

ECSS



International Conference

Emission Control for Seagoing Ships

New engine optimization technologies - Advanced emission control concepts - Intelligent upgrade solutions

26 – 28 June 2013 | Grand Elysée Hamburg, Germany

News on regulations and certifications • SCR system application towards Tier III • EGR application strategies • Complex design for scrubber technologies • Alternatives: LNG and hybrid solutions

With contributions from the following companies:

- FEV Motorentchnik GmbH, Germany
- AVL List GmbH, Austria
- Rolls-Royce, Norway
- Deltamarin Ltd, Finland
- Scandlines Danmark A/S, Denmark
- Wärtsilä Switzerland Ltd., Switzerland
- Germanischer Lloyd SE, Germany
- IACCSEA, United Kingdom
- Johnson Matthey, United Kingdom
- HUG Engineering AG, Switzerland
- H+H GmbH, Germany
- Wärtsilä Moss AS, Norway
- Yarwil AS, Norway
- Couple Systems GmbH, Germany
- Shell Deutschland Oil GmbH, Germany

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Featuring information and case studies on the following subjects:

- Industry Drivers: Latest news about **IMO MARPOL ANNEX VI, Tier III**
- Identify how latest developments in **SCR Systems** enable to meet Tier III
- Explore newest improvements in **scrubber systems** and how to apply them
- Discover alternatives: **LNG fuel** and hybrid technologies for radical **emission reduction**
- Greenhouse Gas: GAIN an insight into **IMO's EEDI scheme** and how to enhance energy efficiency

Highlight speakers:



Oskar Levander
Vice President Innovation,
Engineering&Technology,
Marine, **Rolls-Royce**



Herbert Römich,
Managing Director, SCR – Systems
Department, **H+H Umwelt & Industrietechnik GmbH**



Joonatan Haukilehto,
M.Sc. (Nav. Arch.), Deputy
Manager R&D,
Deltamarin Ltd.



Gernot Graf, Dipl. Ing.,
Manager Development Commercial
and Large Engines,
AVL List GmbH

Interactive Workshop Day | Friday, 28 June 2013

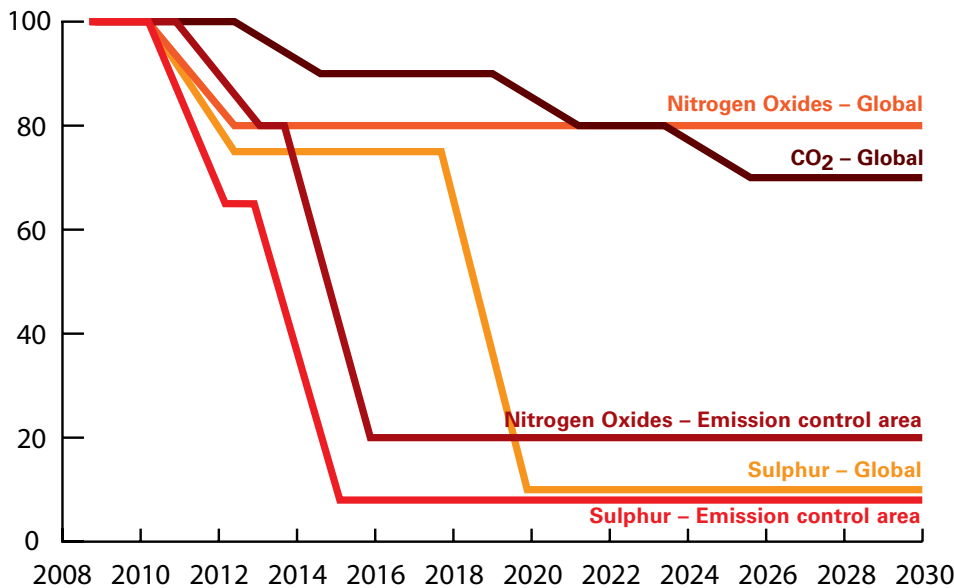
B | Retrofitting SCR technologies

Five reasons to convince your management to let you attend:



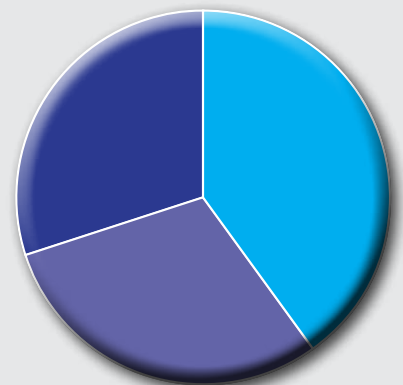
- 1** Expert speakers from leading engine manufacturers and suppliers provide practical knowledge on hot topics that helps us to master our challenges with **IMO Tier III compliance**.
- 2** At this event, I can **network with key people** from our industry to share first-hand experiences, enabling us to move forward faster towards sustainable solutions.
- 3** This conference is a brilliant opportunity to discuss new innovations face to face with leading experts to find the best solutions in **latest emission reduction concepts**.
- 4** This event will provide us with the perfect opportunity to **effectively generate new business**.
- 5** The intensive **exchange of knowledge**, ideas and inspiration on the conference is a crucial factor to ensure our company and products stay on top.

Are you prepared?



Expected Audience

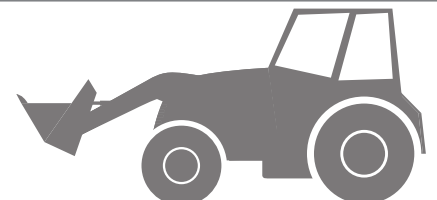
- Shipping companies
- Marine engine manufacturers
- Emission control system manufacturers



Co-located with IQPC's

3rd International Conference

NEXT GENERATION OFF-HIGHWAY ENGINES 2013



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Upcoming regulations – Advanced engine concepts – Improvement in efficiency & emission reduction

Real get together for the industry to discuss newest development of improvement on efficiency

26 – 28 June 2013 | Grand Elysée Hamburg, Germany

www.off-highway-engines.com

Conference Day One | Wednesday, 26 June 2013

08:30 Registration & Coffee

09:00 Welcome & Opening Address by



Udo Schlemmer-Kelling,
Executive Engineer,
FEV Motorentechnik GmbH, Germany

09:10 **Interactive Session – Speed Networking**



The perfect opportunity to speak directly with your peers and network effectively. Maximise your time at this event by participating in this interactive networking session.

Don't forget your business cards.

IMO MARPOL Annex VI Tier III: Solutions for NOx reduction

09:50 **Cost benefit effects of IMO III solutions**

- Challenges, driven by legislations
- Visible technical solution
- Total cost of ownership



Udo Schlemmer-Kelling,
Executive Engineer,
FEV Motorentechnik GmbH, Germany

10:30 **Consideration of NOx reduction measures for IMO Tier III compliance**

Highlight

- cEGR as efficient NOx reduction versus challenges with fuel quality
- Miller with 2 stage turbocharging
- Optimization of TCO



Gernot Graf,
Manager Development Commercial and Large Engines,
AVL List GmbH, Austria

11:10 Refreshment Break & Networking

11:40 **Thermal Challenges in Aftertreatment Systems for Marine Applications**

- Global and local emission regulations are driving the need for aftertreatment systems
- Low load conditions can present difficult thermal challenges
- Electric heat can be a potential solution to overcome these challenges
- Exhaust flow rates, watt density, backpressure & vibration requirements are key parameters which must be taken into account



Dr. Joern Bullert,
Technical Manager Europe,
Watlow GmbH, Germany

Alternative options for radical emission reduction

12:20 **Gas engines and novel propulsion concepts**

Highlight

- LNG as a marine fuel
- Gas engines and LNG installation features
- Economic and environmental benefits of running on LNG
- Hybrid propulsion machinery concepts
- Novel propulsion concepts for the future



Oskar Levander,
Vice President Innovation, Engineering & Technology,
Marine,
Rolls-Royce, Norway

13:00 Networking Luncheon

14:30 **Insight full view on emission reduction systems and and propulsion configuration selection**

Highlight

- The choice between DM, DE and Hybrid
- Effect of EGCS on machinery selection
- Alternative fuel types



Joonatan Haukilehto,
M.Sc. (Nav. Arch.), Deputy Manager R&D,
Deltamarin Ltd, Finland

15:10 **Hybrid operation in Short Sea shipping**

- The never ending search for fuel savings
- Poor engine load identified as savings potential
- Batteries – the considerations
- Installation and operation
- The result



Claus Nikolajsen,
Vice President, Operations and Route Management,
Scandlines Danmark A/S, Denmark

15:50 Refreshment Break & Networking

16:20 **Ro-ro/Ro-pax operation in ECA zones**

- Flexible solution with LNG containers as fuel tanks
- ECA zone operation meeting emission regulations
- Sailing profile of 10 days
- Performance data following the product guides
- Pricing based on budgetary offers



Andrzej Buczkowski,
Sales Director,
Wärtsilä Switzerland Ltd., Switzerland

Special: Latest News on IMO's EEDI

17:00 **The Impact of the EEDI on ship design**

- Overview on IMO's EEDI scheme
- Calculation and verification of the EEDI
- Levers to pull – sensitivity analysis of EEDI parameters
- Energy efficiency measures
- Development of CO2 emissions



Martin Köpke,
Senior Research Engineer,
Germanischer Lloyd SE, Germany

17:40 Closing Remarks of Chairman

17:50 End of Conference Day One

Join us for an informal evening get-together!

This is an excellent opportunity for you to meet the other attendees (also of the co-located conference "Next Generation Off-Highway Engines") and to make new business contacts in a relaxed atmosphere.

Meeting point 19:30 at the hotel lobby!



Sponsorship

We have a variety of packages available to suit your requirements. For all Sponsorship and Exhibition opportunities call James Walker:

+49 (0)30 20 91 32 75 or email sponsorship@iqpc.de

Conference Day Two | Thursday, 27 June 2013

08:30 Registration & Coffee

12:20 Networking Luncheon

09:00 Welcome & Opening address by



Udo Schlemmer-Kelling,
Executive Engineer,
FEV Motorentechnik GmbH, Germany

Latest SCR technology for efficient NOx reduction

09:10 **Meeting IMO III NOx limits**

- Intro to IACCSEA
- The IMO NOx Review
- Overview of SCR Technology
- The Installed base of shipping SCR
- Lessons from Marine SCR

Joseph McCarney,
Chairman of IACCSEA, The International Association for
Catalytic Control of Ship Emissions to Air,
United Kingdom

09:50 **Combined SCR / DPF Systems for marine applications**

- DPF systems: soot regeneration at low temperatures; ash cleaning
- SCR / DPF system combinations: converter design and catalyst / DPF layout
- Installation: narrow space situation for converter and piping
- Control concepts for DPF regeneration and urea dosing
- Examples of combined SCR / DPF applications

Highlight



Christoph Hug,
Manager Diesel Großmotoren Development,
HUG Engineering AG, Switzerland

10:30 Refreshment Break & Networking

11:00 **Technical and Commercial issues for urea in marine SCR systems**

- Technical issues: urea quality standards, urea storage and handling, CO2 penalty from urea production
- Commercial issues: availability, typical running costs



Stein Lovskar,
Technical Director,
Yarwil AS, Norway

11:40 **SCR Technology for diesel engines – retrofit experience**

- SCR Principle in general
- Design parameters
- special aspects for retrofitting
- New developments / trends

Highlight



Herbert Römich,
Managing Director,
H+H GmbH, Germany

How to meet SOx limits with high efficient scrubber technologies

13:50 **WÄRTSILÄ SCRUBBER systems – Lowest cost for meeting marpol annex VI requirements**

- Update on regulations
- Variety of systems – your choice
- References
- Way forward
- Summary



Heidi Paulsrud,
Sales Manager,
Wärtsilä Moss AS, Norway

14:30 **Scrubber solution as an sustainable option for SOx / NOx and PM**

- Basics about the DryEGCS
- Installation Samples
- CAPEX and OPPEX with DryEGCS
- The "Bunker-Future in the SECA



Dan Lingenberg,
Vicepresident Innovation,
Couple Systems GmbH, Germany

15:10 Refreshment Break & Networking

Special: Oil stress and emission targets

15:40 **Importance of oil stress for cylinder lubrication when meeting future emission targets**

- Insights into 2 stroke engine lubrication
- Oil stress and it's importance for future cylinder oil requirements



Matthias Mundt,
Manager Technical Services Europe & Africa,
Shell Deutschland Oil GmbH, Germany

16:20 **Interactive Session - Speaker's Corner**



Panel discussion with speakers of the day. What are the current trends and potentials for SCR and Scrubber solutions?

17:00 Closing Remarks of Chairman

17:10 End of Conference Day Two

Interactive Sessions



Network session:

The perfect opportunity to speak directly with your peers and network effectively.



Speakers Corner:

With your questions and comments you will actively steer the direction of this interactive panel discussion

For further information

please visit our website

www.ships-emission-control-ecss.com/MM or contact us on
+49 (0)30 20 91 32 74 or email **info@iqpc.de**

Interactive Workshop Day | Friday, 28 June 2013

08:30 Registration & Coffee

10:30 Refreshment Break & Networking

B | 09:00 – 17:30

Retrofitting SCR technologies

SCR systems are the method of choice for many vessel operators to comply with future emission reduction requirements. This workshop gives participants the opportunity to discuss issues around **retrofitting SCR on fleets** to stay ahead the legislation.

- Costs and benefits
- **Effects on fuel consumption** and engine performance
- Suitability of SCR systems for different vessel types
- Harminization of **engine control** and SCR system control
- Durability of SCR solutions and future outlook

For further information please visit our website

www.ships-emission-control-ecss.com/MM

12:30 Networking Luncheon

15:30 Refreshment Break & Networking

17:30 End of Workshop Day

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DIESEL & GAS TURBINE WORLDWIDE is the only international magazine that is dedicated to the products, technologies and industry news of large bore reciprocating engines and gas turbines across all industrial markets including stationary power generation, marine propulsion and mechanical drive installations. If it's in the engine room, it's covered.

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Emission Control for Seagoing Ships

26 – 28 June 2013 | Grand Elysée Hamburg, Germany

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Email: info@grand-elysee.com

www.grand-elysee.com

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Please always quote the booking reference **IQPC-Berlin**. Hotel accommodation and travel costs are not included in the registration fee.

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Conference Packages	Standard Price
<input type="checkbox"/> Platin Package 2 day conference plus 1 workshop	€ 3.199,- + VAT
<input type="checkbox"/> Bronze Package 2 day conference	€ 2.399,- + VAT

Full day workshop on 28 June 2013

Workshop B

B: Retrofitting SCR technologies

Only one discount applicable per person.

CAN'T MAKE IT TO THE CONFERENCE? PURCHASE THE 2-DAY DOCUMENTATION FOR € 990,- +VAT. Documentation will be sent 6 weeks after the event

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