

## Sponsors of the conference



**EVERY TIME** Q 50 Tier 2

Tænk på miljøet - det gør vi!  
Cummins dieselmotorer overholder alle Tier 2 emissionskrav! Fra 76 til 3500 HK

**Granly Diesel A/S**  
Hovedvejen 233 B, Østved, Lejre • Fiskerihavnsvej 34 - Esbjerg  
Tlf. 46 42 35 50 - [www.granlydiesel.com](http://www.granlydiesel.com)



Danmarks Rederiforening

[www.shipowners.dk](http://www.shipowners.dk)



**CORROSION CONTROL**

**Zink- og aluminiumanoder**

BAC CORROSION CONTROL A/S PHONE: +45 70 26 89 00  
FÆRØVEJ 7-9 FAX: +45 70 26 97 00  
4681 HERFØLGE E-MAIL: [INFO@BACBERA.DK](mailto:INFO@BACBERA.DK)  
DANMARK [WWW.BACBERA.DK](http://WWW.BACBERA.DK)



Lloyd's Register  
Marine

**Future performance  
depends on today's  
decisions**

Discover more at  
[www.lr.org/performance](http://www.lr.org/performance)



Maritime Development Center of Europe

# New Challenges for the Maritime Industry



**Update and  
potential Solutions**

**Venue and date:**

IDA, Kalvebod Brygge 31 – 33, Copenhagen  
Monday 23<sup>rd</sup> March 2015



**Organizers:**

Skibsteknisk Selskab (Danish Society for Naval Architecture and Marine Engineering) and IDA Maritim (Danish Maritime Society)

**Location:**

Ingeniørhuset, Kalvebod Brygge 31–33, Copenhagen (See [www.ida.dk](http://www.ida.dk))

**Introduction**

*This conference will focus on the challenges for the maritime industry in the coming years relating to Energy Efficiency Design Index (EEDI) and new international regulations on safety and environment.*

*The coming rules on reduction of EEDI for new ships must not result in under powering from a safety aspect. Work on solutions will be presented.*

*New machinery arrangements of unconventional design are emerging. Which class requirements should be met?*

*No international regulations exist on black carbon, particles and noise from ships. Will they come?*

*The Polar code will soon enter into force. What will be the consequences and how will it affect ships operating on Greenland?*

**Registration**

Registration via the web site: <http://ida.dk/event/312666> not later than 19th March 2015. This home page is mainly in Danish, which means that persons not familiar with the Danish language may register directly by e-mail to Ms. Helle Borch, [hbo@ida.dk](mailto:hbo@ida.dk). The e-mail registration should include the name of participant, address, name of company and address, birthday, phone no. and e-mail. Please refer to meeting No. 312666.

In case of problems with registration, please call Ms. Helle Borch, phone no. +45 3318 4650.

For further information contact Valdemar Ehlers, chairman of IDA Maritim, [valdemar.ehlers@lr.org](mailto:valdemar.ehlers@lr.org)

**Cancellation**

Cancellation must be made in writing to the Secretariat at [info@skibstekniskselkab.dk](mailto:info@skibstekniskselkab.dk).

If cancellation is made up to 4 weeks prior to the conference the full fee is returned. 50% of the fee will be charged for cancellation made between 4 and 2 weeks prior to the conference.

Full fees are charged when cancellation is made less than 14 days prior to the conference.

If you have already booked, it can be arranged with the Secretariat to transfer your booking to another person from the same company/organisation.

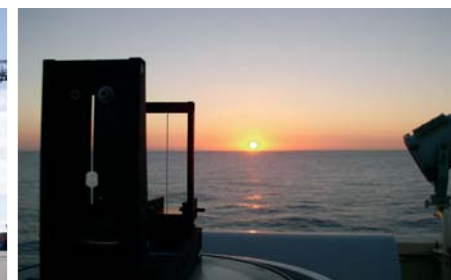
**Price**

DKK 2.000 including lunch and refreshments.

Only DKK 500 for students.

VAT is not included in the price.

No written material is included in the price, but the presentations will be available on the web page of Skibsteknisk Selskab after the conference ([www.skibstekniskselkab.dk](http://www.skibstekniskselkab.dk))





# Program

9.30 – 10.00 **Registration, Exhibition, coffee & networking**

10.00 – 10.05 **Welcome**

*Valdemar Ehlers, chairman IDA Maritim*

10.05 – 10.30 **Key note speech**

Keeping regulation global. How should the shipping industry respond to the increasing desire by regional institutions to develop and impose regional regulations for ships in international trade? Can we maintain IMO as the global regulator for shipping in the future?

*Lars Robert Pedersen, Deputy Secretary General, BIMCO*

10.30 – 11.00 **Guide to Ship Energy Efficiency Indexing (EEOI, EEDI, EVI)**

Different Indexing principles for the evaluation of the Energy Efficiency of ships have been discussed in the last years. These different Index values will be described in this presentation together with the development in the recent years. Also a new indexing procedure developed by the speakers will be presented including some test results of this new method

*Hans Otto Kristensen, Director, HOK Marineconsult and Jakob Buus Petersen, Director, Vessel Performance Solutions*

11.00 – 11.30 **SHOPERA , Risk Assessment to avoid under powered ships**

The Project HOPERA: "Energy Efficient Safe SHip OPERATION is a Collaborative" funded by the EU-FP7 program which brings together 24 partners from Universities, Classification Societies, Ship Yards and Ship Owners from around Europe. The goal is to develop guidelines for ensuring the safe operation of ships designed to satisfy the new EEDI criteria. This talk will outline the goals of the project and give an overview of the progress so far

*Harry Bingham, Associate Prefessor, DTU*

11.30 – 12.00 **The risk of under powered ships. The right selection of engine and propeller match**

"The increasingly strict EEDI requirements lead to reductions in installed main engine power. The IMO Minimum Propulsion Power (MPP) requirements have been put in place to avoid that this results in under powered ships. The possible consequences of under powering and how these EEDI and MPP requirements influence the choice of main engine and particularly the match between main engine layout and propeller layout is the topic of the presentation"

*Kim Rene Hansen, Marine Engineer, MAN Diesel A/S*

12.00 – 13.00 **Lunch, networking and exhibition**

13.00 – 13.30 **Noise challenges faced with the introduction of IMO MSC.337(91) and MARPOL**

MSC.337(91) "CODE ON NOISE LEVELS ON BOARD SHIPS" has been adopted, replacing the former IMO resolution A.468(XII). The presentation covers the difference between the resolutions and the philosophy behind MSC.337(91).

Following IMO MARPOL, stricter requirements to the emission of ships operated in coastal areas have been implemented. To meet the emission requirements scrubbers are being installed on several vessels. In many cases, due to space limitations, the scrubbers replace silencers. This replacement could potentially cause environmental noise issues. A few findings on the noise reduction of scrubbers both analytical and measured are presented

*Jacob Plum, Electrical Surveyor, Lloyds Register*

13.30 – 13.50 **The problems with soot, Has the IMO set sails to reduce emissions of black carbon?**

Black Carbon emissions from the international commercial shipping industry are thought to contribute about 1-2% of global BC and elevated BC levels from ships impacts human health in the vicinity of ports. The environmental impact of BC in the Arctic may be a strong factor in accelerating the reduction on ice cover. So, is shipping generating its own easy passage across the North Pole? The latest from IMO will be reported

*Frank Stuer-Lauridsen, CEO, Litehauz*



- 13.50 – 14.10 **Inventory Calculations of particulates and black carbon emissions from ships**  
 “Particles emitted from navigation near coastal areas are a reason of concern due to the various effects from particles on human health. In the Arctic area, navigation emissions of black carbon (BC) contributes to global warming, due to its ability to absorb light and due to its darkening effect when deposited to snow and ice surfaces. This presentation explains the emission inventories made for particulates in the sea area around Denmark and for BC in the Arctic area based on AIS data”  
*Morten Winther*, Department of Environmental Science, Aarhus University
- 14.10 – 14.30 **Dispersal modeling of particulates and black carbon from ships in the Baltic and the Arctic region**  
 This presentation is a follow up on the previous presentation about emissions inventories. A state-of-the-art atmospheric long range transport model have been used to study the contributions from ships emissions to the concentration and deposition levels of air pollution both in the area around Denmark and in the Arctic by using the previous presented emissions inventories as a part of the input to the model system. This presentation will present some results from this study.  
*Jesper Heile Christensen*, Department of Environmental Science, Aarhus University
- 14.30 – 14.50 **Class approval of systems of unconventional design – hybrid and battery designs**  
 Facing the new requirements for sulfur emissions, in the Nordic we see owners looking for different kind of propulsion principles. One of these is hybrid- and battery designs. But what are the challenges, regarding stable functionality and safety?  
 In this presentation I will cover basics on battery functionality and safety, how the battery is implemented in the ships electrical grid seen from a class perspective and finally shortly touch on LR's Rules for DC systems”  
*Jacob M. Plum*, B.SC.E.E., Surveyor – Electrical systems, Lloyd's Register Marine

- 14.50 – 15.20 **Exhibition and coffee break**
- 15.20 – 15.50 **Green Ferry Vision, Electrical ferry to Ærø in 2017.**  
 What future challenges regarding environment and emissions does this project what to solve  
*Signe Jensen*, Associate Professor, SIMAC
- 15.50 – 16.20 **Volt**  
 The unmanned, zero emission short sea ship for the future. The road network is in general heavily congested, nevertheless, the use of road transport is steadily increasing. Governmental bodies and EU acknowledge this fact, and want to move more freight from road to sea and rail. Competitive sea transportation needs new thinking  
*Flemming Mose Christensen*, Area Manager, Denmark, Faroe Islands, Iceland & Greenland DNV GL Maritime
- 16.20 – 16.40 **IMO's new Polar Code**  
 The Polar Code is due to enter into force on 1st January 2017, The work at IMO on a mandatory Polar Code has been conducted since 2010 in most of the Committees and subcommittees. Has the result been worth waiting for? Does it cover what is needed, and is it clear what is required?  
*Michael Prehn*, Deputy Director, Danske Maritime
- 16.40 – 17.00 **Polar Code – the practical approach**  
 Ship owner's considerations and examples on how to implement practical experience operating in Arctic and Antarctic into the Polar Code and thoughts made when specifying new buildings to a Polar Code not yet adopted  
*Allan Idd Jensen*, Nautical Superintendent, Royal Arctic Line A/S
- 17.00 – 17.15 **Roundup and debate**  
*Valdemar Ehlers*, chairman IDA Maritim

