it is a union with a great history, 65 years of history, strong traditions and a lot of contact to the maritime industry. In Nul-Kryds we focus on keeping a strong connection with both the department of mechanical engineering and the industry to ensure that we can give our members the most interesting projects or internships. We have participated in recruiting new maritime engineering students throughout the last couple of years in cooperation with the Danish Shipowners' Association through the campaign "World Carrier".

Nul-Kryds is always interested in getting new relations, so please do not hesitate to contact us if you are interested in meeting the maritime engineering students of DTU or have some interesting project proposals.

The core of Nul-Kryds is the board consisting of five members and two substitute members. There is roughly 30 active members of Nul-Kryds and 15 active alumni members, joining us for our yearly Christmas and summer parties. The amount of active members is varying a lot, but is rising at the moment.

Below the names and contact information of the board is found.

President: Thor Andersen	Email: Thor@nul-kryds.dk
V. President: Lasse de Boer	Email: Lasse@nul-kryds.dk
Treasurer: Sune Thonesen	Email: Sune@nul-kryds.dk
Member: Drude Hundevadt	Email: Drude@nul-kryds.dk
Member: Niclas Niclasen	Email: Niclas@nul-kryds.dk



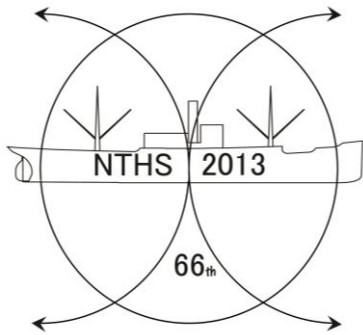
## >>> Concluding remarks

We in Nul-Kryds are very pleased with this year's NTHS congress. We reached our main goal, to present the adverse maritime industry in Denmark and Denmark in general. There are of course always things that could have been done differently and we could easily have used the double amount of time both with the companies we visited but also to visit even more companies. We focused on showing of the maritime industry throughout all of Denmark, which was the reason for us to start out in Skagen and ending up in Copenhagen.

We have gotten overwhelmingly positive feedback from the other delegations and the only minor critical feedback we got was that there had been a little too little lunch Wednesday and Thursday and that the Norwegian delegation had hoped to see some large container vessels. This is something we have noted and we will try to make improvements for the next time, the NTHS congress will be in Denmark.

We would like to end our report by thanking the participating companies and our silent sponsors. Without the financial support from you this year NTHS congress would not have been possible. We hope that all of you would be interested in having us again in five years when the congress returns to Denmark.

Finally we would like to wish the Gothenburg delegation all the luck in the world for arranging next year's congress.



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