

Ship Managers' Survey 2020

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Early experiences of IMO 2020 implementation, the most promising future fuels and the likely evolution of operating costs (opex) were among this year's Seatrade Ship Managers' Survey questions, once again kindly compiled by **Dr. Malcolm Willingale**.

Q: What are your primary concerns regarding the risks surrounding successful IMO 2020 compliance across your managed fleet?

A common theme running through replied here was how ship managers had worked hard with their clients to understand and prepare for risks involved with the new global sulphur cap. That having been said, a number of concerns remain.

'Now that the new low-sulphur fuels are in use, we've had to be careful with blends, sedimentation and getting the quality right,' relates Capt. Rajesh Unni, founder and ceo of Synergy Group. 'We have protocols in place for managing this but a lot of this comes down to workforce quality and using technology to make sure machinery is protected and reliability is maintained.' Other 'risks' include management of client scrubber installations with makers and yards, he says, and the opex implications of non-optimised fuel vessel fuel consumption and performance.

'Fuel husbandry, in particular in relation to possible compatibility issues,' is indeed a primary concern, agrees Columbia

Shipmanagement (CSM) ceo Mark O'Neil. 'We have not seen compatibility problems arising yet, where analysis results have highlighted potential problems before the fuels are burned, but the fear is that existing analysis parameters will not capture and highlight all potential compatibility issues. Likewise he notes: 'high sediment content from certain sources of low sulphur fuel,' adding 'but these have been managed and the fuels either debunkered or burned under controlled conditions. Enhanced vigilance is the name of the game for the foreseeable future in relation to all fuel-related matters.'

'The quality of fuel that is delivered and its availability are the two primary concerns,' states Fleet Management Ltd md Kishore Rajvanshy. Vessels burning new fuels have

encountered 'blocked filters and purifiers,' he reports, 'creating a risk on the safe propulsion of ships' since 'shipboard fuel systems are not designed to handle such different bunkers in storage.' At the same time clients' vessels fitted with scrubbers are facing 'issues with the sensors and automation,' he says, as well as with the 'very tight' time limit of just one hour given to change over to compliant fuel if the need arises.

PTC (Philippine Transmarine Carriers) ceo Gerardo Borromeo echoes that the root concern, from which others may flow, is 'the assurance of a consistent and available supply of [suitable] fuels across all key ports called on.' He also notes the challenge for those ships fitted with open loop scrubbers of 'knowing well in advance where such

systems are accepted and where they are not,' as well as 'how and where to discharge.'

Frank Coles, ceo of Wallem Group, identifies 'elements that we are not able



Capt. Rajesh Unni



Mark O'Neil



Kishore Rajvanshy

Fleet Management reports 'good experience' with methanol including on dual-fuel chemical tanker Mari Couva



PHOTO: FLEET SHIPMANAGEMENT

to control', including for scrubber-equipped vessels 'the impact of the chemicals on the overall condition of the ship'; for others 'on the commercial side...the LSFO cost and to what extent will shippers bear that cost or pass it up the chain,' and in general the 'compliance-related question of whether port states will take a hard stance on policing and enforcing the regulation or will show leniency until the kinks have been worked out.'

Sikha Singh, director of Executive Ship Management (ESM), lists 'ongoing challenges like restricted availability of compliant fuel worldwide, consequences and risks of mixing various grades of compliant fuels, storage, purification and usage in the engine etc. which need to be tackled with strict and proper checks and implementation of good practices.'

Dieter Rohdenburg, ceo of Intership Navigation, agrees that 'the main concern going forward remains the availability of VLSFO – many of our ships are trading in areas where the supply of HFO was a challenge in the past, but the situation has worsened with the change to low

sulphur fuel as oftentimes even gasoil is not available. And even the main bunker hubs are now reporting shortage / non-availability which resulted in the recent price hikes.'

V.Group sees the primary concern as 'the fuel characteristics and lack of agreed ISO standards. Pour point, viscosity, flash point and compatibility for each bunker parcel will essentially be an unknown for the ships' engineers.'

InterManager secretary general Capt. Kuba Szymanski states simply 'understanding all LOCAL interpretations of the international regulations.'

Ian Beveridge, ceo of Bernhard Schulte Shipmanagement (BSM), provides a convenient summary of many managers' chief concerns as follows:

- Scrubber operations, including correct operation and handling of waste products;
- Coping with additional and 'non-unified/-aligned' regulations for certain areas/zones and from different authorities;

- LSFO fuel quality. Still no ISO specification. LSFO blends' composition and their technical/operational behaviour remains unpredictable.'

Carl Schou, president & ceo of Wilhelmsen Ship Management, also reiterates a common sentiment when he says: 'while we have done all we can to mitigate this risk, we are keeping our eyes open and staying vigilant particularly in this area.'

Q: Taking a medium- to long-term time horizon, which fuel types and technologies do you see as making a significant contribution to decarbonisation?

Respondents generally pointed out that managers were fully signed up to aid shipping's decarbonisation as far as possible, as well as agreeing that more R&D on future fuels was needed with plenty of disruption to current thinking still likely.

'Having said that we are not sitting still and waiting,' adds Schou. 'The Wilhelmsen group has been making headways in hydrogen,' he reports, while in ship management 'we are working together with our owners in the development of hydrogen as alternative fuel for ships while one of the group companies, Norsea group, is working on a sustainable supply chain of hydrogen distribution for commercial shipping.'

Beveridge succinctly replies: 'medium term: LNG' – an area where both BSM as manager and its principal the Schulte Group are heavily involved – and 'longer term: e-methanol, ammonia and hydrogen.'

ESM's Sikha likewise provisionally favours LNG. While research on various other solutions is underway 'LNG as a fuel seems to have the potential to make significant contribution in reduction of carbon,' she points out, with the industry having already made good progress on developing 'ancillary



Ian Beveridge



Carl Schou



Capt. Kuba Szymanski



Gerardo Borrromeo



Frank Coles



Dieter Rohdenburg

technologies such as dual fuel (gas Injection) engines to cater for LNG usage and developing Dual Fuel Diesel Electric (DFDE) propulsion.'

However, Rajvanshy sounds a sceptical note by querying 'the present trend inclining towards LNG as the alternate fuel,' predicting that 'with the challenge of methane slip, this option will be considered closely in the future' (see earlier Markets page). Further ahead he says Fleet's experience with methanol 'has been quite good, and we believe it has huge potential in achieving the required decarbonisation rate,' especially as it can be produced by alternate means and can be pumped normally without requiring very specific handling techniques.

Wallem's Coles counters by saying 'we cannot escape the fact that [LNG] is the best available technology today,' while 'at a conceptual level, hydrogen seems to offer a long-term solution, especially if it can be synthesized from renewable sources.' But he points out that to say technology for the latter 'is in its infancy would be generous,' with 'gigantic' obstacles to be overcome including the infrastructure needed for its supply and onboard storage solution.

Synergy's Capt. Unni also feels that in the short-term LNG 'offers some advantages as a sustainable fuel,' with his company already managing gas-fuelled vessels and expecting to take charge of more, requiring crew to be training in 'specific LNG handling and usage skills'. But he adds that LNG can 'only be an interim fuel,' with hydrogen or ammonia 'the most likely replacement fuels' - despite any such new fuel requiring 'huge investments in infrastructure and superstructure.'

V.Group believes that 'LNG and bio fuels will potentially be the fuel of choice for the transition phase. However, to achieve the IMO decarbonisation targets extensive development will be required in the new technologies (hydrogen, ammonia, battery, methanol),' with ultimately a combination of these technologies likely to make a significant contribution.

While pointing out that the decarbonisation challenge lies 'first and foremost' with the engine manufacturers,

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Rohdenburg offers his personal view that 'we will see a mix of different propulsion systems in the future; hybrid and electric propulsion for smaller, short-sea vessels, LNG for regular liner trades, and probably ammonia, bio-fuel and others that can be used in existing internal combustion engines for tramp and long-haul trades.'

Similarly, CSM's O'Neil predicts that 'in the medium term we will see a variety of fuel types very much dependent on the nature of the trade, geographical location and market. Low sulphur, high sulphur, LNG, LPG, hydrogen, electricity and ammonia will all have a place and will all be viable (to varying degrees) as single or possible dual fuel alternatives.'

PTC's Borromeo likewise believes there will be a place for 'any fuel source that can successfully drive the move to zero carbon emissions.' However, he stresses the need for all stakeholders to agree on some of the most cost-effective solutions as soon as possible, in order that that supply and demand issues for the selected fuels and technologies can be planned in advance to avoid shortfalls.

InterManager's Capt. Szymanski proffers a single-word answer: 'gas'.

Q: How do you see the main opex cost components evolving over the next 12 months?

Here several managers referred back to the earlier question on IMO 2020, pointing out that compliance would involve significant increases in opex.

V.Group, for example, identifies the main opex driver as 'pressure to ensure that vessels are complying with new emissions regulations, which could place added pressure on fuel prices – especially as fuel costs represent as much as 50-60% of a total ship's operating cost,' with the year set to be 'dominated by new fuels, scrubber installation and promoting environmental practices, all adding pressure to opex.' It also sees 'ensuring safety and security of crew and vessels' potentially becoming a major pressure on opex, 'especially in some of the geopolitical 'hotspots' around the world.'

'Bunker costs will swing wildly,' predicts O'Neil. 'Initially high costs for low sulphur and then gradually decreasing. High sulphur costs initially low and gradually rising as supplies become more strained. Crew costs will remain stable but other costs will decrease as opex elements are increasingly optimised.'

Rohdenburg agrees that manning costs 'will remain roughly the same as last year, and so will luboil costs.' Insurance is likely to increase as the insurance markets harden, he adds, 'and we will probably see a slight increase in the cost of spares and repairs as well.'

Capt. Szymanski also foresees opex 'staying more or less the same,' adding that 'there is still a surplus of seafarers looking for jobs and this could be the most dynamic change should we start seeing a shortage of them, but at present we don't.'

Borromeo agrees that fuel and crew costs are 'top of the list of key operating expenses,' with both stricter regulatory compliance and higher insurance premiums plus unforeseen contingency-related expenses arising from geopolitical uncertainty driving up opex. 'Therefore, it is critical that efficiency onboard is driven as a mindset and attitude across the board, to help mitigate such cost impacts,' he says.

Schou replies briefly: 'Like anything else, we foresee this is an upward trend in parallel with the inflation rate.'

Beveridge prefers to list some specific outliers, notably 'pressure on wages for

LNG qualified seafarers and for seafarers that are converted to LNG' due to the large LNG carrier orderbook (see Markets section in earlier pages); increasing insurance costs due to the 'deteriorating claims environment and hardening underwriting markets'; higher drydocking costs as a result of ongoing scrubber refits absorbing available yard and engineering design capacity; and the increasing need to replace complete electronic systems because of their complexity and 'obsolescence of faulty components.'

Coles agrees with others that in general crew costs are not likely to change much, but that 'unforeseen costs' are likely to arise from the consequences of IMO 2020 in terms of 'unplanned maintenance and possible problems from 'so-called' compliant fuel.' Enhanced security and cyber security costs could also impact opex, he adds.

Sikha brings the discussion IMO 2020. 'Notwithstanding the long-term benefits, operational and maintenance costs for new fuels and equipment that are IMO2020 compliant will likely add to running cost of

the vessels in the next few months, she replies.

Rajvanshy agrees that the new fuel requirements, together with extra costs related to scrubber spares, 'uncertain' BWTS (ballast water treatment system) performance and the need for vessels complying with IMO Tier 3 requirements to apply SCR (selective catalytic reduction) in specific zones, will all serve to drive up opex.

Capt. Unni believes 'optimising vessel fuel consumption and performance' remains the key weapon against rising opex, which is why Synergy together with Alpha Ori Technology spent three years creating SMARTShip, an Internet of Things (IoT) platform that 'increases transparency, ensures emission control area compliance and enables cost-cutting remote monitoring, diagnostics and predictive maintenance' for client shipowners.



Checking pressure on LNG vessel

Cost savings per vessel using the system have averaged \$150,000 a year, he says, including a 5% reduction in fuel usage, and these historical saving rates are only set to increase this year with IMO 2020. ●

A full transcript of answers to the Seatrade Ship Managers' Survey 2020 – including replies to additional questions on 'the main drivers for outsourcing ship management' and 'the attraction and retention of talented sea and shore staff' – can be downloaded from www.seatrade-maritime.com