

## GST 2020

Copenhagen, 11th March 2020

Welcome address by Peter Andersen, CEO, GTT Analytics Ltd.

Good morning Ladies and Gentlemen,

It is my pleasure and privilege to bid you welcome to this year's GST Europe and to the Plenary "Analysing IMO2020 implementation and the road to 2050".

I am sure that Vanessa Darnborough and her team are relieved to see this event go ahead after the COVID-19 virus has caused the cancellation of so many events all over the world, including about half of those planned for the recent *IP Week* in London, *TPM* in Los Angeles and *Singapore Maritime Week* to name but a few. I owe thanks to Vanessa and the *Informa Connect* team for inviting me.

I'm standing here as a dinosaur, who first joined the shipping industry around the time of Noah's Ark. Indeed, we did pitch for the agency for her Århus port call, as far as I remember.

I am also standing here as a father and a grandfather.

When penning my thoughts for this welcome address I spent a lot of time considering my position vis-à-vis those two aspects of my persona in the light of *IMO's* 2050 target to reduce carbon emission by 50% compared to 2008 levels.

The question in my mind, as a shipping dinosaur, is whether this target is too ambitious?

Whereas the question I ask myself as a Pater Familia is whether this is enough?

My thoughts are further shaped by the considerations and evidence of climate change presented by James Lovelock, the father of the Gaia theory, who published "*Novacene – the age of hyper-intelligence*" last year when he turned 100 years old.

Much evidence of the disastrous effects of climate change has been published. Just a couple of weeks ago research published in *Nature Climate Change* included a new example:

"This season's bushfires [in Australia] were so catastrophic, they caught modellers off guard – way off guard. The models not only hadn't predicted that bushfires of this magnitude could happen now, they hadn't even predicted that bushfires of this magnitude could happen in the next 80 years."

So, it is clear – we must act, and act fast, to safeguard the future of our children and their descendants.

It is easy to point fingers at the maritime sector and its CO<sub>2</sub> emissions – and many people do so. But unless we have a holistic view on the entire supply chain then the impact of the shipping industry's decarbonisation efforts will be insignificant in the overall picture.

As my good friend Mark Williams wrote in his *Monday Macchiato* newsletter earlier this year, there is little point in having a fleet of decarbonized bulk carriers hauling coal to polluting power plants.

But we are here to discuss the shipping industry's contribution, so let me briefly look at some of the available and emerging fuel options:

## Options

### 1. Low Sulphur Heavy Fuel Oil / Ultra-Low Sulphur Fuel Oil

- a. New fuel blends with 0.5% sulphur content can contain a large percentage of aromatics, a key parameter for black carbon emissions. Yet instead of establishing policy or making concrete recommendations on the issue the 7<sup>th</sup> Session of the *IMO Sub-Committee on Pollution Prevention and Response (PPR)* at its February 2020 meeting, invited member organizations to conduct more research into the issue. Will it be resolved at *PPR8* in 2021 or will the discussion continue without action?

### 2. High Sulphur Heavy Fuel Oil with exhaust gas cleaning equipment

- a. There are question marks over the environmental impact on the marine ecosystem of discharges from open-loop scrubbers. More and more countries impose bans (two weeks ago: France, Spain, Portugal, Gibraltar; more recently: China, and Brazil reportedly considering). Will disposal become prohibitively difficult or expensive?
- b. What about the ROI on scrubber installations to date? The spread between LSHFO and HSFO is diminishing, fell 65% in two months. With crude oil prices dropping more than 30% just the last few days, will the economics of scrubbers evaporate completely?
- c. Will the *decarbonICE* solution, as conceived by a Joint Industry Project under the *Danish Maritime Development Center* prove feasible? What is the risk of deposited ice-encapsulated CO<sub>2</sub> leaking and evaporating emissions above sea-level?

### 3. LNG

- a. Attractive because it emits approx. 25% less carbon dioxide (CO<sub>2</sub>) than conventional marine fuels in providing the same propulsion power. But LNG is mostly methane, a potent greenhouse gas (GHG) that traps 86 times more heat in the atmosphere than the same amount of CO<sub>2</sub> over a 20-year time period, according to a study by *The International Council on Clean Transportation*. Is LNG a transitional solution only?

### 4. LPG

- a. Will LPG offer attractive CO<sub>2</sub> emission reductions relative to its propulsion power? Is the cost of modifying a ship's propulsion system to LPG feasible?

### 5. Wind - zero CO<sub>2</sub> emissions.

- a. Results from multiple tests and deployments of different wind technologies, supporting conventional propulsion systems, have been positive. Apart from the additional investment required it is difficult to see any fault with this option. Will we ever see ships on long voyages entirely propelled by wind coming back into fashion?

### 6. Biofuel

- a. Blending traditional fuels with biofuels or indeed used chippy oil has already been tried and tested with success. It seems to me to be a solution that must be deployed no matter which fossil fuel solution survives, as it serves the dual purpose of re-using a resource instead of putting it to waste. When will ships be able to sail exclusively on biofuel on long voyages? We may learn more from the 3 months trial by *UECC and GoodFuels* on the PCTC "*Autosky*" on European routes, where the partners anticipate a 6500 mt CO<sub>2</sub> reduction during the trial period.

### 7. Methanol

- a. Tested and tried. Are the transition costs attractive? Ongoing fuel costs compared to other sources?

### 8. Ammonia – zero CO<sub>2</sub> emissions.

- a. Is the toxicity of ammonia over-stated? Are the transition costs attractive? Ongoing fuel costs compared to other sources? *Equinor's* results with the "Viking Energy" OSV will hopefully give some useful indications.
- 9. Electricity - zero CO<sub>2</sub> emissions, subject to the electricity source, of course.**
  - a. Until we have seen a quantum leap in battery technology, I don't think we'll see this option deployed on long-distance shipping routes, but it does offer significant potential for shorter voyages. Is CO<sub>2</sub> neutral electricity available in sufficient quantities for all trade routes?
- 10. Fuel cells (hydrogen) - zero CO<sub>2</sub> emissions.**
  - a. Will we see hydrogen-powered container ships on the trans-pacific trade lanes by 2030, as was deemed promising in the recent report from *The International Council on Clean Transportation*? Or is it more likely to be used in short-sea trades, as suggested by *Hydrogen Europe*?
- 11. ...or combinations, e.g. dual-fuel engines etc.**
- 12. New innovations**
  - a. And considering the speed of innovation, there may be as yet unexplored, or indeed unknown fuel options emerging as we approach the deadline.
  - b. F.inst. designs exist on processing waste plastic into fuel. The circular effect could be significant, in particular if it would become attractive to collect and sell waste plastic, thereby reducing plastic pollution of our oceans.

#### Issues:

- 1. Biggest issue in my book: The maritime industry has been compliance driven for too long, most companies sitting on the fence and waiting – should I say hoping? - for regulatory easing of new requirements, often trading ships too close to the deadline. This is no longer an option!
- 2. Institutional investors that are shifting assets away from oil and gas companies are not interested in financing shipping companies, which remain dependent on fossil fuels. This is also reflected in the number of financial institutions that have discontinued analysis of shipping stocks.
- 3. *IMO: The Department for Partnerships and Projects* just launched to help Member States achieve the 2030 Agenda for Sustainable Development is positive, but long-overdue. Is the *IMO's* decision process too slow for the world? Will trade blocs or national Governments launch unilateral laws and regulations to protect their own aquatic environments?

#### Opportunities:

- 1. Sustainability-linked finance**
  - a. Like the syndicated \$5bn revolving credit facility secured by *Maersk Line*. Under the terms of the facility the credit margin will be adjusted based on *Maersk's* progress to meet its target of reducing CO<sub>2</sub> emissions per cargo moved by 60% by 2030 – significantly more ambitious than *IMO's* target of 40% reduction by 2030.
  - b. Finance under the *Poseidon Principles* – currently involving banks representing around 20% of the global ship finance portfolio, and growing.
- 2. Sustainability-linked chartering**
  - a. Pools – an established commercial practice to drive efficiencies – and profitability - through economies of scale, including optimized positioning to reduce ballasting thereby reducing emissions. The emerging use of algorithmic trading offers additional optimisation.

- b. Selection of tonnage: as an example, *Cargill's* policy of chartering more efficient vessels and ensuring 100% compliance with sulphur regulations and using *IMO's Energy Efficiency Operational Indicator (EEOI)* to track performance.
- c. Performance-based incentives: f.inst. using data analytics to track voyages against objective benchmarks

### **3. Sustainability-linked voyage execution**

- a. JIT (*Port of Rotterdam, Waertsila*). Important steps forward and with a holistic supply-chain focus. Will also have positive effects on the general mobility and environment in port cities.
- b. Voyage optimisation through the use of AI-based simulators to identify optimum ballasting and routing options.

### **4. Circular economy**

- a. An area rightly receiving much attention, but requiring the engagement of entire supply chains.

### **How to get there?**

- 1. Industry must take leadership. Key areas will be innovation, but most importantly ambition.
- 2. Create awareness – *George Livanos – HELMEPA – Greta Thunberg* generation.
- 3. Press for holistic strategies embracing the full supply chains, engaging and committing all stakeholders, not just shipping, to ambitious environmental targets.

Paul Stuart-Smith of *Zero Carbon Finance* wrote in an OpEd piece in *Tradewinds* a few days ago: “Hope is not enough – shipping needs a decarbonisation plan. The industry does not have the luxury of waiting for others to define its future. The world’s carbon budget is disappearing, while the impacts of climate change become ever more obvious.”

If the industry fails to show leadership, societal pressures will set the agenda – and my guess is that the industry will foot the bill.

We have an exciting programme over the next two days, with expert speakers sharing their views on how we achieve the current objectives – and perhaps some may propose ways of raising the ambition level.

We need action on many fronts, and we need it now!

Enjoy the conference.

[ends]

### **Bio notes**

*Peter Andersen is exploring the infinite possibilities that AI beyond ML offers the maritime industry as CEO of Oxford-based start-up, GTT Analytics Ltd., and is a regular speaker at maritime industry events.*

*Having started his shipping career as a boarding clerk, Peter has held a number of leadership positions including Head of Marketing at BIMCO, Founder/ Director at Trigonal, Senior Vice President at Inchcape Shipping Services, and Vice President Sales and Marketing at Q88 LLC. Most recently he held the position as Senior Director, Maritime Business Development at Genscape Maritime, where he worked on the development of predictive analytics based on AIS data, to optimize maritime processes and support strategic business decisions.*

*Peter is a past member of the Equasis Editorial Board, Intertanko Associate Members Committee, and have held Board positions in a number of companies. He was a Visiting Professor at the World Maritime University in Malmo from 1990-99.*

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