

5th IMarEST Condition Based Maintenance Conference

Developing the Technical and Technological Future of Vessel Maintenance

London, 9th & 10th December 2015

CPD APPROVED BY

Institute of
Marine Engineering,
Science & Technology

IMAR^{EST}

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Developing the Technical and Technological Future of Vessel Maintenance

Day 1, Wednesday 9th December 2015, London

08:00 Registration and coffee

08:50 Welcome and opening comments from Conference Chairman

Capt. Kuba Szymanski, InterManager, Secretary General (confirmed)

09:00 – 10:30 Session 1: Shipowner/manager panel

Each panel member will be given 15 minutes to give their thoughts on the challenges of condition-based maintenance implementation on a fleet level and why it is still not the norm. There will then be a moderator led Q&A before the panel take questions from the floor.

Key topics to be covered in this session include:

- The shift from traditional maintenance plans to CBM
- On board performance monitoring and interpretation of data
- Lesson learned from and problems to overcome in the successful implantation
- What is holding back all shipping companies from implementing CBM?
- Risk Based Maintenance vs. Condition Based Maintenance or both?

09:00 – 09:15 Session presentation

Capt. Aleksander Legowski, Managing Director & COO, Österreichischer Lloyd

09:15 – 09:30 Session presentation

Duncan Ross, Fleet Manager, Heidmar

09:30 – 09:45 Session presentation

Speaker to be confirmed

09:45 – 10:30 Session Q&A

Moderator led Q&A and questions from the floor

10:30 – 11:00 Networking coffee break

11:00 – 11:35 Keynote Presentation

Lessons to be learnt and applied from the Offshore Industry

11:35 – 13:00 Session 2: Operational practicalities of condition based maintenance

It is widely accepted that effective maintenance is inextricably linked with the operational efficiency of a ship. It has been estimated that between 10-15% operational costs of a ship are directly attributed to maintenance, repair and retrofit (depending of course on the size and type of vessel). This in turn impacts on consumable costs, like spare parts and labour. With these operational costs typically rising by as much as 2.5% according to industry research, this session will focus on how to get the most out of CM/CBM as a means of improving operational efficiency and cutting costs. It will also highlight the need for maintaining the highest levels of crew competency.

This session will address:

- Impact of maintenance on vessel efficiency
- Training crew to drive efficient vessel maintenance
- Analysing essential KPIs for vessel maintenance programmes and critical ship-owner concerns
- Strategies for reducing downtime during maintenance

- How CM offers a better indication of equipment's condition
- Ensuring the availability of equipment by reducing its unnecessary dismantling
- Improved flexibility of planned maintenance

11:35 – 11:50 Session presentation

Jamal Ghotbzadeh, Marine Engineer, Neilson Active Holidays

11:50 – 12:05 Session presentation

Stanley George, Marine Engineer, Brookes Bell

12:05 – 12:20 Session presentation

Speaker to be confirmed

12:20 – 13:00 Session Q&A

Moderator led Q&A and questions from the floor

13:00 – 14:00 Lunch Break



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14:00 – 15:30 Session 3: Technical considerations for maintenance plans

For many shipping companies maintenance is still widely planned according to operating hours and calendar, regardless of whether maintenance is technically required or not. Condition monitoring and condition based maintenance plans are growing in popularity for very good reason, it allows for better use of existing onboard data for planning maintenance whilst the vessel is in operation, it offers the flexibility to change maintenance plans based on the condition of critical assets, reduced machinery failures during deployment, it reduces the need for assessment at repair facilities and the associated costs and makes compliance reporting a significantly easier task.

This session will address:

- Case study maintenance programmes for critical assets on the vessel, including propulsion system maintenance, engine maintenance/performance and monitoring of critical hull structure and integrity
- Interpreting data to produce effective and efficient maintenance plans
- Incorporating new technologies into maintenance plans (ballast water systems, ECDIS...)
- A technical review of the impact of CBM systems on vessel performance
- Strategies for vessel and fleet asset life cycle management and extension

14:00 – 14:15 Session presentation

Wolfgang Hintzsche, Marine Director,
German Shippers' Association

14:15 – 14:30 Session presentation

Jørgen Sjo Samuelsen, Manager –
Maintenance Management, Dof Management

14:30 – 14:45 Session presentation

Speaker to be confirmed

14:45 – 15:30 Session Q&A

Moderator led Q&A and questions from the floor

15:30 – 16:00 Networking coffee break

16:00 – 16:30 Conference Presentation

Presentation title TBC
Martin Stopford

16:30 – 17:30 Session 4: Big Data Workshop

Advancements in technology mean that vessels now produce extensive data; this workshop will show how to convert this data into efficient maintenance strategies, saving both time and money.

17:30 – 17:40 Chairman's conclusions and close of day one



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Day 2, Thursday 10th December 2015, London

08:30 – 09:00 Morning coffee

09:00 – 09:10 Opening comments from Conference Chairman

Capt. Kuba Szymanski, InterManager, Secretary General (confirmed)

09:10 – 10:40 Session 5: Technology panel

Each panel member will be given 15 minutes to look at new technologies to the market.

- A review of the latest next generation vessel maintenance technologies and how to integrate them into existing maintenance plans
- Addressing return On Investment (ROI) and how to increase profitability through effective maintenance strategies
- Effective use of smart technologies.

09:10 – 09:25 Session presentation

Speaker to be confirmed

09:25 – 09:40 Session presentation

Reidar Retzius, CEO, MERA

09:40 – 09:55 Session presentation

Speaker to be confirmed

09:55 – 10:40 Session Q&A

Moderator led Q&A and questions from the floor

10:40 – 11:15 Networking coffee break

11:15 – 12:45 Session 6: Performance Based Maintenance: a Step Beyond CBM

Recent arguments have been made that although a leap forward in efficiency and effectiveness, CBM does not offer the most complete method for planning vessel maintenance as it only ensures a vessel meets standard operating levels. This level of performance may not be adequate to remain at the forefront of a highly competitive industry. However, with the advent of real time monitoring, the shipping industry is now in a position to be able to conduct maintenance of vessels based purely on their performance. This performance monitoring is an evolution of CBM as it determines not only the equipment's condition but also the fall and rise in its performance.

This session will address:

- Why move away from CBM to PBM
- How to monitor performance of critical assets
- Analysis of real-time performance data
- Automated performance monitoring of the equipment
- How to establish strict performance limits
- The prioritising and optimising of maintenance to achieving lower operational costs
- The return on investment achieved in performance monitoring and performance based maintenance

11:15 – 11:30 Session presentation

Fabien Cadaut, Eniram

11:30 – 11:45 Session presentation

Speaker to be confirmed

11:45 – 12:00 Session presentation

Speaker to be confirmed

12:00 – 12:45 Session Q&A

Moderator led Q&A and questions from the floor

12:45 – 13:45 Lunch Break

13:45 – 14:20 Conference Presentation

Maintenance of Lifeboats and Associated Technologies

Captain Dennis Barber, Member of the BIMCO Marine Committee and external expert on LSA, BIMCO



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Day 2, Thursday 10th December 2015, London

14:20 – 15:45 Session 7: Establishing Effective Scheduled Maintenance Plans

Although it is clear that Condition Monitoring and Condition Based Maintenance will become the accepted norm, the vast majority of maintenance conducted is still through scheduled, pre-planned maintenance. In this period of transition it is still important to get the best out of maintenance plans, ensuring they are as effective and as efficient as possible. This session will address just such issues.

Key topics to be covered in this session include:

- Consequences of failure of equipment on safe operation of the ship
- Critical equipment and systems
- Establishing realistic and effective maintenance intervals as well as methods and frequency of inspections
- Type of measuring technologies to be used
- Assigning responsibility for inspections to qualified crew
- Clear definition of reporting requirements and mechanisms
- Practical experience of the engineers in operation and maintenance of ship and its machinery
- Analysing historical trends of asset failure to create efficient maintenance plans
- The Use of appropriate measuring and testing equipment
- The type of inspection and test to be employed – visual, vibration, pressure, temperature, electrical, load, water tightness

14:20 – 14:35 Session presentation

Effective Planned Maintenance System (Holistic View on Interface between RCM / CBM / Critical Spares Management & Alignment with Maintenance Management Strategy)

Syed Ahmed, Manager - Technical - Asset Integrity, Prosafe

14:35 – 14:50 Session presentation

Allan H Rasmussen, Senior Consultant, Logimatic

14:50 – 15:05 Session presentation

Speaker to be confirmed

15:05 – 15:45 Session Q&A

Moderator led Q&A and questions from the floor

15:45 – 15:55 Chairman's final remarks

15:55 Networking coffee break and close of conference

