



CONFERENCE NOTES

Capital Link held successfully the 5th Annual Shipping & Offshore CSR Forum – Best Industry Practices – A Competitive Advantage

The 5th Annual Capital Link: Shipping & Offshore CSR Forum that took place on Tuesday, November 3, 2015 in London, was once more successfully hosted at Square Mile's One Moorgate Place and was attended by several hundreds of stakeholders from the maritime industry including among others Ship Managers, Shipowners, Ship Operators, Shipbrokers, Commercial and Investment Bankers, Charterers, Classification Societies, Commodity and Energy Traders, Environmental Maritime Organizations, Industry Associations, Government and Non-Governmental Organizations, Financial and Trade Media, Institutional Investors, P&I Executives, Lawyers and Insurers, Market Analysts and Consultants, Private Equity Firms, offshore industry entities, as well as by numerous Shipping students and graduates from Cass Business School.

The Forum's purpose was to bring together leading shipping and offshore company executives as well as charterers and financiers to discuss how the implementation of Best Industry Practices (BIP) translates into tangible commercial, operational and financial competitive advantages. The Forum explored BIP across several areas such as fleet management, technological innovation, crewing, energy efficiency and the environment, safety and security. Furthermore, the demand for BIP by charterers and the response and initiatives by shipping and offshore companies was discussed in depth. At the same time, the 5TH Annual Capital Link CSR Forum aimed to showcase that Sustainability and Corporate Social Responsibility are not abstract theoretical concepts but have tangible practical implications. Besides, given greater industry sophistication, awareness, and expectations, CSR becomes an increasingly important issue that companies cannot afford to ignore.

In a nutshell, Capital Link's objective is to promote the ongoing development of a platform that raises the visibility of CSR in the shipping and offshore industries on a permanent and long-term basis via the publicization of the benefits of CSR not only to a wider audience of professionals in these industries, but also to the investment and financial communities with an explicit aim to become a centralized informational source and communications platform on the topic of CSR, linking industry, government and non-governmental organizations, industry associations, the financial and investment community, and the public at large. The annual maritime CSR Forum that has established itself as one of the key events that bring together the international maritime community in London, was organised by Capital Link Inc., in cooperation with UK Trade & Investment (UKTI).

Nicolas Bornozis (President and CEO of Capital Link Inc.) took the podium initially and welcomed all attendees. He thanked all guests, speakers and sponsors for joining the Forum and pointed out that although this event was more industry-oriented – in comparison to the 8TH Annual Capital Link: Shipping, Marine Services & Offshore Forum that was held a month ago at the same venue –, he was delighted to see the support of many organizations and the presence of 23 leading companies from the sector. Furthermore, he thanked Professor Costas Th. Grammenos for his contribution to the Forum as well as the numerous students and graduates from Cass Business School that joined the extended maritime family with the purpose to learn and to participate actively in the present and future of the maritime industry. Before giving the floor to the first speaker, Mr Bornozis offered a hint of what would follow by arguing that in a low-freight revenue environment where earnings cannot cover operational costs, a lot of people are cutting corners, yet those who follow best industry practises do potentially enjoy lower cost of capital, have better class charterers and engage in longer chartering agreements



Guy Campbell (Chairman, The Baltic Exchange) started off the Forum with the Opening Remarks. Mr Campbell mentioned among other things in his remarks that:

“We don’t read about record highs in my sector [nowadays]. I am invited today to share my opinions. We have more than 600 members at BE our members are responsible for the greatest share of dry bulk our daily freight indices are used by the market. Whereas the tanker market enjoys a good market, average daily earnings for the dry bulk sector ranged between \$5,500-\$7,300 during 2015, regardless of ship size. We have to standardize globally the best industry practices. As a 25-year veteran in the sector, I have witnessed a lot of hypocrisy MIFID II regulation has put at risk a lot of business that might leave the EU but we at BE have done a lot to stop this trend”.

Beyond Regulatory Requirements; New Challenges & Industry Response

Moderator:

Peter Hinchliffe, Secretary General - International Chamber of Shipping (ICS)

Panellists:

Fred Kenney, Legal Director – International Maritime Organization (IMO)

Michael Lund, Deputy Secretary General – BIMCO

Haralambos J. Fafalios, Chairman of the Greek Shipping Co-operation Committee, Director – Fafalios Shipping

Dee Taylor, Partner - Liskow and Lewis

The first panel of the 5TH Annual Capital Link: Shipping & Offshore CSR Forum discussed about the development of regulatory requirements and of initiatives in response, by the various parties involved in the maritime industry, and was moderated by Peter Hinchliffe (Secretary General - International Chamber of Shipping). Mr Hinchliffe mentioned briefly that: “Shipping is an extremely highly regulated industry. We have a lot of pending regulation. The issue is how can companies go beyond the difficult [regulatory] environment” before giving the floor to the panellists to develop their personal perspectives.

Best Industry Practices as a Financial Advantage

Moderator:

Doug Johnston, Partner, Climate Change and Sustainability Services – EY

Panellists:

Evan Harvey, Director of Corporate Responsibility – NASDAQ

Joseph E.M. Hughes, Chairman & CEO – Shipowners Claims Bureau

Paul Stevens, Chief Financial Officer - Navig8 Europe Ltd.

Vassilios Maroulis, Shipping, Logistics & Offshore Director – Citibank N.A.



The second panel of the 5th Annual Capital Link: Shipping & Offshore CSR Forum focussed on the ways through which the consistent implementation of CSR practices can lower the cost of capital (bank financing) for shipping companies, improve stock market valuations and decrease insurance premiums. Panel moderator Doug Johnston (Partner, Climate Change and Sustainability Services – EY) opened the discussion by saying that “we are here today to understand the perspectives of financial stakeholders. Improved reputation etc. is an outcome [of CSR] but what are – if they exist – the commercial benefits of CSR in shipping. Our panellists bring a variety of perspectives”.

Technological Innovation – For Energy Efficiency

Dr. Abdul Rahim, Managing Director, Europe & Africa - Class NK

After the end of the second panel discussion, Dr. Abdul Rahim (Managing Director, Europe & Africa - ClassNK) presented some of the latest energy efficiency-related technological innovations in the maritime sector.

Below are some of the key points of Dr. Rahim's presentation:

- Since 2009, we have changed course at ClassNK by bringing industry, academia and government together. We are now supporting the development of the industry and promoting new research strategies by joining forces with all sectors of the maritime community.
- Since the program's inception in 2009: 221 projects completed; 114 projects in progress; 48 projects in planning.
- Japanese GHG Reduction Program involves 22 projects, 12 yards, 7 owners, 11 makers, ClassNK, Government, NPOs. The result: new ECO ships design and technology: New engines (6-10% savings); Hybrid T/C (2-3% savings); Adv. LF paint (6-10% savings); Air lubrication (3-13% savings).
- A snapshot of just a few of the projects that ClassNK has been working on:
 - a. Tsubasa Hybrid Tugboat. Objective: reduce fuel consumption and CO2 emissions by 20% compared to equivalent conventional systems in tugboats. Partners: Niigata Power Systems, NYK LINE, ClassNK. Timeframe: August 2011 – July 2013. Process: Japan's first hybrid propulsion system was developed combining



main engine, AUX generator and lithium-ion batteries. Outcomes: we achieved our objective (more than 20% reduction).

- b. Lithium Battery Research. Objective: to assess and verify the safe use of lithium batteries on vessels. Partners: National Maritime Research Institute, Uzushio Electric Co., Ltd., ClassNK. Timeframe: August 2011 – July 2013. Process: 18 kinds of lithium battery cells underwent various testing in controlled conditions. Outcomes: almost all of the lithium batteries are safe to use onboard (based on these results, the lithium battery system is currently tested onboard).
- c. Fuel Emulsion. Objective: to verify the potential of water mixed fuel in reducing NOx emissions to meet IMO Tier III regulations. Partners: Nanofuel Co., Ltd., Maritime Innovation Japan Corporation (MIJAC), ClassNK. Timeframe: December 2014 – Ongoing. Process: fuel oil was mixed with water at varying ratios to lower reaction temperature and suppress NOx generation. Outcomes: fundamental combustion tests proved that it is possible to reduce NOx emissions to regulated levels through emulsion only; prevention of afterburning and smoke creation (currently under further verifications on heavy oil cases).
- d. Power Assist Sail. Objective: to develop supplementary propulsion force for the vessel by using the lift force of crosswinds, similar to the wings of an airplane, and drag from tailwinds. Partners: MES, MOL, Akishima Laboratory, ClassNK. Timeframe: June 2012 – January 2014. Process: prototype for real ship was designed and produced. Simulation tests were carried out on a 45,000gt tanker (Tokyo-Seattle voyage). Outcomes: feasibilities were confirmed for operationability, durability, reduction in CO2 (to be developed further for future application).
- e. CFRP Propeller. Objective: to design a propeller made from composite materials and improve operational efficiency by 3-4%. Partners: Nakashima Propeller, NYK, MTI, Imabari Shipbuilding, The University of Tokyo, NMRI, ClassNK. Timeframe: June 2012 – Ongoing. Process: Nakashima Propeller designed a CFRP propeller. CFRP is known for its lightness, flexibility and formability. ClassNK then conducted testing and granted approval. Outcomes: propulsive efficiency on the M/V Taito Maru improved by 6%.
- f. LH2 Transport Risk Assessment. Objective: to increase the safety of transporting liquid hydrogen to the same level as LNG (note: LH2 is highly volatile). Partners: Kawasaki Heavy Industries, Iwatani Corporation, K-Line, ClassNK. Timeframe: October 2011 – Ongoing. Process: comprehensive risk assessment of LH2 transportation was performed based on hazard identification study and analysis



(HAZID); CFD model was created and compared with experimental values to evaluate H2 leak and diffusion. Outcomes: tests confirmed that the risk of LH2 transportation can be minimized to the same extent as that of LNG. We are currently working on further research assuming practical operation such as loading/unloading.

- g. Hydrogen-admixture to natural gas for gas engines. Objective: examine the transferability of academic studies and gain new knowledge for end users and engine developers. Partners: Technische Universität München (TUM), Kyushu University, ClassNK. Timeframe: September 2014 – March 2015. Process: experiments have been carried out using single cylinder research gas engine on the lean-burn type gas engine and gas injection (GI) type (to be tested on varying H2 ratios for further CO2 reduction).
 - h. ClassNK CMAXS. Objective: optimize onboard machinery and engine maintenance. Partners: Diesel United, Daihatsu Diesel, Makita, Mitsui, ClassNK. Timeframe: 2012 – Ongoing. Process: real-time condition data is collected from sensors via data logger on board then analysed and translated into valuable recommendations. Outcomes: ClassNK CMAXS detects potential damage, minimizes downtime, reduces repairs and simplifies our surveys. Current situation: huge amounts of data are now available through software solutions such as ClassNK CMAXS. Maximizing the potential of this data will be vital for optimizing operations.
- At ClassNK, we are developing the industry's first data center. It will enable makers to develop improved products and provide more sophisticated maintenance services.

Best Industry Practices - Energy Efficiency & Environment

Moderator:

Dr. John Kokarakis, Vice President, Technology & Business Development, Hellenic, Black Sea Region & Middle East - Bureau Veritas

Panellists:

Marcos Vassilikos, Managing Director – Eurobulk

Hans Noren, Managing Director - Stena (UK) Ltd

Theo G. Baltatzis, General Manager – Technomar Shipping Inc. Athens

George Thanopoulos, Technical Manager Bulk Carriers –Neda Maritime Agency Co. Ltd



The third panel of the 5th Annual Capital Link: Shipping & Offshore CSR Forum focussed mainly on environmental issues including legislation, ballast water management, US and IMO updates, emissions control and new technologies. Panel moderator Dr. John Kokarakis (Vice President, Technology & Business Development, Hellenic, Black Sea Region & Middle East - Bureau Veritas) initiated the discussion by noticing that: "Our days have been marked by a tsunami of environmental regulations that is linked to the 2°C-related regulations. These regulations such as the low sulphur are motivating new technologies. Our target is to build and run ecological and economical ships. We shoot two birds with one shot. Our panel has applied these principles and ideas in their companies and they will tell us how their pioneering, very well known for [advanced] technologies companies implemented these".

Best Industry Practices - The Human Element & Human Resources

Moderator:

DS: David Scott, Senior Consultant - Lloyd's Register

Panellists:

Stylianos I. Siafakas COO – Product Shipping & Trading SA

Elias J. Ladas, HR & Training Manager – Danaos Shipping Co. Ltd

Norman Schmiedl, Crewing Director – Columbia Shipmanagement

The fourth panel of the 5th Annual Capital Link: Shipping & Offshore CSR Forum focused on issues related to the management of human resources, crewing, training, retention, etc. Furthermore, it discussed how to address Corporate Social Responsibility objectives by improving human performance and wellbeing through user-centred vessel design and what the industry needs to do to support this integrated approach. Panel moderator David Scott (Senior Consultant - Lloyd's Register) opened the discussion by arguing that: "We spoke earlier about the different challenges, [the different] technologies but also the human element is important to retain the right people. We have a diverse population in [our] environment. The skills you have to bring, the competencies required on-board for the vessels [to function properly] Technical, but also non-technical competencies, to identify what the best people are. Looking and supporting the members of the team. These are some of my main points, from my perspective".



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CONFERENCE MATERIAL

All conference material is available on Capital Link's website, at:

<http://forums.capitallink.com/csr/2014london/index.html>

To download presentations from this forum, please visit the link:

http://forums.capitallink.com/csr/2014london/signup_archive.html

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ABOUT THE ORGANIZERS – CAPITAL LINK

With its headquarters in New York and presence in London, Athens and Oslo, Capital Link (www.capitallink.com) has been active since 1995 in the field of Investor Relations and Financial Communication.

Capitalizing on our in-depth knowledge of the shipping industry and capital markets, Capital Link has made a strategic commitment to the shipping industry and has become the largest provider of Investor Relations and Financial Communications services to international shipping companies listed on the US and European Exchanges. It also organizes annually in New York, London and Athens a series of Investment Forums focusing on its main activity fields (www.capitallinkforum.com).

It has a leading position globally in the area of investor relations with respect to shipping, cooperating with the majority of shipping companies listed on the U.S. stock exchanges, London (LSE and AIM) and Milan. (www.capitallinkshipping.com).

Capital Link's efforts have been recognized by the 2011 Greek Shipping Lloyds Awards and in 2012, 2013 and 2014 by Intercontinental Finance Magazine.

Capital Link has undertaken a series of initiatives beyond the traditional scope of its investor relations activity.