

TELEGRAPH



Wilhelmsen Ahrenkiel Ship Management



STORIES AND SHORT NOTES ON SHORE AND ON BOARD

Experienced and written by
our international WASM team

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DEAR READERS,

It truly has been a long time since the last edition of our former AHST Telegraph. Perhaps you could say that we had to take a creative break, but in the past months, our entire team needed to tackle all the current matters belonging to our new joint venture with Wilhelmsen Ship Management. Also, the ongoing COVID-19 pandemic and all the associated and permanently changing restrictions, which none of us could have foreseen, have led to many challenges ashore and on board. Priorities had to be clearly defined within our teams, so the focus was not on publishing the new issue of our Telegraph.

We are now pleased to present the first issue of our WASM Telegraph. A few months ago, the editorial team, a small team consisting of several WASM colleagues, came together for the first time. We defined and distributed the

various editorial tasks, made a final selection for the article topics, motivated and supported the authors in completing them and coordinated the publication. I can honestly say that it was a pleasure to receive so many varied and interesting articles.

It is undoubtedly the articles that fill the Telegraph with life. Without the volunteer authors, this edition would not have been possible. We greatly appreciate the time that they have invested and say "Thank you" for their extra work and support.

So, take your time and enjoy reading.

Mia-Kaarina Feistner
Management Assistant

For the entire WASM Telegraph
Editorial team.



DEAR TELEGRAPH READERS,

At the time of writing these lines, the terrible war in Ukraine has already been going on for a full two months. Our thoughts are with everyone affected by the war and we very much hope that this senseless war will end soon!

A while has passed since the publication of the last Telegraph and a lot has changed at Wilhelmsen Ahrenkiel Ship Management in the meantime. In October 2020, Wilhelmsen Ship Management (WSM) acquired 50% of the shares of Wilhelmsen Ahrenkiel Ship Management. Together we renamed Ahrenkiel Steamship to Wilhelmsen Ahrenkiel Ship Management.

We have used this time to get to know the staff at Wilhelmsen Ship Management, we have started to work with the systems onboard and ashore, and we have adopted WSM's Safety Management System. We are currently working on removing the final hurdles.

This is a big and important step for all of us. The shipping industry is in a phase of upheaval with many major challenges. We are convinced that the new shareholder structure puts us in a very good position to meet the following challenges:



1. CLOSE TO THE VESSELS

In order to be close to the ships and our seafarers in the era of a pandemic, an international presence is essential. WSM is present worldwide with five offices (Singapore, Kuala Lumpur (Malaysia), Lysaker (Norway), Busan (Korea) and Pasadena (USA)). We have already been able to rely on the support of the five WSM offices on various occasions and together we have found good solutions to challenges.



2. ZERO CARBON SHIPPING

Zero carbon shipping can become reality by 2050, but this needs cross-sector collaboration and a lot of research and work. We are confident that Wilhelmsen and their focus on new technologies and fuels will help us to contribute our important part to the goals. Many complex questions must be answered and this can be achieved only by teamwork.



3. DIGITALISATION

A lot has been said about digitalisation, but it is clear that the sharply increasing demand for information by employees, customers, charterers, authorities and all other parties can be fulfilled only by a smart use of new technology. Introducing or even developing new tools is cost- and time-intensive. WSM has done some important groundwork and it is good that we can cooperate in this respect as well.



4. FINANCIAL STRENGTH AND STRUCTURING EXPERTISE

Two strong shareholders with financial power, similar goals, and a lot of expertise in investments, structuring and financing assets are a good foundation for a technical manager. We want to develop assets together and the first newbuilding orders have come in. MPC Capital AG has ordered newbuildings at Hanjin Shipyard in Korea and WASM will manage them.



5. COOPERATION

To prepare for the future, collaboration and cooperation are important. We have just signed a cooperation agreement with Wilhelmsen ThyssenKrupp JV on 3D printing and will inform our employees soon about the opportunities this will bring.

Most important for the success of our company, however, are our employees - onboard and ashore. During the difficult pandemic period, we were able to rely on the competence, energy, commitment, and flexibility of our employees.

We are very proud that this, as well as all previous issues of the Telegraph, are made up entirely of articles written by our employees. Our authors are neither journalists nor writers, but experts in their field: ship management. The articles in this issue not only give an overview of the topics we are currently dealing with, but also of some of our contributors. To all who contributed to the publication of this issue, we thank you very much!

Happy reading!
Yours sincerely,

Dr. Michael Silies

CEO Wilhelmsen Ahrenkiel Ship Management



A DAY ON AS CARELIA

OUR MEANWHILE RETIRED SUPERINTENDENT YORDAN SIMEONOV KINDLY AGREED TO ACCOMPANY A FEW OF US FROM HAMBURG FLEET TEAM 2 ON A VISIT TO THE MV AS CARELIA AND TOOK CARE OF THE REGISTRATION PROCESS TO GO ON BOARD.

By Carle Olivier, Finance Manager
Finja Aue, HSEQ Assistant
Sonia Humm, Technical Assistant
Rosan van Branden, Technical Assistant

Our field trip started at the vessel's office, where we were welcomed on board by some of the deck crew and the third officer, who took us to the bridge and explained typical vessel operation in general terms. Soon after, we were also greeted by the captain, who showed us around the bridge and kindly ran the navigation systems by us as well as answered our questions regarding loading/unloading procedures and docking manoeuvres. Shortly after we were able to explore the top and upper bridge decks, including the colloquially-named 'monkey deck', where most satellite antennas for communication systems are situated. During this time, we also had time to observe the cranes and ongoing procedure of the container load/unload operation. A while later, the second officer met with us to take

us on a guided tour of the main deck, which included a detailed explanation of safety procedures and lifesaving equipment. We were pleased to see that the lifeboat has ample space and is well equipped in case of an emergency. A lunch break soon followed, which was a thoughtful touch. It really felt like both the steward (aka mess man) and the cook really went out of their way to accommodate us. They even showed us through the galley and their pantries, which was a nice gesture.

After our wonderful lunch, Yordan met with us to show us the chief officer's office, the hospital ward, and the main engine room - which we now charmingly refer to as 'Narnia' because it turned out to be spectacular and by far the most impressive feat of engineering in the entire vessel!

Just to give you a rough idea of the sheer size of this area, our tour here took around two hours, not only because there is so much to see but also because Yordan's range of knowledge was exceptional. The M/E takes up at least three decks in height and depth as well as most of the main room. All auxiliary engines, software systems, stock lockers, and workshops surround the M/E room.

We found the overall experience truly educational. Besides acquiring a lot of additional understanding of all the operating systems, we most importantly gained a more comprehensive vision of them, a new insight to where and how the equipment connects together and its functionality. This was cer-

tainly a practical approach that allowed us to fit together the pieces of our expertise. This day visit has provided us with knowledge that we will bring with us and use in our daily work, such as ordering spares and service arrangements. We would highly recommend that everyone visit vessels when they stop in Hamburg. We feel this is a good initiative in order to familiarise both sides (the office and the on-board crew) with each other.

We would like to thank both the crew on board and our former Superintendent Yordan Simeonov for the entire experience. Also a big thank you to our Fleet Manager Lucian Stavarache for always encouraging us to strive for excellence!

The AS Carelia was built in 2006 in Ulsan, South Korea. She can carry up to 2,824 containers and sails under the Portuguese flag. At the time of our visit, she was chartered by Hapag Lloyd for trade between Northern Europe and Northwest Africa. We took this opportunity to visit her while she was in Hamburg for load and unload operations.

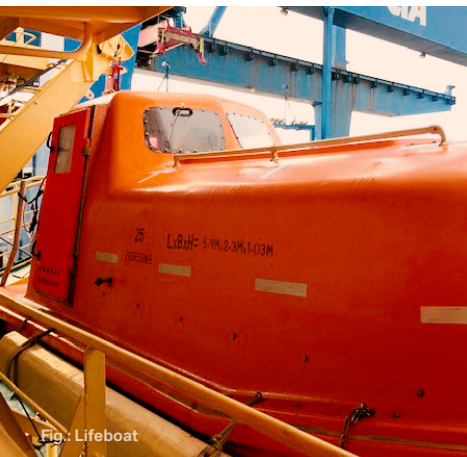


Fig.: Lifeboat



Fig.: Stroke main engine

MAIN ENGINE TECHNICAL DRAWING

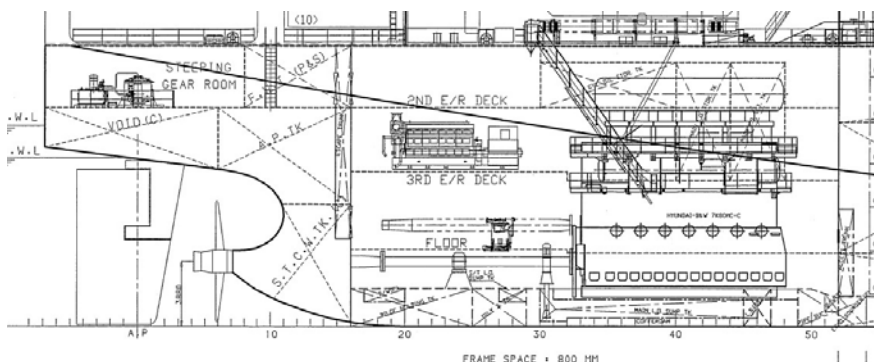


Fig.: Hamburg Fleet 2 team with S/I YS

BOTTLED WATER VS ADVANCED HYDRATION SYSTEM

IF YOU WERE WALKING DOWN THE STREET AND SUDDENLY SAW AN EMPTY BOTTLE OF WATER, WHAT WOULD COME TO MIND? MOST PEOPLE WOULD INITIALLY THINK CONVENIENCE, INSTANTLY QUENCHING THEIR THIRST, AND THAT IT EASILY FITS INTO ALMOST ANY SIZE BAG OR BACKPACK.

By Ralph Jacob Gallego Palada, 3rd. Officer

Advertisers have done a great job convincing people to prefer convenience over conservation. However, people who think outside the box, people who prefer conservation and not extinction think "if 600 million households consume bottled water, that's more than 100 billion water bottles per year or 1 million bottles per minute, and as a consequence our oceans are literally full of plastic bottles. If someone does not care about this consequence, they might change their mind if they have a deeper under-

standing of the effects of plastic pollution on our ecosystem."

The impact of bottled water on our ecosystem is higher than you can ever imagine. According to research led by the Barcelona Institute for Global Health (ISGlobal), the environmental impact of using bottled water on the ecosystem is 1,400 times higher than using treated and purified drinking water. Bottled water uses plastic and making those plastic bottles consumes approximately 1.5 million barrels

of oil. Burning that oil results in more carbon emissions into our atmosphere, which became a hot topic at the United Nations Climate Change Conference Summit, otherwise known as COP26.

Our ship owners care for our environment, so they made a 180 degree turnaround to a sustainable and eco-friendly future. This first step towards climate goals was taken by the "AS CARLOTTA", one of the many vessels managed by Wilhelmsen Ahrenkiel Ship Management GmbH Co. KG.





Fig.: AS Carlotta crew

The drinking water process starts by converting sea water to fresh water through reverse osmosis and continuously filling the fresh water tanks of the ship while it's underway and at constant engine power. Then the hydration system takes the supply of water from the freshwater line that is used daily for household purposes. The water is then filtered with 8-stage filtration process by the compact water dispenser. This process makes water that is 100% safe for drinking.

The installation of an advanced hydration system on board the AS Carlotta began after dry dock in Taicang, China. It was installed in four locations: bridge, crew dining, officers dining and poop deck engine office. The installation location may vary and must take into account the source of water that the AHS will be receiving. For example, it should be near the source of water like a galley faucet or toilet faucet fresh water supply. The location

where the crew gathers most like the crew or officers mess must also be considered. In order to make sure the water is 100% safe to drink, water samples are taken from various locations where systems were installed. The outcome was positive: no traces of harmful bacteria like E. coli, pH levels were in a normal range, and sediments were at a safe drinkable range. In short, the water is safe to drink. Not only that, each crew member received their own heat-retaining tumbler, which retains either heat or cold for a long period of time inside the tumbler. The crew was very satisfied with the newly installed advance hydration system water dispenser because it would not only quench their thirst, but contributes to the preservation of the environment since it lessens the amount of plastic usage onboard and reduces garbage disposal expenses.

The following is a brief preview of the stages that the water goes through:

1. stage is the poly polypropylene filter (PPF) and removes sediment and contaminate particles.

2. stage is UDF and also removes sediments and contaminate particles, but on a smaller scale than the first one.

3. stage is chlorine, taste and odour (CTO), which helps improve the taste of the water and makes the water clearer.

4. stage is reverse osmosis (RO), which removes 99.9% of all waterborne particles including bacteria, heavy metals and organic substances.

5. stage is the polisher filter, the final filtration stage before the water is dispensed.

The next three stages are for post treatment and replenishment:

6. stage uses an alkaline water filter cartridge to help reduce acidity and rebalance the pH level in the water.

7. stage is the mineralising filter, a process which introduces four minerals that are beneficial to the human body (sodium (Na+), calcium (Ca2+), magnesium (Mg2+) and potassium (K+)) into the water.

8. stage is ultraviolet (UV), which is the final phase that effectively disinfects all remaining bacteria in the water.

TRAINEE ON TOUR TO ANTWERP

OUR TRIP STARTED EARLY IN THE MORNING ON OCTOBER 4, 2021. VESSEL MANAGER KIRIL KIRILOV PICKED UP VESSEL MANAGER GEORGI KARAMFILOV BEFORE THE TWO OF THEM STOPPED BY MY PLACE AND WE HEADED SOUTH.

By Laura Paschburg, Trainee

After a look to the right at the ships in the container terminal directly behind the Elbe Tunnel, my anticipation rose. After a long time in the home office due to the COVID-19 restrictions, it was also the first time in a long time that Kiril and Georgi were allowed to visit a ship.

After a short stop near Os-nabrück and a phone call with the office, we drove on via Duisburg until the Netherlands greeted us with bright sunshine. To get in the mood for Belgium, we had some caramel waffles at our next fuel stop and continued on our way.

Once we arrived at the hotel, we had to wait a bit as the rooms weren't ready yet, but we used the time to access the Wi-Fi and get in touch with the agent. When the rooms were ready for us, everyone used the time to work.

After working, we met up again to explore the city a bit since the ship was not due to arrive until

night. Because the train station was too far away to walk to, we decided to take the car, which we had to register online due to current regulations for the Antwerp environmental zone. On the way there, we were stuck in traffic for some time and got a chance to look at our surroundings.

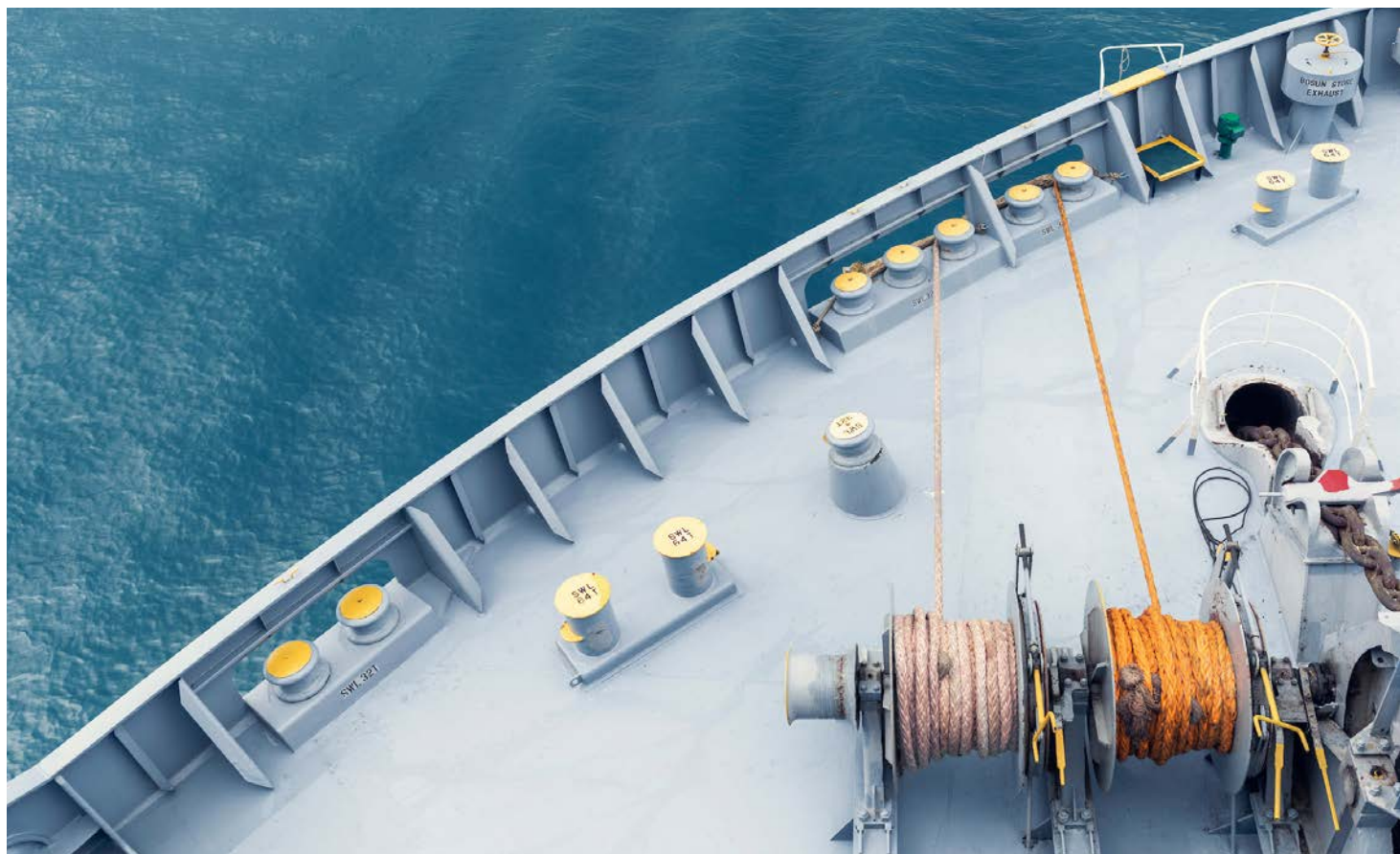
Once in the city, we explored on foot and walked through the old town with its attractive old buildings and a fountain dedicated to the Schelde River as the sun was slowly setting. We found a restaurant where we had a delicious meal. After a little walk through the old town with its many small alleys, we went back to the hotel.

The next day started with breakfast at 7:30 am in the hotel. Right after that, Kiril and I decided to go to a bakery in a small, sleepy suburb of Antwerp to buy some pastries for the crew. The baker seemed a bit surprised at our huge order, but we managed to take two big boxes of

goodies with us onto the ship. After the ship was moored in the harbour, we finally started work at 10:30 am. It was only a few kilometres from the hotel to the ship and after a short distance through the port area, we arrived at the gate. There we had to identify ourselves and received information about our visit, such as the code for the gates leading to the port area.



Excitement grew in the three of us and then she was suddenly in front of us – the Stralsund. To me, she seemed big and impressive, as I had never been able to get so close to a container ship before.



After we had parked our car, we gathered our equipment and went up a narrow and slightly wobbly gangway. The first steps on the vessel began with the official part where we were registered as visitors in the gangway logbook and then received our visitor badges. Then we were led up one deck, invited into the vessel and greeted in the ship's office by the captain and chief mate. The surveyor from the Korean Register was also already on board checking documents.

The captain was very obliging and immediately offered all visitors something to drink. Firstly, I just sat down and tried to get an overview of all these new impressions. Many people came to greet us and a short time later Georgi

and I put on our work clothes. Kiril remained in the office for the moment. I made my way with Georgi and the chief engineer via the incinerator room to the engine room. My first impression was that it was loud and warm but impressive. After a short conversation in the engine control room, we went into the workshop followed by the welding room and the nozzle test room. There I had time to look around a bit and discovered the largest wrenches I had ever seen.

We went back to the office to pick up my list for a short inspection regarding an office project on EEXI with my supervisor Eckard then decided to go to the mess for lunch. I met the chief cook and the crew steward, who showed me the extremely well equipped galley.

At the mess, we took a seat at the captain's table, which I realised only after Georgi explained it to me. There was no one else there at the time, so we were seated alone at the table. As a starter, we had a vegetable soup with a side of meat. The main course was rice with vegetables, fried fish, and shrimp with cocktail sauce. This was accompanied by various drinks such as water, apple juice, and orange juice. There was also a salad and a yogurt dessert.

After refreshments, we went back to the engine room and took a few measurements for my list. We then brought the infrared thermometer back to the ECR and took a closer look at the distribution panels of the main switch board in the ECR as well

as the transformer room and the e-store before inspecting the rest of the engine room. First, we went to the diesel generators, one of which was running, then we checked the purifiers and the main engine. The engine crew was cleaning the main engine air receiver and under piston spaces as the electronic scanning of the cylinder liner was due the next day. So we were able to have a look "behind the scenes".

After that, our path led us to the stern of the vessel, where we looked at the main engine fuel pumps and hydraulic pumps as well as the starter panel and a part of the oily water separator.

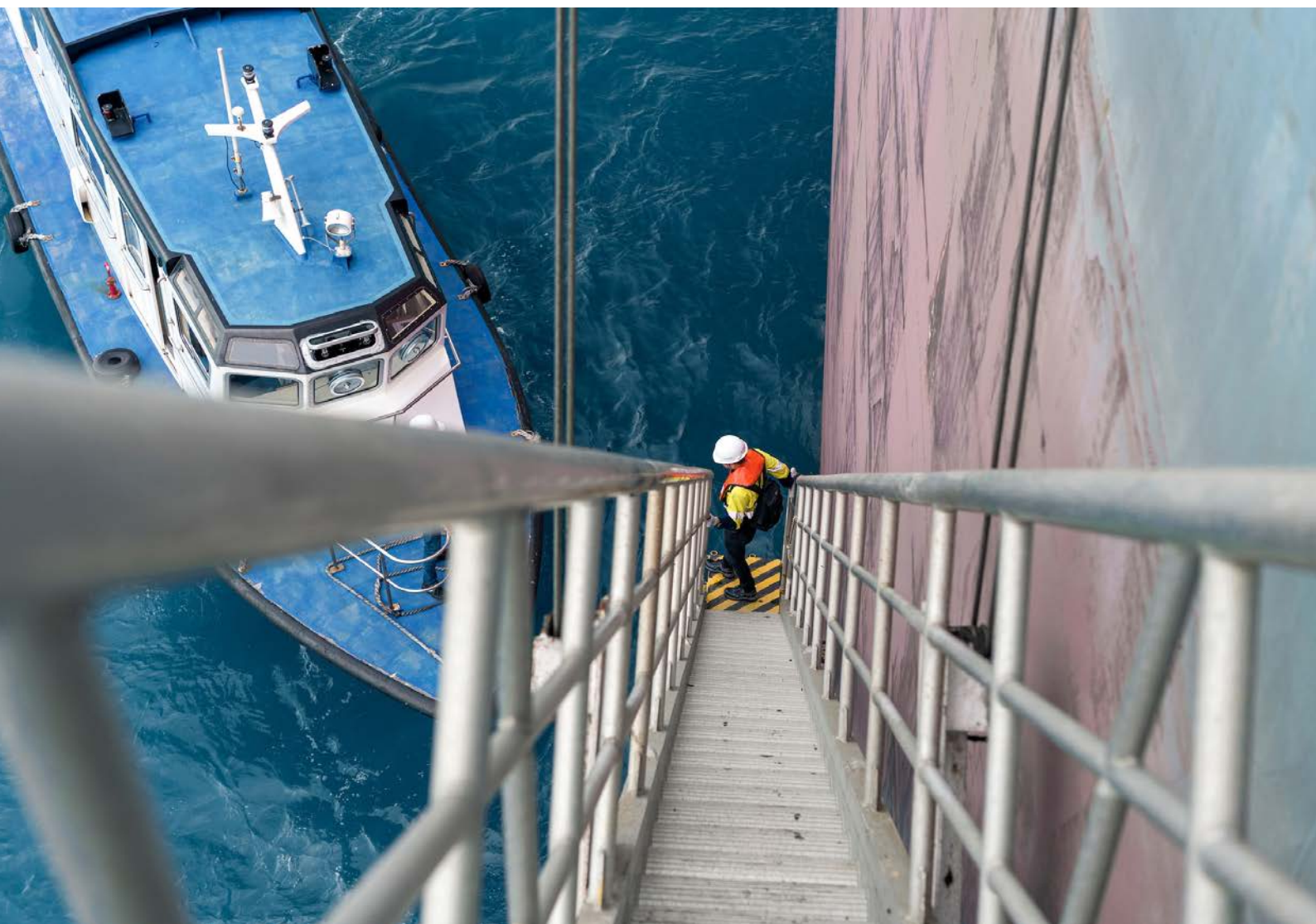
Back at the ECR, Georgi and the chief engineer conferred for a while. The newly arrived engineers came by regularly because of the handover with their predecessors, so there was a lot for me to see.

Afterwards we had a look at the air compressors and the AFT mooring deck, where we also had a look at the cabin for the Suez crew and went on to the AC room.

After I was back in the office, Kiril gave me the order to go to the pier to check how far along the painting work on the stern and bow of the ship was – the Stralsund is now called the AS Nora.



Kiril then took me with him to the bridge. When we reached the top, it was like we were in another world and we had a beautiful view of the port of Antwerp.



While Kiril, the captain and the second mate checked the systems, I had time to look around the bridge and bridge wing. One deck below the bridge is not normally used, but the crew had converted it into a large and well-equipped gym. As the third mate explained to me later, table tennis tournaments are held there, which is a lot of fun for the crew. After the end-of-day meeting, we headed back to the hotel and the first day was behind us.

The next day began for Kiril and me on the bridge. The colleague from IT was also there to bring the systems up to date and Third Mate Slavko explained the existing systems to Kiril. The third mate also subsequently gave me a chance to walk through the entire accommodation area and unlock any door he had a key for. This gave me an even better impression of life on board as he explained a lot to me along the way.

Before lunch, Kiril, the third mate and I went on a safety inspection of the entire ship. We were even allowed to enter a lifeboat and Slavko showed me what some of the boat's equipment is. Immediately after that, we were in the CO2 room and at the AFT mooring station.

Following the very tasty lunch, my biggest challenge awaited me, but I was not aware of it yet. I set off with Georgi to inspect the deck cranes. As soon as I began climbing up the first vertical ladder in a dark room, I realised

that this would not be easy with my fear of heights. But Georgi was patient with me, showed me the way with his flashlight and even took a souvenir photo.

Once at the top, I was able to take a seat in the cockpit and take a closer look at the many different buttons while he climbed to the top and did his inspection. I decided to leave him to inspect the next crane on his own while I walked with Kiril, equipped with a flashlight, through the void space on the starboard side. At the front, we met Chief Mate Adrian who showed us the FWD stores where lashing equipment, cables, ladders and additional twist locks are stored.

Shortly after, the two surveyors from Korean Registry had finished their audits and the closing meeting was started. In the previous two days, all documents were checked and tours of the ship were made. At the end, the AS Nora officially received her class. Before our tour continued, all documents were signed and stamped.

When the surveyor had left the ship, we went on our last adventure where Kiril showed me the FWD mooring station and we looked at lines and anchor chains together. Of course, the photo at the very front of the bow was not to be missed. Past the pilot ladder we reached cargo hold 22, where we first climbed up the cross passage and then down the ladders to the bottom of the cargo hold. I have to admit that I had

underestimated a bit how deep it really goes and then how far the way back up is. Again we were in complete darkness except for the light of our flashlights.

Back in daylight, we headed to the final meeting with the crew where we discussed the takeover and prospects for the future. Finally, we all went up to the bridge to take a group picture on the bridge wing. After saying goodbye to the crew, we went down the gangway one last time and made our way back to the hotel to head back to Hamburg the next morning.

I am very grateful to have been given the opportunity to take part in the ship's takeover during which I was able to discover, learn and take away a lot.



Now I have a better understanding of how life and work on board a container vessel works. I would like to thank everyone who made this possible and who answered every question I had and opened every single door on the ship. Thank you all, I had an amazing time!



RESCUE OPERATION IN CARIBBEAN SEA

SOME TIME AGO, MV AS PETRA WAS UNDERWAY TO HER DESTINATION POINT OF TURBO, COLOMBIA WHEN THE OFFICER ON DUTY NOTICED A DRIFTING MOTORBOAT THAT HAD THREE PEOPLE ON IT WAVING RED LIFE JACKETS.

By Danylo Myachyn, DPA/CSO

The Master decided to approach the boat to investigate because the nearest mainland was 120NM away. Unfortunately, radio contact was not possible since the boat was not equipped with a VHF station. Once the vessel approached the boat, verbal communication was established thanks to Spanish-speaking crew members on board MV AS PETRA. The people on the boat confirmed that they were in distress and had been drifting at sea for three days because of a broken engine and had no means of communication, food or water.

The Master informed the Colombian Coast Guard and rescue preparations began. The crew arranged for the necessary disinfection materials as well as the Suez cabin to accommodate the rescued people. As an additional security precaution, the Master requested that they show the content of the lockers on their boat to ensure that there are no visual signs of drugs, weapons etc.

The weather conditions were favourable to safely manoeuvre to the boat in distress, so the rescues boarded MV AS PETRA



safely. They confirmed that they are Colombian nationals. They were cared for by the well-trained crew of MV AS PETRA and given food, water and clothing. Specific precautions were also taken due to the COVID-19 pandemic.

The Colombian Coast Guard requested that the vessel proceed to Providence Island to take the rescuees to officials. MV AS PETRA started for Providence Island with the motorboat towed behind. Upon arrival at the rendezvous position with the Colombian Coast Guard

boat, all three rescuees were safely handed over to the authorities and the rescued boat was removed from tow. After completing the formalities, MV AS PETRA received permission to continue her voyage to Turbo. The rescue operation took around 12 hours in total, including sailing to Providence Island.

We are very proud to congratulate Capt. Orlin Savov and his crew for the high level of professionalism and seamanship they showed during this rescue operation.



The Flag Administration sent the following message to the crew of MV AS PETRA:

This Administration would like to commend the Officers and Crew of the good vessel AS PETRA for the successful rescue of three Colombian citizens who were stranded at sea in their motorboat. The actions of AS PETRA and the rescue show the finest humanitarian tradition of seafarers assisting others at sea who need help.

We also appreciate the assistance in taking care of the health and well-being of the rescued persons, while at the same time maintaining the practice of quarantine and infection control onboard due to the advent of the global pandemic crisis.

// AL ROMERO

Director of Marine Investigations
For the Deputy Commissioner of
Maritime Affairs, Republic Of Liberia

ENERGY EFFICIENCY – A DEMAND THAT CONTINUES TO GROW

IF WE LOOK AT TODAY'S INITIATIVES REGARDING ENERGY EFFICIENCY AND SHIPPING, WE CAN SEE A LOT OF CHANGES AND AMENDMENTS IN THE MARITIME WORLD SINCE WILHELMSSEN AHRENKIEL ESTABLISHED ITS PERFORMANCE MANAGEMENT TEAM IN 2018.

By Heribert Riesenhuber, former Head of Fleet Performance

During the implementation phase of the team, the focus was to collect operational data from the vessels and analyse them to support a benchmarking process in order to identify energy efficiency improvements. These improvement suggestions along with the knowledge we shared with the fleet support charterers in their efforts to decrease their fuel consumption and related costs.

Looking at the most recent developments in shipping in terms of energy efficiency today, the clear way forward is connecting energy efficiency and greenhouse gases (GHG). This is seen in local initiatives like the EU Emissions Trading System, but also the UN International Maritime Organization's (IMO) goals on reducing GHG emissions from ships.

What can we expect?

Basically, most current initiatives concerning GHG emission reduction look towards the option of improving the vessels' energy efficiency. There are

several regulations adopted by regulatory bodies, for example EEXI, CII (IMO) and ETS (EU), that aim to reduce the CO₂ footprint of the existing world fleet. By enforcing the short- and long-term goals of the different entities, vessel owners and charterers of the world's tonnage must work closer together to enable the shipping industry to adapt to the new environment.

To a large extent, being energy efficient still means implementing and maintaining good seamanship on board. This will also be important in the future, but with the closer support of our vessel crews by owners and charterers, we will be able to contribute even further to the goal of reducing CO₂ emissions in shipping.

The next step of decarbonisation requirements in shipping is already visible on the horizon. Nine global companies including Amazon, Ikea and Unilever have taken the lead and signed a pledge to move cargo on zero-carbon fuel ships only by 2040.



Energy efficiency and greenhouse gas emissions

Reducing daily fuel oil consumption on board our vessels by implementing energy efficiency measures will have a direct impact on the vessels' individual GHG emissions. The CO₂ emissions are produced by the vessels' main engines, auxiliary engines and boilers burning fossil fuels like heavy fuel oil to generate power or heat. To calculate the amount of CO₂ emitted by a vessel, the IMO assumes a CO₂ emissions factor of 3,114 kg CO₂ /ton of fuel consumed on board.

Once energy efficiency measures are in place, daily fuel oil consumption on board will drop and improve the vessels' performance by decreasing related greenhouse gas emissions and fuel costs.

HOW CAN WE OPTIMISE YOUR CONTAINER LOADS FOR MAXIMUM UTILISATION?

AS A THIRD-PARTY MANAGER, WILHELMSSEN AHRENKIEL SHIP MANAGEMENT IS FOCUSED ON MEETING OWNERS' AND CHARTERERS' DEMANDS IN TERMS OF VESSEL OPTIMISATION FOR MAXIMUM LOADING CAPACITY UTILISATION.

By Kiril Kirilov, Vessel Manager

Hiring vessels built under old and outdated lashing rules is not the preferred option for the majority of charterers. Charterers frequently request upgrades of the lashing rules on board their chartered tonnage to optimise the vessel's loading capability, thus transporting more loads on a single voyage and increasing their profits.

Many of the classification societies (e.g., DNV, ABS and others) are constantly working on updating their rules and are therefore enabling much more realistic and precise calculations of the lashing and stowage of the containers on board. Over the years, container vessels have become much larger and cargo securing techniques have been developed to allow vessel operators to ship more containers and heavier weights.

How can existing ships on the market being built under older outdated lashing rules become competitive?

This is where we as technical managers in close cooperation with lashing material manufacturers, classification societies, and loading software developers come in to satisfy customer demands and optimise the utilisation of the vessel's transportation capacity.

Classification societies have developed precise calculations of lashing forces in the stacks using more precise 3D calculations.

Upgrading the vessels' existing lashing rules to the latest more precise rules will bring the following benefits for the vessels and increase the profit for charterers:



1. Increased flexibility in the distribution of weight in the stacks



2. Optimisation of stack weights



3. Better utilisation of vessel loading capacity

How does this work?

The technical departments of the lashing systems' manufacturers calculate and upgrade the existing container securing arrangement plan (CSA plan) to the rules selected by the charterers (there are a variety of lashing rules calculations depending on the classification society). It is worth mentioning here that the upgrade to the selected lashing rules can be done per the rules of one classification society even though the vessel is under another class. For example, DNV GL 2019 lashing rules can be implemented on vessels in the ABS class, and vice versa.

Once this is done, the revised CSA plan is submitted for class approval. Upon approval, the CSA plan is handed to the loading software developer, who produces the software update. Finally, once the installation is performed on board (done remotely via IT support providers using new technologies) the vessel's classification society needs to survey the proper operation of the loading computer system. This can be done either remotely or in person.

After a successful survey, the vessel is authorised to use the upgraded lashing rules. Normally we provide charterers with a copy of the loading software so that coordination and optimisation is achieved by cooperation between the shore cargo planner and ship's command.

Given the information above, there are other possibilities to increase the transported load – the "route specific container stowage" option in lashing forces calculations – for additional loading capacity optimisation on certain geographical routes and areas, on short/ and or coastal voyages and under favourable weather conditions.

Based on long-term statistical data regarding sea state condition and advanced computer calculations, the classification societies have developed and are offering an individual route calculation. Based on the sailing area and expected weather, reduction factors have been established/ calculated then fed into the ship's loading computer systems. The reduction factor reflects the reduction of load assumptions due to ship movements, so optimisation of stack weights is achieved.

The benefits of this second possibility for optimisation are significant and the most important ones are listed below:

- vessels are more attractive to charterers with different route options
 - in some cases, stack weight inside cargo holds for 20 ft containers will be increased
 - ship's command as well as cargo planning offices ashore are more efficient in the planning stage
 - easy calculations on board via developed software
 - last minute restows can be avoided
 - increased profit for charterers/ shippers as more loaded containers can be transported per single voyage
-





i.

As representative example for stack weight increase inside cargo holds (20 ft containers) on one of our managed 6,500 TEU box ship, which underwent such upgrade, we have achieved as follows:

- Route: Unrestricted service with stability: GM 1.24m (20ft 8'6" containers loaded inside cargo hold bay 37): Max. stack weight 127.8 MT

After the upgrade:

- Route: New York to Cape Town (via Monrovia, Abidjan, Accra, Port Harcourt) with stability GM 1.24m (20ft 8'6" containers to be loaded inside cargo hold bay 37): Max. stack weight achieved 143.1 MT

The vessel might be subscribed to this service and benefit from it either offline or online in direct contact with the relevant classification society's department. As a result, charterers increase their profit. The vessel is granted a class notation thus becoming more competitive in the market compared to a vessel with same characteristics but outdated rules.



We at Wilhelmsen Ahrenkiel Ship Management are ready to support owners and charterers in ship loading capacity optimisation, ensuring maximum possible competitiveness of their vessels on the market.

INTRODUCTION BY DALE ROLFE

FLEET MANAGER AT WILHELMSSEN AHRENKIEL SHIP MANAGEMENT B.V., ROTTERDAM

THE PROSPECT OF INTRODUCING MYSELF TO EVERYONE MAY BE SOMETHING OF A CHALLENGE, AS IT IS NOT EASY TO SUM UP A CAREER OF AROUND 41 YEARS IN THE MARITIME INDUSTRY IN A BRIEF AND EASY-TO-READ HISTORY. I WILL DO MY BEST TO TRY.

By Dale Rolfe, Fleet Manager

My maritime career began in 1980 with a very brief but exciting period with the British Royal Navy. Sadly, this career was cut short by events in 1982 when the Royal Navy was forcibly downsized. I believe the term in today's business-speak would be "involuntary restructuring". I was lucky to be placed as an engineer cadet with the U.K. Merchant Navy, which allowed me to continue my engineering studies at South Shields Marine and Technical College in the UK, which is situated in an unlovely but charismatic industrial town in the northeast of England close to Newcastle.

The trials and tribulations of learning marine engineering, thermodynamics, advanced mathematics, naval architecture and the like was greatly offset by the multitude of extracurricular activities available in the Northeast of England (Newcastle is renowned as a party centre second to none in the U.K.). It is testament to the resilience of youth that I passed my studies at all. With training completed at the end of 1984 and equipped with a freshly printed 4th Engineers Certificate of Competency, I started my full-

time seagoing career as a junior engineer with a company known as Cayzer Irvine Shipping of London. My first non-navy vessel was the "Stirling Universal", a reefer vessel and the first of many to come.

It is a 'tradition' on British ships that all newly qualified junior engineers are assigned every dirty and unpleasant job that the onboard staff can possibly think of. My formative years did not involve a great deal of daylight as I seemed to spend my time inside every tank, engine crankcase and any other dark and dirty tight spot that could be found. These activities resulted in my picking up the rather unusual nickname of "Junior Jobbie".

During my seagoing career, I sailed predominantly on reefer ships (refrigerated cargo) and was lucky enough to visit some of the smaller and more interesting ports in the world in obscure locations that are rarely visited by container ships or other larger vessels. I can safely say that I have visited some of the lesser-known ports of the world and found most of them to be an absolute pleasure. During my time

at sea, I sailed on a tanker or two, bulk carriers and a car carrier, but I always returned to the reefer ships.

During the course of my seagoing career, I became specialised in the roles required by the industry and trained as a refrigeration engineer, perishable cargo specialist, and by extension became greatly experienced in the design and retrofit of electronic control systems for the reefer systems. After some years at sea as Chief Engineer, I decided that my career should follow the next logical pathway and into ship management and repair ashore. Various incidents with self-destructing engines and a rather nasty engine room fire may have hastened this decision.



My first change of horizons brought me into the ship repair business in Dubai before moving on to other challenges, finally settling in the USA as a Technical Superintendent.



Fig.: Dale Rolfe, 1984



Fig.: Vessel M.V Stirling Universal



I was pleased to start a new chapter in my career path with Ahrenkiel Steamship B.V. in May 2018 with a return to my ship's engineer roots and took up the position of Technical Superintendent in the newly set-up Rhoon/Rotterdam office.

Before joining Ahrenkiel, I worked for a large Dutch-based reefer ship owner and manager and moved from the daily technical operations of the vessels more towards the insurance and legal aspects of the business. This involved claims handling, recovery actions and working with our various insurance partners. In this function, my role extended to acting as internal and external expert consultant in perishable cargo preservation and ensuring that the whole cold chain operation from plantation to market was running correctly. This side of the shipping business proved to be quite fascinating.

My initiation into Ahrenkiel was a detailed familiarisation at the Hamburg office and then straight into my first repair onboard AS Paulina. The Rotterdam office started small in 2018 and has changed considerably since those early days. As the number of vessels has increased, the composition of office roles has changed. Our team expanded from the original 12 to 29 persons, returning to 20 persons in 2021. In January 2019, I had the pleasure of being invited to assume the role of Fleet Manager for the AHST B.V. technical team, which has kept me busy since. It has been a gratifying challenge to constantly navigate the sometimes choppy waters of ship management and deal with the multitude of people involved in the operation of a busy shipping company ashore and afloat.

Our usual day-to-day activities make for a very full day, but the numerous challenges presented by various other projects such as dry dockings and new regulation compliance to name just two make

time seem to fly by. Our team here in Rotterdam mostly take these challenges in stride and the team remains as goal-focused as ever. Our primary goal always remains taking care of the ships and supporting our valued staff onboard meeting their challenges also.

One of the strengths of our team is the cultural diversity of those in the office. We have a mix of people from diverse backgrounds and cultures (seven different nationalities at the last count) with each bringing their own particular strengths into play. It is sometimes this diversity that assists us in finding solutions that would not occur in a more homogenous team. It also brings those odd moments of hilarity when a mistranslation occurs or one person understands something in a completely different way to that intended.

However, our team remains strong, resolute and always ready to help. We wish you all peaceful and rewarding times ahead.



SONGA SHIPS ACQUISITION

IN THE FOURTH QUARTER OF 2021, WILHELMSSEN AHRENKIEL SHIP MANAGEMENT (WASM) ACQUIRED THE MANAGEMENT OF FIVE CONTAINER SHIPS WITH A CAPACITY OF 1,900 TEU TO 4,250 TEU. ALL FIVE BOXSHIPS ARE THE PROPERTY OF MPC CONTAINER SHIPS ASA.

By Kiril Kirilov, Vessel Manager

With this acquisition, WASM has expanded its technical management services further in the feeder segment. Each vessel retained its class (KR) and flag (Liberia, Marshall Islands, and Antigua & Barbuda). The vessels were re-named, surveyed, and audited. WASM's safety management system (SSMM) was implemented and the vessels became official members of the WASM portfolio.

A new planned maintenance system (PMS) was installed and implemented in each vessel. Four of the vessels were already retrofitted with exhaust gas cleaning systems (EGCS) in full compliance with MARPOL Annex VI and its amendments, thus ensuring flexibility on the chartered market. In order to ensure a smooth takeover process, a working group consisting of members from all departments within the WASM organisation ashore was established to synchronise and prepare the takeover process and to enrol the vessels under WASM technical management in the most efficient way. The takeovers took place in the Far East and in Europe under very challenging conditions due

to the COVID-19 pandemic situation worldwide. In the Far East, the main part of the job was performed by the crew on board, who were remotely supported by external service providers and WASM. It was considered almost impossible to take over a ship without being there physically, but this was proven wrong with well-organised and synchronised team support.

In contrast, the takeovers in Europe were attended by an assigned group of vessel managers representing WASM, who aimed to assist and facilitate the takeover processes. External providers were also arranged for machinery condition evaluation, which had the advantage of immediately assessing the vessels' maintenance needs. All in all, the takeovers did not interfere with the vessels' routine operations nor were the charterers' schedules affected in any way. The high level of preparedness and professionalism of the crew, riding teams and office staff paid off. After becoming the technical manager for the ships, WASM evaluated the vessels' current class schemes and technical condition while advising the owners of

the benefits of enrolling some of them into the EDD program. Upon obtaining the owner's approval, the WASM technical department, which is experienced in EDD subscriptions for various clients and ships, successfully registered two of the vessels in the EDD program.

Lastly, all of the above would not have materialised without the great seamanship and dedication of the crew. The close connection and trusting cooperation between crew and shore is the key to today's success in shipping. We at WASM are proud of our crew and rely on their professionalism. Thanks to our joint efforts, we deliver to our clients and ship owners reliable, compliant and high quality technical management.



We welcome the five container ships AS Alva, AS Pamela, AS Pia, AS Nora and AS Emma to our management and wish them and the crew fair winds, calm seas and blue skies always!

JOINING SUSTAINABILITY SHIPPING INITIATIVES FOR IMPACT

Sustainability is one of the key factors for modern shipping companies and contains many aspects that need to be addressed in the business model of each company. However, in order to achieve a global impact as an industry as a whole, collaboration is vital. We have therefore joined initiatives that take on aspects of sustainability on an industry scale and we support these as members and signatories:

By Gabriele Gottschalk, Corporate Communications Manager



REDUCING EMISSIONS

Clean Shipping Alliance (CSA)

The CSA supports the use and effectiveness of exhaust gas cleaning systems to achieve shared environmental and sustainability initiatives across all shipping sectors. The Alliance was formed in 2018 with a mission to provide information and research data to better inform industry, national and international authorities, non-governmental organisations and the public on the environmental performance and benefits of open- and closed-loop exhaust gas cleaning systems (EGCS) and associated air and water emissions.



HEALTH AND SAFETY

Container Ship Safety Forum (CSSF)

The vision of the Container Ship Safety Forum (CSSF) is a container shipping industry with high safety standards ensuring no harm is caused to people, ships, cargo or the environment. As a CSSF member, we collaborate to advance the continuous improvement of safety culture and performance in the container shipping industry through measurement, reporting and benchmarking, sharing best practices and engaging with key stakeholders to develop durable solutions.



The Neptune Declaration
on Seafarer Wellbeing
and Crew Change

CREW CHANGE CRISIS DURING COVID-19

The Neptune Declaration

COVID-19 has impacted the daily lives and wellbeing of seafarers in unprecedented ways, causing a humanitarian crisis at sea. Hundreds of thousands of seafarers have been stranded working aboard ships beyond the expiry of their contracts. Together with more than 850 companies and organisations, we have signed the Neptune Declaration on Seafarer Wellbeing and Crew Change, which outlines the main actions that need to be taken to resolve the crisis.



THE FIGHT AGAINST OCEAN POLLUTION

Eyesea

Eyesea, a nonprofit organisation, developed a maritime pollution reporting and mapping smartphone application through the use of geotagged pictures. The Eyesea app logs where rubbish has been spotted anywhere in the world to help identify where cleaning is needed. We support this important initiative that will help to fight the pollution of our oceans.

NEW FUELS AND CHALLENGES

THE 2020 FUEL SULPHUR CAP WAS AN OPERATIONAL FUEL CHALLENGE FOR VESSEL ENGINES IN MANY RESPECTS, FROM REFINERY SUPPLY TO ONBOARD USAGE.

By Lucian Stavarache, Fleet Manager

From a cleaning point of view and to avoid potential negative consequences, the first challenge onboard was to prepare the fuel storage tanks before bunkering the new very low sulphur fuel oil (VLSFO) towards the end of 2019. One of the consequences was existing accumulated sludge from old high sulphur fuel oil (HSFO) batches.

The transition and subsequent complete changeover from HSFO to the new VLSFO was somehow bound to pose issues, especially related to the alleged incompatibility of various VLSFO batches. However, thanks to most of our cleaned fuel storage tanks using dedicated chemical products, our excellent crew managed this process 100% successfully. There were NO issues reported (machinery breakdown, filters and purifiers blockages due to excess asphaltenes,

clogging, etc...) on board our managed vessels caused by the new VLSFOs during the 2020 sulphur cap or HSFO/VLSFO changeover. This means that the whole process was handled onboard with high professionalism and care based on constant communication between the office and the vessels, which is mentioned in two Company Fuel Bulletins issued in 2019:

Fuel Bulletin #7 – “Fuel change-over / 2020 0.5% sulphur cap”

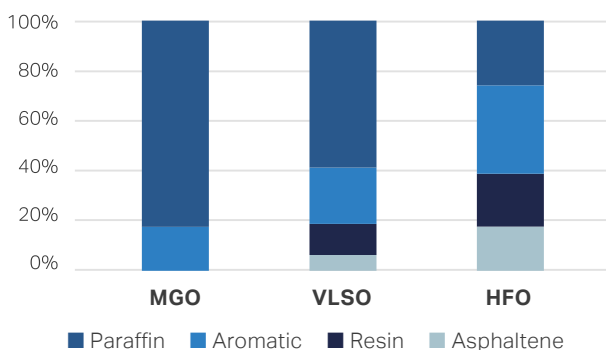
Fuel Bulletin #8 – “2020 0.5% sulphur cap / new VLSFO basic guidelines”

Issues with the new VLSFOs were expected during 2020 because the fuel changeover happened rather quickly and certain pressure was put on refiners/blenders to ensure affordable production of

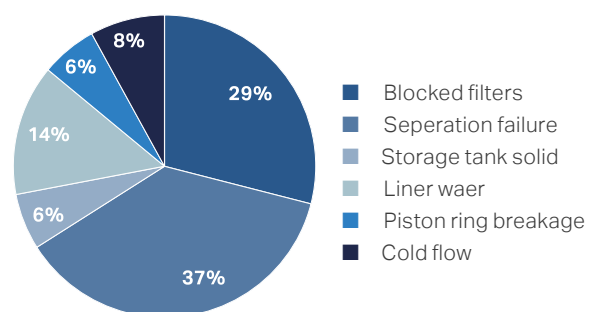
VLSFO in terms of both quantity and low cost. Some VLSFO supplier options were also diluting HSFO with lower sulphur light fractions to obtain the needed 0.5% sulphur. In simple terms, the new VLSFOs have an increased paraffinic content compared to the HSFO where the aromatic content is predominant. The new VLSFOs* could still be unpredictable during onboard usage. Some of these issues are highlighted below based on experience during Q1/2020.

With these issues in mind, the question is what should be done to avoid potential VLSFO issues during onboard usage: fuel stability, fuel compatibility, poor combustion? The most significant reported issues were linked to blocked fuel filters and purifier failure due to excessive sludge formation, which was linked directly to fuel stability.

MARINE FUEL COMPOSITION



VLSFO FAULT DISTRIBUTION*



Source: Innospec

An affordable and simple solution would be fuel additives, proven to be efficient while cleaning the storage tanks for the 2020 fuel sulphur cap changeover. Now that these new VLSFOs must be dealt with, a special focus must cover the following aspects as advised by a fuel additives supplier during our recent discussions:

- **stabilising the fuel and reducing the sludge amount (less sludge means more fuel to burn)**
- **keeping storage tanks clean between different fuel batches**
- **preventing fuel ageing and asphaltene agglomeration**
- **better combustion process (resulting in lower fuel consumption) and engine performance, consistently reducing soot particulates to maintain clean turbochargers and exhaust gas economisers**

- **proper final filtration (based on our 10-micron fuel filters retrofit project) to reduce at a minimum the cat fines level before reaching the engine's high-pressure injection components**
- **ensuring separation between different fuel batches when bunkering, avoiding co-mingling and using an on-board cat fines fuel testing kit at the same time**

There are new additives developed that target the majority of the aspects above. Their usage should seriously be taken into consideration including by owners.

The main engine's internal condition, from the excessive wear of the cylinder liner to piston rings breaking shortly after overhauling, is another important aspect linked to the new VLSFOs and the proper cylinder lubricating oil (CLO) grade in use. Although a low sulphur fuel grade in use usually requires a low base number (BN) 40 CLO, it must

be considered that these low BN CLOs do not ensure the same good detergency as a higher grade (BN70) and consequently a proper cleaning of the cylinder liner wall during the combustion process. With a somewhat poor combustion process (some VLSFOs are so-called hybrid fuels), sludge and ash have a higher tendency to form inside the cylinder, hence the need for a good detergency CLO. If a fuel additive can improve the VLSFO's combustion and considerably reduce sludge and ash formation, using a higher BN70 CLO for short periods (ex. 2-3 days) is recommended at the same time.

Still the question remains: are we doing enough to prevent any major main engine issues by using the VLSFO additives and switching for a short period to a high BN CLO? There is no clear answer here, although the odds are considerably improved.

In any case, we need to rely on our good chief engineers onboard and their close cooperation with the vessel managers as a single vessel management team!

TYPES OF PURIFIER SLUDGE



Distillate

Distillate aging, polymerisation and fuel instability



Wax

n-paraffin wax crystals separating in fuel due to lower temperatures



Residual

Residual aging, asphaltene dropout and fuel instability

Source: Innospec



WASM MARINE LOSS PREVENTION

**LOSS PREVENTION
MANAGEMENT NOT ONLY
SAVES LIVES AND PROTECTS
THE ENVIRONMENT FROM
CASUALTIES, BUT ALSO
PREVENTS MACHINERY
DAMAGE LEADING TO
UNPREDICTABLE AND
EXTRAORDINARY REPAIR
COSTS.**

By Lena Marie Heick, Fleet Insurance
Coordinator

Such risks are often covered by marine insurance underwriting such as hull and machinery, loss of hire, and protection and indemnity along with many other insurance types available on global markets. However, the more losses that are submitted to underwriters for loss compensation, the more that they will negatively impact the owner's loss record, eventually leading to higher insurance premiums and thus directly resulting in increased operational expenses for the ship – which is clearly not the purpose in the end.

It is of utmost importance for shipowners to minimise the likelihood of having to take ships out of service due to severe machinery casualties – particularly during times when charter markets

are at an all-time high. Therefore, it becomes essential for shipowners to have the correct preventive measures in place to reduce potential marine risks to a minimum.

In recent years, WASM has sought options to continuously improve and implement new measures to maintain the highest safety standards on board and to protect shipowners' interests. Machinery claims represent one of the most common type of claim, specifically main engine, auxiliary engine, and propulsion/stern tube damage. The latter, for instance, caught the attention of shipowners due to the problem of environmentally acceptable lubricants (EALs). A recently published initiative in cooperation with DNV and leading marine underwriters reports

that EALs have adverse effects on bearing and seal performance, which can damage several engine components. Not only do damage claims for this correlate to high damage repair costs, but also lead to extensive repair times that result in unnecessary off-hire periods.

A common cause of engine damage as of late has been refinery catalytic fines. Catalytic fines, or cat fines for short, are fine-grained catalysts, usually aluminium and silicon compounds, used by petroleum refineries to process petrol and other marine fuels. The instances of damage have significantly increased in the marine industry since 2017 and demonstrably affected quite large numbers of ship-owning companies. Especially nowadays, where the high demand for low sulphur fuels is increasing, these fuels typically have more catalytic fines than high sulphur fuels. Once these extremely hard particles have entered the main engine systems, they cause severe abrasive wear of the majority of engine components within a short time despite properly installed separators. Along with other procedures in compliance with the MARPOL standards, there are many measures that have been implemented on board the WASM fleet in recent years that probably prevent such losses, for example:

- **Class-certified cat fine test kits supplied to the fleet with the purpose of determining the concentration of catalytic fines before using engine injection**
- **Modification of main engine and auxiliary engine fuel oil filter systems – 10-micron automatic filtration system**

A large portion of the WASM fleet has been fitted with an additional set of automatic filtration fuel oil filters, which are installed primarily in order to prevent particles such as cat fines from entering the engine components. The filters have been installed between the HFO purifier discharge lines and the service tanks.

- **Implementation of fuel oil and lube oil handling and treatment procedures**

As a follow-up to a company's existing principles, an in-house procedure has been implemented that forms the basis for guidance on the life cycle of fuel and lubrication oils. This includes a broad range of processes ranging from procurement procedures, on-board handling and treatment procedures (including correct storage), transfer consumption, purification of the oils and proper sampling on board our vessels for analysis before usage.



By providing these guidelines to both ship and office staff, we want to:

- ensure a uniform procedure that is optimally designed for smooth fuel and lube oil operations
- prevent engine damage and thus avoid unplanned off-hire periods
- increase the life cycle of the ship's oils
- reduce waste and pollution

In addition to these procedures already mentioned, WASM has several service contracts in place such as main engine liner measurements, which are carried out annually on board the vessels. During the measurement, premature unusual wear of the liners can be detected that enables owners/WASM to conduct repairs and thus prevent further significant deterioration of the cylinder liners and consequential damage.

The decisive factor, however, that impacts the effectiveness of WASM's loss prevention remains the crew. WASM is proud to work with highly qualified and motivated crew members who ensure safe navigation and trouble-free running of the vessel's engine day after day. In this respect, we rely on cooperation built on trust over many years resulting in a three-year average crew retention rate of roughly 95%. It is essential that our crew is familiar with our different ships and engine types to ensure proper handling and maintenance performance on board and therefore prevent potential engine damage.

Another important component of WASM technical management is the increased number of roving masters and roving engineers who support improving the optimal link between the vessel and shore-based personnel. Our roving masters regularly sail on our ships and perform internal audits on board. This ensures that newly implemented procedures, projects, and ship manual guidelines can be conveyed optimally and become familiar on board – even remotely due to the ongoing restrictions due to the COVID-19 pandemic.



SHIPPING BY PEOPLE

IMPRESSUM

We thank our Editorial Team for their motivation and their ideas in putting this Telegraph together.

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